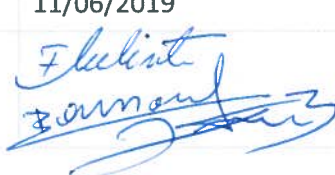


Evaluation Report of remaining national rules in addition to the latest TSIs in force for the Rolling Stock and onboard CCS subsystems

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Not Applicable

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1 REFERENCES, DEFINITIONS AND ABBREVIATIONS

1.1 Reference Documents

Table 1 : Table of Reference Documents

	<i>[Ref. N°]</i>	<i>Title</i>	<i>Reference</i>	<i>Version</i>
[1]		Plan for Rules cleaning-up – Overview	ERA-PRG-006-EXT	1.0
[2]		Annex I - Remaining national technical rules applicable to vehicles	ERA-PRG-006-Annex I	23/03/2016
[3]		List of parameters to be used for classifying national rules	Imp.Dec.(EU)2015/2299	17/11/2015
[4]		Mid term report Cleaning up of national rules	ERA-PRG-006-REP Mid term	V 1.0
[5]		Rules cleaning up programme plan	ERA-PRG-006-PPL	V 2.0

1.2 Definitions and Abbreviations

1.2.1 Standard Terms and Abbreviations

- LoP: List of parameters
- RDD: Reference Document Database
- RINF: Register of Infrastructure
- TSI OPE: TSI relating to ‘operation and traffic management’ subsystem
- MS: Member State of EU

1.2.2 Specific Terms and Abbreviations

- Not Applicable

2 EXECUTIVE SUMMARY

In the context of interoperability, for the management of the shared railway system that forms the single European Railway Area, rules in the form of TSIs are an essential tool for the safe and cost-effective management of the railway system. Rules in the form of national rules are also an essential tool for the management of shared national legacy systems (e.g. the CCS class B systems). The presence and enforcement of national rules preserves the benefits of national interoperability and prevents further national system diversity beyond the minimum needed during the transition to the target system.

Furthermore, the absence or non-transparency of appropriate rules leads to unnecessary uncertainty, costs and safety risks. Since the scope extension of TSIs (with effect on 01 January 2015), a situation with too many, and sometimes contradictory or unjustified national rules is not acceptable.

The “cleaning-up” of unnecessary national rules was therefore a fundamental and urgent action to remove technical regulatory barriers to the open market, international operation and interoperability.

The Agency started beginning of 2016 a programme (see ERA programme plan ERA-PRG-006-PPL) where the Member States and the Agency worked together on the identification, evaluation and cleaning-up of national rules for vehicle authorisation in addition to the TSIs for vehicles in force.

In order to carried-out this cleaning-up, the Member States were asked to :

- Identify and withdraw the national rules covered by TSIs referred to in section 3.1.2,
- Relate the national rules to the TSIs and to the new list of parameters (decision 2015/2299/EU),
- Clearly identify the national rules that are not related to open point(s) nor specific case(s) to TSI requirements and specify if they complement/contradict/replace TSIs for technical compatibility with existing networks,
- Ensure that the requirement is a mandatory rule. Acceptable national means of compliance in accordance to the definition in article 2 (34) of directive 2016/797 is not considered as a national rule,
- Identify and analyse requirements that don't relate to any of the above and consider in this case if the TSI is deficient/non-exhaustive.

Based on the outcome of this programme, Member States should have :

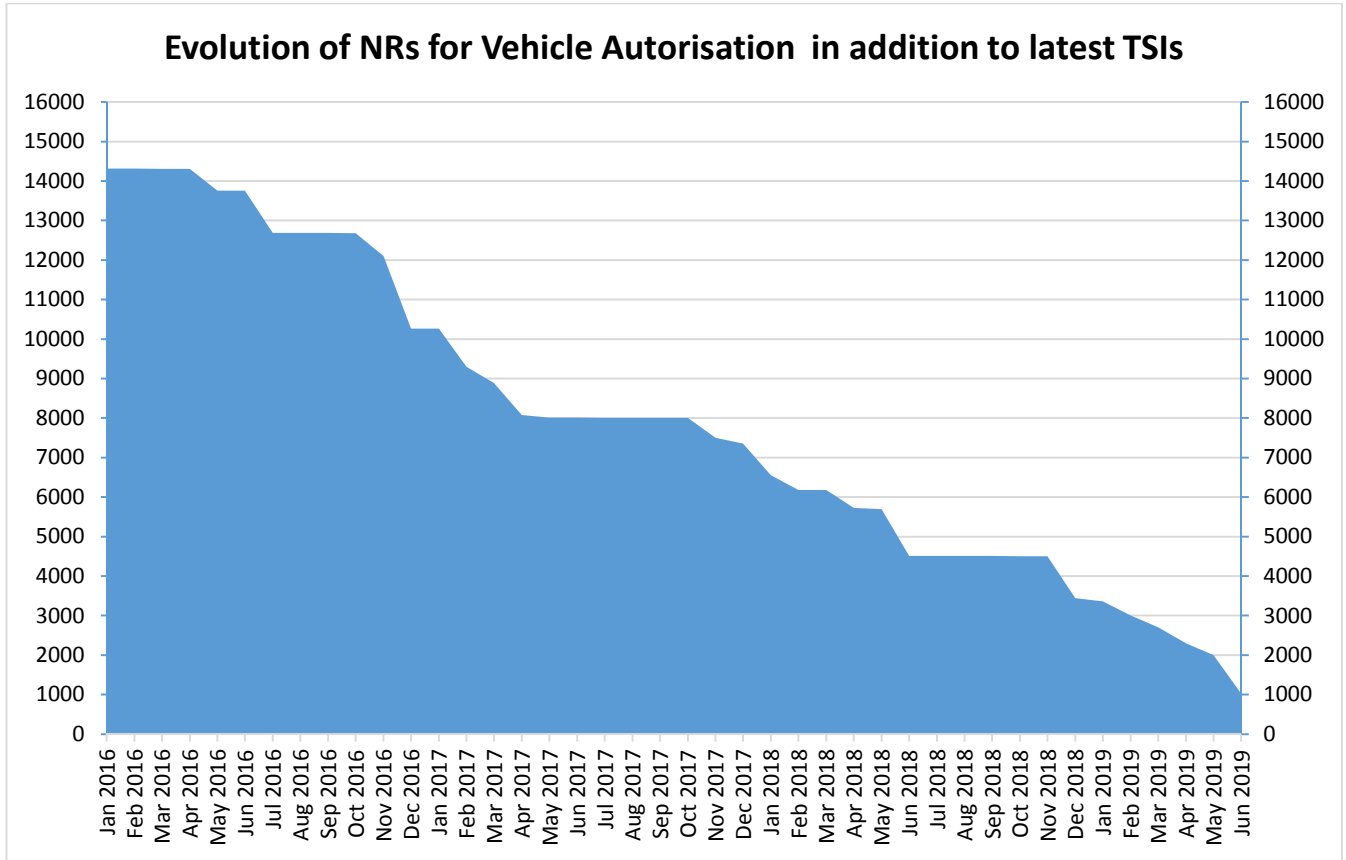
- Cleaned, updated and published their national rules in RDD.
- Ensured that their national legislation for vehicle authorization is aligned with the content of RDD.

During this period, the Agency provided technical support to Member States by reviewing their remaining national rules and updating the Reference document database. In addition, a reporting to European commission and RISC on the progress made was carried out regularly.

From 16 June 2019 and pending the Single Rules Database, the Reference Document Database is the reference for applicants, NSAs and the Agency in terms of applicable national rules for vehicle authorisation.

After the finalization of this activity and at the time this report was written, the number of national rules applicable in addition to the TSIs in force is **1026** while in 2016, the number of national rules not cleaned-up reached **14312**.

The following graph shows the evolution of the amount of national rules for vehicle authorisation in addition to latest TSIs since 2016.



3 SCOPE OF THIS REPORT

3.1 Scope in terms of vehicle and national rules

3.1.1 Introduction

The objective of this report is to provide:

- an overview of remaining national rules in addition to the latest TSIs in force for vehicle authorisation.
- the distribution of remaining rules for the rolling stock and onboard CCS subsystems per group of RDD parameters.
- an analysis of the remaining rules for those specified in section 3.1.4.

3.1.2 Scope in terms of rolling stock subsystem

The latest TSIs applicable to the Rolling Stock subsystem are the following:

- TSI WAG: Commission Regulation (EU) No 321/2013, amended by Regulation (EU) No 1236/2013.
- TSI LOC&PAS: Commission Regulation (EU) No 1302/2014.
- TSI PRM: Commission Regulation (EU) No 1300/2014.
- TSI Noise: Commission Regulation (EU) No 1304/2014.

Note: The TSIs published on 27 May 2019 in the Official Journal of the European Union should be considered by the Member States for the next revision of their national rules (e.g. open point closed).

The technical scope of this report covers the categories of vehicles that are defined in the TSIs WAG and LOC&PAS ie; Freight wagons, Locomotives, Trainsets / Electric or Diesel Multiple Unit, Passenger coaches, Track machines/OTMs. These categories of vehicles are also provided for each rule in RDD.

3.1.3 Scope in terms of CCS onboard subsystem

The latest TSI applicable to the CCS onboard subsystem is the following:

- TSI CCS: Commission Regulation (EU) No 2016/919 (including ERA/ERTMS/033281 rev 3.0 dated 04/12/2015)

3.1.4 Scope in terms of national rules

In accordance to article 13.2 of directive (EU) 2016/797, national rules and where relevant acceptable national means of compliance shall apply in the cases defined below :

- a) where the TSIs do not cover, or do not fully cover, certain aspects corresponding to the essential requirements, including open points;
- b) where non-application of one or more TSIs or parts of them;
- c) where a specific case requires the application of technical rules not included in the relevant TSI;
- d) national rules used to specify existing systems, limited to the aim of assessing technical compatibility of the vehicle with the network;
- e) networks and vehicles not covered by TSIs;
- f) as an urgent temporary preventive measure, in particular following an accident.

This report focuses on national rules evaluated by the Agency. The table below provides an overview of National Rules notified by Member States subject or not to an evaluation.

National Rules relates to	Published in RDD	Evaluated	Remarks
Vehicles in the scope of Loc&Pas and WAG TSIs	Yes	Yes	Freight wagons, Locomotives, Trainsets / Electric or Diesel Multiple Unit, Passenger coaches, Track machines/OTMs.
Article 13.2(a): Open points listed in TSIs	Yes	Yes	TSIs clearly identify where a national rule may be kept and notified; traceability between TSIs and possible remaining national rules is clearly established, and the corresponding rules are recorded in RDD. The Agency checked if the national rule covers the scope of the open point.
Article 13.2(a): Other directives	Yes	No	Corresponding rules are available in RDD. Anyway, it will have to be decided at later stage with the Commission how to deal with these rules, considering the mentioned directives. As a general principle, the TSIs in force don't cover subjects in the scope of these other EU directives. Corresponding parameters are defined in section 3.2.3
Article 13.2 (b): non application of TSI	No	No	
Article 13.2 (c): Specific cases mentioned but not described in TSIs	Yes	Yes	TSIs clearly identify where a national rule may be kept and notified. Traceability between TSIs and possible remaining national rules is clearly established, and the corresponding rules are recorded in RDD. The Agency checked if the national rule covers the scope of the specific case.
Article 13.2(d): Technical compatibility between vehicle and existing network(s)	Yes	Yes	
Article 13.2 (e): Vehicles not covered by TSIs	No	No	Concern vehicles such as Tram-Train, metric gauge vehicle.
Article 13.2 (f): Urgent temporary preventive measure following an accident	No	No	
TSI potentially deficient or not exhaustive	Yes	Yes	National rules when accepted by the Agency are maintained pending the resolution of the potential deficiency.
Previous versions of TSIs not listed in section 3.1.2	Yes	No	

National Rules relates to	Published in RDD	Evaluated	Remarks
Vehicle not TSI compliant authorised before the intering into force of TSIs.	Yes	No	Rules are in RDD for reference/history and are not subject to Agency evaluation.

Note 1: The TSIs Noise and PRM do not contain any open points and the specific cases are fully specified in the TSIs, with the exception of noise limits for 1520 mm vehicles coming from 3rd countries. For this reason, no national rules are expected except for specific case that could be missing in the TSIs

Note 2: The TSI WAG includes in its clause 7.1.2 conditions for having wagons authorised on the whole EU network (the marking TEN can then be affixed on these wagons). Therefore the only possible remaining national rules apply only for wagons not fulfilling the conditions of clause 7.1.2.

3.2 Corresponding parameters in List of Parameters and RDD for the national rules

The latest revision of the LoP (decision 2015/2299/EU) is taken as basis for categorising the national rules, and for their notification in the Reference Document Database hosted by the Agency. The correspondence between parameters of the LoP and TSIs applicable to vehicles is provided in RDD.

The following sections list the parameters for which any notified rules shall referred to and provide some considerations taken by the Agency when assessing them.

3.2.1 Parameters related to the CCS subsystem, including class B ATP and radio systems

Remaining rules for ETCS and GSM-R specified in the TSI CCS correspond to the following parameters in RDD:

- 12.1.2 GSM-R compliant radio system
 - 12.1.2.1 - Use of hand portables as cab mobile radio
 - 12.1.2.2 - Other GSM-R requirements
- 12.2.2 STM requirements
- 12.2.3 Transitions
- 12.2.5 ETCS cab signalling
 - 12.2.5.1 - Level crossing functionality
 - 12.2.5.2 - Braking safety margins
 - 12.2.5.3 - Reliability - availability requirements
 - 12.2.5.4 - Safety requirements
 - 12.2.5.5 - Ergonomic aspects of DMI
 - 12.2.5.6 - Interface with service brake
 - 12.2.5.7 - Other ETCS requirements (related to existing not interoperable networks)
 - 12.2.5.8 - Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances

Parameters covering CCS and Radio class B systems (legacy systems) are the following:

- 12.1.1 Non-GSM-R radio system
- 12.2.1 National on-board signalling systems

3.2.2 Parameters for compatibility with Train Detection systems

Due to the criticality of this subject for interoperability and the high diversity of existing national sub-systems, a specific group of parameters is defined for compatibility between vehicles and train detection systems (open points in TSIs, diversity of existing systems):

- 8.4.2: ‘EMC between the vehicle and the railway system’
 - o 8.4.2.1.1 Rail return current
 - o 8.4.2.1.2 Heating cable interference current
 - o 8.4.2.1.3 Interference current under the vehicle
 - o 8.4.2.2.1 Electro-Magnetic fields/Induced voltages in the track/under the vehicle
 - o 8.4.2.3 Vehicle entrance impedance
- 12.2.4: ‘Compatibility of rolling stock with the CCS Trackside’
 - o 12.2.4.1 Minimum axle distance
 - o 12.2.4.2 Minimum wheel diameter
 - o 12.2.4.3 Metal and inductive components-free space between wheels
 - o 12.2.4.5 Compatibility with fixed installations of CCS

These parameters are described/specified in the document ERA/ERTMS/033821 ‘Interfaces between control command and signalling trackside and other subsystems’, which is referred to in the TSI LOC&PAS, clause 4.2.3.3.1 ‘Rolling Stock characteristics for the compatibility with train detection systems’

3.2.3 Parameters in the scope of other directives

The following parameters are covering technical requirements specific for railways but also governed by other EU directives:

- 5.5 Toilets (Directive drinking water 98/83/EC)
- 6.2 Impact of the vehicle on the environment (Regulation REACH 1907/2006)
- 6.2.1.1 Toilet emissions (Directives 2006/7/EC, 2006/11/EC)
- 6.2.1.2 Exhaust gas emissions (Directives 97/68/EC, 2001/63/EC, 2002/88/EC, 2004/26/EC, 2006/105/EC, 2010/26/EC Exhaust emission)
- 6.2.1.3 Chemical and particulate emission
- 8.4.1 EMC within the vehicle (Directive 2014/30/EU, former Directive 2004/108/EC repealed on 20/04/2016)
- 8.4.2.2.2. Electro-Magnetic fields/Induced voltages outside the track (Directive 2004/108/EC)
- 8.4.2.4 Psophometric current (Directive 2004/108/EC)
- 8.4.2.5 Transverse voltage limits for compatibility voice/data circuits (Directive 2014/30/EU)
- 8.4.3.1 Maximum Electro-Magnetic fields (Directive 2014/30/EU, Directive 2013/35/EU for workers)
- 8.4.3.2 Induced interference current/voltage(Directive 2014/30/EC)
- 8.4.3.3 Psophometric current(Directive 2014/30/EC)
- 8.7.2 Pressure vessel systems/pressure equipment (directives 2009/105/EC simple pressure Vessel,- 97/23/EC Pressure equipment)
- 8.7.3 Steam boiler installations (directives 2009/105/EC simple pressure Vessel,- 97/23/EC Pressure equipment)
- 8.7.4 Technical systems in potentially explosive atmospheres (Directive 94/9EC)
- 8.7.5 Hydraulic/pneumatic supply and control systems
- 11.2.2 Water supply system (drinking water 98/83/EC)
- 14.1 Design, operation and maintenance constraints for the transport of dangerous goods (2008/68/EC, 2010/61/EC transport of dangerous good)

3.2.4 Parameters corresponding to technical requirements not retained in TSIs

In the TSIs mentioned in section 3.1.2 and 3.1.3, it was decided not to have specific basic parameters for the following RDD parameters:

- 4.7.1.2 Brake discs
- 4.7.1.3 Brake pads (for brake discs)
- 6.1.1.1 Altitude

- 6.1.1.3 Humidity
- 6.1.1.4 Rain
- 6.1.1.6 Solar radiation
- 6.1.1.7 Resistance to pollution

Therefore national rules related to these RDD parameters should not be allowed because they would represent unnecessary technical barriers.

However, in case of rule published by a MS, the Agency will suggest to the MS to take into account the last version of the TSIs, and for parameters of group 6 to consider available harmonised EN standards (e.g EN 50125 as mentioned in TSI Loc&Pas Application guide) and/or the clause 7.4 of the TSI LOC&PAS 'Specific environmental conditions'.

3.2.5 Parameters corresponding to documentation requirements

The following parameters under group 1 in RDD describe transverse subjects related to documentation or procedures:

- 1.1 General documentation
- 1.2.1 Maintenance instructions
- 1.2.2 The maintenance design justification file
- 1.3.1 Instructions for operation in normal and degraded modes of the vehicle
- 1.4 National requirement for testing

Today, national rules corresponding to these parameters may be notified. However, as technical documentation is covered by TSIs, and taking into account the implementation of the 4th Railway Package, the Agency does not see room for such national rules in the future (e.g. 'General documentation' is defined by regulation 2018/545 and TSIs).

Note: National rules under parameter 1.4 are relevant under the 4th RWP when they cover strictly rules for organisation of on-track testing. The rules specifying the content of these tests should not be kept under this parameter (documentation) but under the relevant parameters where national rules have been notified

3.2.6 Parameters related to the RST subsystem

For information the following parameters heading covers Rolling Stock subsystem where national rules might have been notified:

- 2-Structure and mechanical parts
- 3-Track interaction and gauging
- 4-Braking
- 5-Passenger-related items
- 6-Environmental conditions and aerodynamic effects
- 7-External warning, signalling, marking functions and software integrity requirements
- 8-On-board power supply and control systems
- 9-Staff facilities, interfaces and environment
- 10-Fire safety and evacuation
- 11-Servicing
- 13-Specific operational requirements
- 14-Freight-related items

4 GENERAL RESULTS OF THE EXAMINATION OF NATIONAL RULES AND ACCEPTABLE NATIONAL MEANS OF COMPLIANCE

The table below provides an overview of the number of national rules and acceptable national means of compliance notified by Member states in addition to latest TSIs and the results of the examination leading to a positive or negative assessment.

The Agency will address to the relevant MS, in accordance with Article 26(3) of the Agency Regulation a technical opinion, when the evaluation of the Agency leads to a negative assessment.

Table 2 : number of national rules notified by Member states and results of the examination

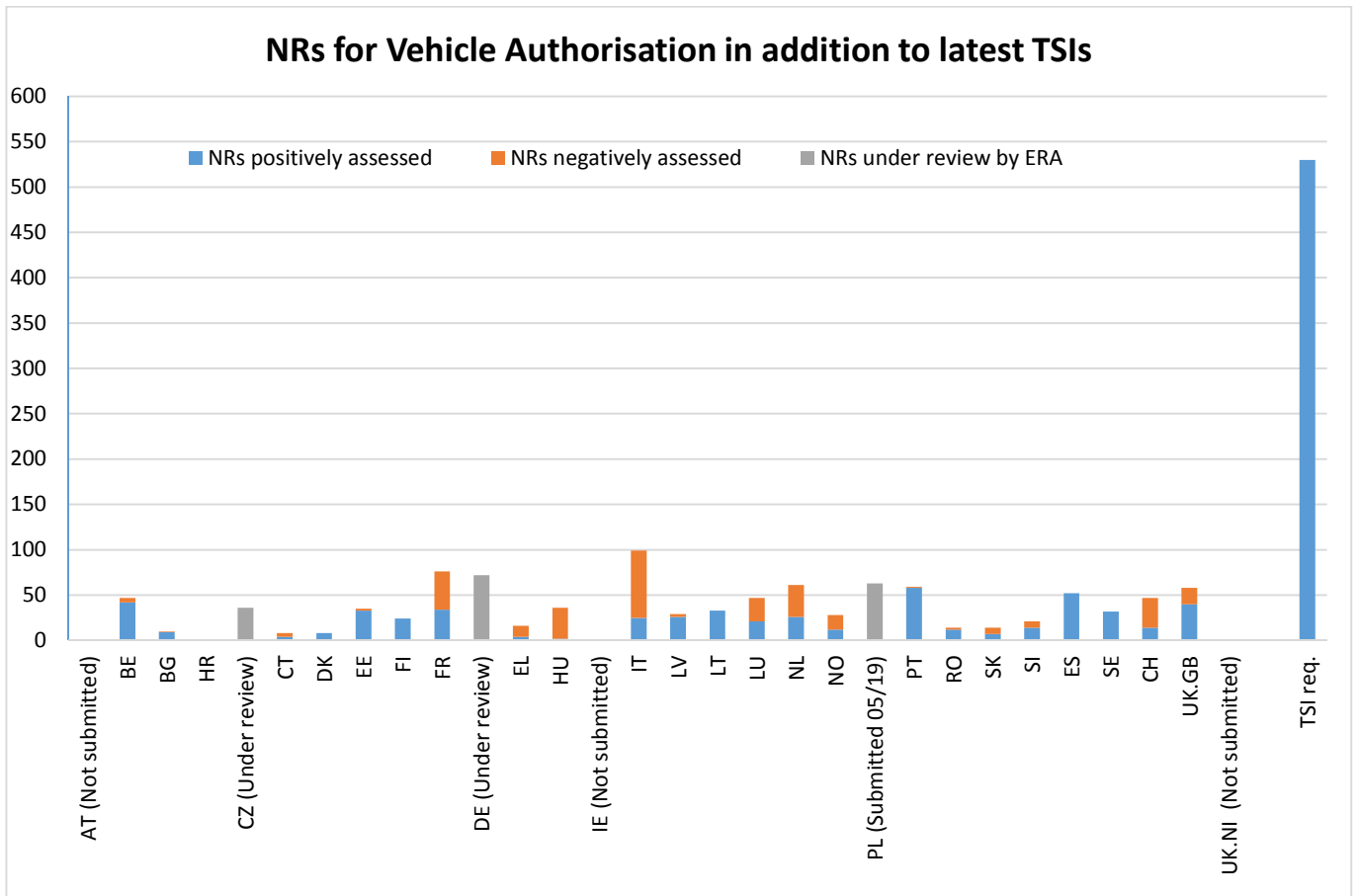
Member States	Number of National rules (or draft) and Acceptable national means of compliance	Results of the examination		Remarks
		Positive assessment	Negative assessment	
Austria	0	0	0	National rules in addition to TSIs mentioned in section1 were not provided by the MS.
Belgium	47	42	5	2 National rules should be repealed 3 National rules can be accepted if they are revised in accordance to the Agency assessment.
Bulgaria	10	9	1	1 National rule needs to be clarified
Croatia	1	1	0	Croatia shall confirm that no rules are applicable for Train Detection and class B CCS
Czech Republic	36	0	0	Under assesment by ERA
Channel Tunnel	8	4	4	3 National rules should be repealed 1 National rule needs to be clarified
Denmark	8	8	0	
Estonia	35	33	2	2 National rules related to Train detection system can be accepted if they are revised in accordance to Agency proposal
Finland	24	24	0	
France	76	34	42	All requirements published in RDD are considered as acceptable national means of compliance. 7 parameters contains requirements that should be modified

Table 2 : number of national rules notified by Member states and results of the examination

Member States	Number of National rules (or draft) and Acceptable national means of compliance	Results of the examination		Remarks
		Positive assessment	Negative assessment	
				37parameters contains requirements that should be repealed from Vehicle authorisation
Germany	72	0	0	Under assessment by ERA
Greece	16	4	12	9 National rules should be repealed 3 National rule should to be clarified
Hungary	36	2	34	34 National rule should to be clarified
Ireland	0	0	0	National rules in addition to TSIs mentioned in section1 were not provided by the MS.
Italy	99	25	74	17 National rules should be repealed 57 National rule should to be clarified
Latvia	29	26	3	3 National rules related to Train detection system can be accepted if they are revised in accordance to Agency proposal.
Lithuania	33	33	0	
Luxembourg	46	20	26	4 National rules should be modified 22 National rule should to be clarified
Netherlands	61	26	35	Further discussion is necessary with the MS. The NL Ministry informed that the new articles/changes of the RIS 2019 in the RDD (incl the NTR's for ERTMS). This information will be exchanged and discussed with ERA before the Ministry publishes RIS 2019 - forecast Oct 2019.
Norway	28	12	16	Norwegian NSA informed the Agency that the Vehicle Regulation containing the NRs for vehicle authorisation is being revised. The process for adapting the regulations to the directive is started and

Table 2 : number of national rules notified by Member states and results of the examination

Member States	Number of National rules (or draft) and Acceptable national means of compliance	Results of the examination		Remarks
		Positive assessment	Negative assessment	
				planned to be finished by the end of 2019. The review of ERAs draft assessment report will be then a part of this revision. 11 National rules should be modified 5 National rules should be repealed
Poland	63	0	0	Under assesement by ERA
Portugal	59	58	1	1 National rule (IT GER 009) related to Train detection system will be revised by Portugal to include frequence management for compatibility with track circuits.
Romania	14	12	2	2 National rules should to be clarified
Slovakia	14	7	7	7 National rules should to be clarified
Slovenia	21	14	7	7 National rules should to be clarified
Spain	52	52	0	
Sweden	32	32	0	
Switzerland	47	14	33	3 National rules should be repealed 30 National rules should to be clarified
UK-Great Britain	59	41	18	7 National rules should be modified 10 National rules should be repealed 1 National rule related to limits and test/evaluation method on train detection systems should be notified by UK UK informed the Agency that for 14 National rules, RSSB will review the requirements and make appropriate changes in a future revision of the standard.
UK-Northern Ireland	0	0	0	National rules in addition to TSIs mentioned in section1 were not provided by the MS.



5 EVALUATION REPORT PER MEMBER STATE

The evaluation available in this section where all the rules provided by the MS are listed, includes the following information:

- a. the status of their availability (Yes/No). If Yes, additional information is provided when available (e.g. document or RDD, language, LoP version, confirmed or forecast...).
- b. the status of their publication in RDD:
 - no,
 - uploaded,
 - ready to be uploaded by the Agency,
 - published by the MS (possibly with a forecast date).
- c. the existence of national rules related to parameters listed in subclauses 4.2
- d. the existence of rules (or draft rules) applicable to rolling stock for compatibility with existing network/legacy system, and the reference to the related parameters.

For these rules, a more detailed analysis is provided per parameter such as the purpose of the rule, how the rule 'fits' with RINF register for the description of the infrastructure or with TSI OPE for information to be exchanged between IM and RU, need to review a specific case, etc.

- e. The existence of other rules than those listed in points c and d above. If such rules are not justified by the technical compatibility with the network, they should not exist except if they are intended to cover a possible TSI deficiency (in accordance with the guidelines [2]).

For these rules, a more detailed analysis is provided per parameter.

Existence of non-mandatory national provisions, with thereference to the related parameter.

Associated with each rules, the Agency's evaluation is described as well as some additional actions to be taken as a follow-up of this evaluation.

5.1 Member state AT

5.1.1 Summary of actions

Action	Responsible
AT to provide the national rules in addition to the TSIs	NSA AT

5.1.2 Rolling Stock Subsystem

5.1.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	No
	Nature: - RDD: an old publication based on the former list of parameters. Migration to the new list of parameters is imported in RDD, not published.
	LoP version: New list as in Decision 2015/2299/EU
	According to the information received from NSA AT, a working group is now reviewing the list of national rules. The forecast is that the list of rules will be available end of September 2019
Assessment status	-
Amount of remaining NRs in addition to latest TSIs	-

5.1.3 CCS onboard Subsystem

5.1.3.1 Summary table

Availability and status of remaining national rules	
Availability of data	No
	Nature: - RDD: an old publication based on the former list of parameters. Migration to the new list of parameters is imported in RDD, not published.
	LoP version: New list as in Decision 2015/2299/EU
	According to the information received from NSA AT, a working group is now reviewing the list of national rules. The forecast is that the list of rules will be available end of September 2019
Assessment status	-
Amount of remaining NRs in addition to latest TSIs	-

5.2 Member state BE

5.2.1 Summary of actions

Action	Responsible
NSA BE to align the draft “arrêté royale” with the draft national rules assessed by ERA	MS/NSA
NSA BE to publish the cleaned NRs in RDD	NSA BE
NSA BE to take into account the actions identified below as “Action NSA BE ”	NSA BE
ERA to take into account the actions identified below as “Action ERA ”	ERA

5.2.2 Rolling Stock Subsystem

5.2.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : Excel table
	RDD : ready for upload in RDD
	LoP version : New
	-
Assessment status	On going Taken into account by MS : see assessment below
Amount of remaining NRs in addition to latest TSIs	42 include one non mandatory rules rule

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	15 parameters: 6.2-Impact of the vehicle on the environment 6.2.1.2-Exhaust gas emissions 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.2.4-Psophometric current 8.4.2.5-Transverse voltage limits for compatibility voice/data circuits 8.4.3.1-Maximum electro-magnetic fields 8.4.3.2-Induced interference current/voltage 8.4.3.3-Psophometric current 8.6-Diesel and other thermal traction system requirements 8.7.1-Tanks and pipe systems for flammable liquids 8.7.2-Pressure vessel systems/pressure equipment 8.7.3-Steam boiler installations 8.7.4-Technical systems in potentially explosive atmospheres	Other directives covering : <ul style="list-style-type: none"> • Environment impact, • Exhaust emission directive • EMC directive • Pressure vessel • Dangerous goods • Etc.

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
		14.1-Design, operation and maintenance constraints for the transport of dangerous goods	
Rules related to documentation	Parameters listed in section 3.2.4	1 parameter: 1.4-National requirement for testing	The rule should address rules related to organisation of tests. Not accepted National rule should be modified Action to NSA BE: Rule should be revised to cover clearly aspects related to organisation of tests (e.g reference to Article 8 of the Railway Act 30/08/2013) NSA BE indicates that reference to article 8 of 30/08/2013 is done and inform that there is no authorisation for testing
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter	
Other rules related to compatibility with network / legacy system	See subsection 2 below	2 parameters: 9.3.1-Speed indication 9.3.4-Driver supervision	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	10 parameters: 3.1-Vehicle gauge 3.2.1-Running safety and dynamics 3.3.2-Wheelset (complete) 7.2.2.4-Lamp 9.1.1-Interior layout 9.1.3.4-Front visibility / visibility field 9.1.4-Desk ergonomics 9.3.2-Driver display unit and screens 9.6-Recording device 9.7-Remote control function from the ground	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	6 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.1.3-Interference current under the vehicle 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 8.4.2.3-Vehicle entrance impedance 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Existence of non mandatory rules	-	1 parameter: 7.1-Integrity of software employed for safety related functions	Reference to EN 5012x remain pending the revision of TSI Loc&Pas application guide. Action ERA: Publication of the revised application guide that refer to EN 5012x

5.2.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.2.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>4.7.4-Eddy current track brake</u> Sauf mention contraire dans le registre de l'infrastructure / les données de l'infrastructure mises à disposition par le gestionnaire de l'infrastructure, les freins à courants de Foucault sont, en principe, interdits. les freins à courants de Foucault doivent pouvoir être désactivés</p>	The national rule refers to open point 4.2.3.3.1.2 Rolling stock characteristics for compatibility with train detection system based on axle counters -EMC in Loc&Pas TSI 1302/2014.	Accepted
<p><u>6.2.3.4-Ballast pick-up and projection onto neighbouring property</u> Cet item ne concerne pas le matériel circulant à moins de 250 km/h. Des éléments permettant de garantir le bon comportement du matériel vis-à-vis de cette problématique sont présentés (un essai en ligne pourrait être demandé). Les essais doivent être effectués à vitesse maximale de circulation du matériel. L'attestation de conformité doit mentionner ces conditions. La vitesse maximale de circulation de chaque état membre est définie dans son document de référence.</p>	The national rule refers to open point 4.2.6.2.5, Aerodynamic effect on ballasted track for RST of design speed in Loc&Pas TSI 1302/2014 and apply to vehicle operating with a design speed above 250km/h.	Accepted
<p>8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.1.3-Interference current under the vehicle 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 8.4.2.3-Vehicle entrance impedance</p> <p>See section “ Analysis of rules related to compatibility with Train Detection System”</p>	The national rule refers to open points in Loc&Pas TSI 1302/2014 : - 4.2.3.3.1.1 Compatibility with track circuits-EMC- EMC interference, - 4.2.3.3.1.2 Rolling stock characteristics for compatibility with train detection system based on axle counters –EMC - 4.2.3.3.1.1 Compatibility with track circuits – Vehicle design: minimum impedance between pantograph and wheels of the train	See section “ Analysis of rules related to compatibility with Train Detection System”

5.2.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>9.3.1-Speed indication</u> Un indicateur de vitesse est présent dans chaque poste de conduite. la précision de mesure et d'affichage de la vitesse satisfait aux conditions suivantes:</p> <ul style="list-style-type: none"> • $\pm 3 \text{ km/h} \pm 1,5\%$ de la valeur de la vitesse max., si $V \text{ max.} > 160 \text{ km/h}$; • $\pm 3 \text{ km/h} \pm 2,5\%$ de la valeur de la vitesse max., si $V \text{ max.} < 160 \text{ km/h}$, <p>Ou bien la mesure et l'affichage de la vitesse satisfait aux conditions de la ST CCS. Voir description pour les véhicules équipés d'un EVC.</p>	<p>The national rule refers to clause 4.2.9.3.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The rule is maintained as it covers the Belgium Class B system.</p>	Accepted
<p><u>9.3.4-Driver supervision</u> Chaque poste de conduite est muni d'un système de veille automatique selon les prescriptions de la fiche UIC 641. Le dispositif de veille automatique est mis en service au plus tard lorsque la vitesse atteint 5 km/h et reste armé tant que la vitesse est supérieure à cette valeur. 30 secondes après déclenchement de la veille automatique et sans intervention du conducteur, le dispositif de clignotement de phares comme décrit au 7.2.2 est automatiquement activé. La valeur X comme définie dans la STI LOC&PAS est fixée à 5 sec. Description : UIC 641,UIC 651, L'intervalle X comme défini dans la STI Loc & Pass est fixé à 5 secondes.</p>	<p>The national rule refers to clause 4.2.9.3.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The rule complements the clause 4.2.9.3.1 (2) of Loc&Pas TSI, by providing the value of "X seconds". The value of X in Belgium is 5 seconds. For aspects related to light flashing device, see Agency evaluation on parameters 7.2.2.4. Following assessment of the Agency, NSA BE indicates that Obligation on blinking lights will be removed.</p>	<p>Rule related to flashing device is Not accepted and be repealed</p> <p>Action NSA BE : National rule to be revised to highlight what remain for TSI vehicle.</p>

5.2.2.4 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<p><u>3.1-Vehicle gauge</u> Conditions particulières relatives aux OTM afin de respecter le gabarit : les exigences de la norme EN 14033-1 s'appliquent. Description : EN 14033-1</p>	<p>The national rules refer to clause 4.2.3.1 of Loc&Pas TSI 1302/2014.</p> <p>NSA BE indicates that the TSI does not cover the clause 5.2 of EN 14033-1 and request that this subject is to be covered by TSI loc&Pas 1302/2014. NSA BE considers the clause not as an exception but something very common in a lot of OTM where working organs can be unfolded and folded.. It has to be made sure that these organs are folded properly during "drive" mode. This is an</p>	<p>Accepted pending discussion at TSI Workin party</p> <p>Action ERA : to consider the request of NSA BE</p>

National rules	Agency evaluation	Agency evaluation status
	<p>operational and safety constraint but it can only be achieved by a correct design of the vehicle.</p> <p>Agency : TSI loc&Pas clause 4.3.2.1 refer to EN 15273-2 as well as EN 14033-1-2017 clause 5.1. The applicant chooses a reference profile to comply with; this will be the technical compatibility reference to be used for the comparison with the lines in which the OTM is intended to be used in transport mode. The clause 5.2 of EN 14033-1 referes to exceptions to the declared reference profile as well some operational measures which are not and is not intended to be covered by Loc&Pas TSI scope. Under the "new" IOD these situations are managed at operational level by means of the SMS of RU and IM (article 23.1.c).</p>	
<p><u>3.2.1-Running safety and dynamics</u> Il y a lieu de prendre en compte que l'inclinaison des rails est de 1/20 sur l'infrastructure ferroviaire belge. Description : L'inclinaison des rails est de 1/20 sur l'infrastructure ferroviaire belge. Registre de l'infrastructure For OTM 14033-1</p>	<p>The national rules refer to clause 4.2.3.4.2 of Loc&Pas TSI 1302/2014 and clause 4.2.3.5 of TSI WAG</p> <p>Agency : The applicant chooses the area of use for which the tests are to be carried out (this includes the cant deficiency, the speed of the rolling stock, the rail inclination). If the rolling stock is to be authorized where the inclination of the rail is different, the conformity must be demonstrated for the different inclinations. The rail inclination is currently a characteristic that must be part of the technical file and is also a basic design characteristic.</p>	Accepted
<p><u>3.3.2 Wheelset (complete) (OTM)</u> La conception des essieux et des arbres d'essieux tient compte des efforts générés en mode travail. EN 14033-1</p>	<p>The requirement refers to clause 4.2.3.5.2.1 and 6.2.3.7 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The TSI clauses on axle and wheelset axles already cover the requirement. The applicant shall declare in the technical documentation as set out in clause 4.2.12 of TSI 1302/2014, the assumption of the load conditions for the calculations.</p> <p>Following assessment of the Agency, NSA BE indicates that this rule will be removed but asks ERA to give some explanation on this in the AG.</p>	Not accepted National rule should be repealed
<p><u>7.2.2.4-Lamp</u> Le conducteur peut commander les feux avant, de position et arrière à partir de la position normale de conduite ; le pilotage des feux peut faire appel à une seule commande, ou à une combinaison de commandes. Signal d'alerte lumineux donnant 30 à 40 clignotements des projecteurs par minute.</p>	<p>The national rule refers to clause 4.2.7.1.4 of Loc&Pas TSI 1302/2014.</p> <p>Agency : The rule "<i>Blinking mode of head lamps is still compulsory in Belgium</i>" is not a rule for vehicle authorisation, this is dealt with under the SMS of Railway undertaking. There could be many ways</p>	Not accepted National rule should be repealed Action NSA BE : The rule will be revised.

National rules	Agency evaluation	Agency evaluation status
<p>Ce requis est obligatoire sur les véhicules munis de cabine de conduite.</p>	<p>that does not require a technical change of a vehicle.</p> <p>The rule is maintained by NSA BE pending the revision of their existing operational national rules that mandate blinking mode of head lamps.</p> <p>The remaining Safety national rules of Belgium do not include use of <i>"Blinking mode of head lamps is still compulsory in Belgium"</i>, the rule mentioned here can be removed now.</p> <p>Following assessment of the Agency, NSA BE will remove the rule but will state that if a blinking light mode is provided, it must be possible to activate it from the drivers' cab.</p>	<p>Action ERA:</p> <p>ERA will provide further advice in relation to the COR 14 in the revised TSI OPE.</p>
<p><u>9.1.1-Interior layout, 9.1.4-Desk ergonomics</u> Les cabines de conduites sont conçues selon les prescriptions des STI ou selon les fiches UIC 612 et 651. OTM : Les exigences de la norme EN 14033-1 s'appliquent.</p> <p><u>9.3.2-Driver display unit and screens</u> Les écrans (DMI) sont disposés dans la cabine de conduite selon l'appendice J la fiche UIC 612-0</p>	<p>The national rule refers to clause 4.2.9.1 of Loc&Pas TSI 1302/2014.</p> <p>NSA BE indicates that the TSI CCS gives requirement for driver desk lay-out and ergonomics, but they are very general. NSA BE also experienced some difficulties encountered by the manufacturers, especially on the position of DMIs. NSA BE will introduce a change request to LOC&PAS TSI regarding the position of DMI.</p> <p>Agency :</p> <p>The change request will have to take into account the discussions already held in the last full revision of LOC&PAS TSI and next limited revisions (REC 120, REC 120-1).</p> <p>Note. Functional requirements are covered by TSI Loc&Pas 4.2.9.1.4. The TSI application guide indicate that a request for standard have been launched RfS 006- Driver's cab: front visibility, layout, access. (EN 16186-1 to 4).</p>	<p>Accepted</p> <p>Action ERA :</p> <p>TSI WP to consider the change request that will be introduced by NSA BE</p>
<p><u>9.1.3.4-Front visibility / visibility field</u> La visibilité frontale satisfait aux conditions de la fiche UIC 651. (4ième édition – 2002) Pour les locomotives avec cabine centrale, la visibilité des signaux bas depuis le poste de conduite en position assise n'est requise que du côté de la voie correspondant au côté de la cabine à partir duquel le conducteur conduit la locomotive. Remarque : Sur l'infrastructure ferroviaire Belge, les signaux bas sont situés à gauche de la voie dans le sens de marche. OTM : Les exigences de la norme EN 14033-1 s'appliquent.</p>	<p>The national rule refers to clause 4.2.9.1.3.1 of Loc&Pas TSI 1302/2014.</p> <p>NSA BE indicates that the rule covers locomotive with a central driver's cab and considers that the TSI is not enough explicit to cover the visibility of the driver in seated position.</p> <p>Agency:</p> <p>The front visibility of such typ of locomotive is covered by the clause 4.2.9.1.3.1 (3) of Loc&Pas TSI. In addition, in the WPs in 2016, it was decided to cover the front visibility of central driver cab in the last revision of the TSI application guide that</p>	<p>Accepted pending discussion at TSI Working party</p> <p>Action ERA :</p> <p>TSI WP to check if the clause mentioned in the application guide can be transferred in the TSI Loc&Pas clause.</p>

National rules	Agency evaluation	Agency evaluation status
	<p>mention the EN 16186-1:2014 cl. 5.2.2. and the following paragraph :</p> <p><i>"For locomotives with central cab, due to the nose structure in front of the cab, and for OTMs, due to the layout of the cab, the visibility of low signals at both sides of the track is not always possible from the seated driving position.</i></p> <p><i>For locomotives with central cab and OTMs: If movements from the driver are required to enable him to see low signals then these movements within the cab are not to be hindered by equipment inside the cab.</i></p> <p><i>For locomotives with central cab, the visibility of the low signals from the seated driving position is only required for the track side corresponding to the cab side from which the driver is operating the locomotive.</i></p> <p><i>For OTMs, the requirements set out in clause 14.6 of EN 14033-1 are an acceptable mean of compliance"</i></p> <p>ERA considers that this issue is closed until next revision of the EN 16186-1:2014 cl. 5.2.2. (in the WP in 2016, the inclusion of this clause was already discussed but finally discarded because of the wording in the EN was not clear).</p> <p>NSA BE agrees with application guide clauses and wants that the clauses become mandatory in the TSI.</p>	
<p><u>9.6-Recording device</u> Événements à enregistrer obligatoirement avec un appareil enregistreur :</p> <ol style="list-style-type: none"> 1. Au minimum conforme au § 4.2.3.5.2 de la STI "Exploitation et gestion du trafic" applicable. 2. Pour les véhicules équipés du système MEMOR ou STM MEMOR, l'enregistrement est également conforme à la description reprise dans la partie C de la présente annexe ; 3. Pour les véhicules équipés du système TBL 1+ ou STM TBL1+, l'enregistrement est également conforme à la spécification générale de la TBL 1+ ; 4. Pour les véhicules équipés du système TBL2 ou STM TBL2, l'enregistrement est également conforme aux spécifications de cet équipement ; 5. Pour les véhicules équipés d'ERTMS/ETCS, l'enregistrement est également conforme aux spécifications applicable de la STI CCS ; 6. Pour les véhicules équipés du système TVM430 ou STM TVM430 ou Bistandard ETCS-TVM430, l'enregistrement est également conforme aux spécifications de cet équipement. <p>Remarque : Si l'enregistreur n'est pas muni d'un dispositif automatique de mise à jour de l'heure, celle-ci est réglée en permanence en Temps Universel (UTC) + 1 heure.</p>	<p>The national rule refers to clause 4.2.9.6 of Loc&Pas TSI 1302/2014.</p> <p>NSA BE indicates that the rule deals with the chronology of data registered by the recording device (when data are from different sources). NSA BE remarks that the manufacturer must take into account the specifications of the EN 62625-1. This standard is only referenced in the TSI Loc & Pass 1302/2014 and not in the version 2011/291/CE. Furthermore, the manufacturer of the rolling stock must take into account that the data to be registered can come from different sources and must make that the data is to be registered in a correct and chronological order. All data must also be registered on a same time or distance base. Means have to be foreseen to make the data available and readable when needed by a mandated authority.</p> <p>Agency :</p> <p>ERA considers that there is no mistake in the Standard EN 62625-1 called by TSI Loc&Pas 2014 see clause 4.3.1.4 of EN 62625-1. During the analysis it was concluded that the part 2 of the EN</p>	<p>Accepted</p> <p>Action ERA:</p> <p>TSI WP to confirm if the relevant clauses of the "EN 62625-2:2016 <i>Electronic railway equipment - On board driving data recording system - Part 2: Conformity testing</i>" can be referred either in the TSI and/or in the TSI application guide.</p>

National rules	Agency evaluation	Agency evaluation status
<p>Toutes les données doivent être enregistrées sur une même base de temps et de distance parcourue.</p> <p>Il est tenu compte du fait que les données à enregistrées proviennent de différents médias et réseaux informatiques et il est donc indispensable de faire en sorte que l'enregistrement se fasse en conformité avec la chronologie des événements</p> <p>L'EF doit pouvoir mettre à disposition de l'autorité publique mandatée à chaque instant les données enregistrées. L'EF doit également procurer à l'autorité publique mandatée les données, les informations et les moyens nécessaires pour la lecture et l'interprétation des données enregistrées.</p> <p>Description : EN 62625-1,EN 62625-2,STI CCS, STI OPE</p>	<p>62625 can cover the aspects related to chronology of data registered in a recording device.</p> <p>The rule is maintained pending that the Working party of Loc&Pas TSI checks if relevant clauses of EN 62625-2:2016 can be referred in the TSI or in its application guide.</p>	
<p><u>9.7-Remote control function from the ground</u></p> <p>La télécommande par radio est conçue de sorte à assurer le niveau de sécurité requis en fonction du type d'engin et de son utilisation. Un système de veille automatique ainsi qu'un dispositif de détection de basculement est obligatoire.</p> <p>Description : EN 50239 + VA + système de détection de basculement.</p>	<p>The national rule refers to clause 4.2.9.3.6 of Loc&Pas TSI 1302/2014.</p> <p>Agency :</p> <p>The rule is maintained pending the revision of TSI within SG 3/4. ERA considers that only the relevant clauses of the EN50239 should be considered.</p> <p>Note. The EN 50239 is mentioned in the revision of TSI loc&Pas application guide.</p>	<p>Accepted</p> <p>Action ERA:</p> <p>TSI WP to consider the relevant clauses of the EN 50239 in the next revision of the TSI Loc&Pas.</p>

5.2.2.5 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.1-Rail return current, 8.4.2.1.2-Heating cable interference current, 8.4.2.1.3-Interference current under the vehicle</u></p> <p>Le matériel satisfait aux conditions établies par le gestionnaire de l'infrastructure SI (x,RoSto—y,z) EMC RS 2.4. F.</p> <p>Description : SI (x,Ro—o—y,z) EMC RS 2.4 F, EN 50238, CLC/TS 50238-2</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency : ok</p>	<p>Accepted</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u></p> <p>Le matériel satisfait aux conditions fixées par le gestionnaire de l'infrastructure SI (x,RoSto—y,z) EMC RS 2.4. F</p> <p>Description : SI (x,Ro—o—y,z) EMC RS 2.4F, EN 50238, CLC/TS 50238-3, EN 50121-1 EMC, EN 50121-3-1 EMC</p>	<p>The national rule refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency : ok</p>	<p>Accepted</p>
<p><u>8.4.2.3-Vehicle entrance impedance</u></p> <p>Le matériel satisfait aux conditions du document SI (x,Ro—o—y,z) EMC RS 2.4 F.</p> <p>Description : SI (x,Ro—o—y,z) EMC RS 2.4 F.</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency : ok</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> En cas de problèmes de shuntage répétitifs dans certaines zones géographiques ou pour certains types de matériels, l'autorité nationale de sécurité peut imposer l'installation de dispositifs d'aide au shuntage aux matériels concernés. Description : ERA/ERTMS/033281 (V4), UIC 790, UIC 512, Registre de l'infrastructure</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency : The NR shall not only refer to NSA BE but also indicate for which kind of TCs (or areas of use...) or for which types of vehicles (Impacting characteristics...) the shunt assister is necessary</p> <p>Following assessment of the Agency, NSA BE indicates that the rule has always been in the Belgian regulation. NSA BE oughts this rule is a precaution.</p>	<p>Not accepted NRs should be modified</p>
<p><u>12.2.4.5-Compatibility with fixed installations of CCS (OTM)</u> Le matériel roulant susceptible de circuler isolément et dont la tare est inférieure à 30 t, est équipé d'un dispositif d'aide au shuntage Description : ERA/ERTMS/033281 (V4), UIC 790, UIC 512, Registre de l'infrastructure</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Rule apply to OTM</p> <p>Agency : It is not clear whether the rule relates to part of networks? If yes a specific case might be needed. In the interface document, rule is under 3.1.7.1 vehicle axle load... Normally rules concerning shunting assisting device are related to axle load not to the vehicle mass.</p>	<p>Not accepted NRs should be modified</p>

5.2.3 CCS onboard Subsystem

5.2.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover the open points:

- 12.2.5.2 B2 "braking aspects"

The parameters below do not contain national rules to cover the open points:

- 12.2.5.3 B2 and B3 "Availability"
- 12.2.5.6 B2 "braking aspects"
- 12.2.5.4; 12.2.5.5 B2 "ETCS DMI"

5.2.3.2 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : Excel table RDD : ready for upload in RDD
	LoP version : New
	If no, forecast
Assessment status	On going Taken into account by MS : see assessment below
Amount of remaining NRs in	7

Availability and status of remaining national rules			
addition to latest TSIs			
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	12.1.2.2-Other GSM-R requirements 12.2.2-STM requirements 12.2.3-Transitions 12.2.5.2-Braking safety margins 12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)	

5.2.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.1-National on-board signalling systems</u> En fonction des lignes parcourues, les cabines de conduites des trains sont équipées des systèmes de signalisation appropriés. voir doc 20190228_AR_12_2.doc Les performances de freinage calculées par le système de signalisation de cabine ne sont pas supérieures aux performances de freinage réelles du train.</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency : The parameter 12.2.1 is intended to list the class B systems which might be the case for the document referred. The comments on the content still are: <i>“Depending on the lines traveled, the train cabs of the trains are equipped with the appropriate signaling systems. see doc 20190228_AR_12_2.doc”</i> This is a route compatibility check topic and has nothing to do with Vehicle authorisation. At authorisation and based on the area of use, the vehicle must be equipped with the correct class B system ⇒ The requirement above should be deleted. <i>“The braking performance calculated by the cab signaling system is not greater than the actual braking performance of the train.”</i> A cab signaling system normally should calculate the braking curves in a safe way. This is dependent on the operational condition of the train, and can require manual data entry. Therefore this is an issue of SMS. The wording (requirement) of the NTR is not clear.</p>	Not accepted National rule should be modified

5.2.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<u>12.1.2.2-Other GSM-R requirements</u>	Agency :	Not accepted

National rules	Agency evaluation	Agency evaluation status
<p>Le logiciel du GSM-R installé est approuvé pour être utilisé sur l'infrastructure ferroviaire belge. 150 (+30, 0) secondes après déclenchement de la veille automatique ou 30 secondes après déclenchement de la veille automatique et arrêt du train et à défaut intervention du conducteur, la radio GSM-R émet automatiquement un appel d'urgence vers le service de gestion du trafic ferroviaire.</p> <p>Si des fonctions non-harmonisées sont implémentées dans le système GSM-R, celles-ci ne peuvent pas perturber le bon fonctionnement sur l'infrastructure ferroviaire belge.</p> <p>Description : STI CCS, EIRENE, RGPT</p>	<p>Concerning the DSD alarm via GSM-R this is an exported constraint and cannot be accepted. The rule requires a TSI conform vehicle to have an additional physical link between the DSD device and the radio and the implementation of an optional functionality in the cab radio. Vehicles without the optional functionality in the cab radio may be able to run, with a specific operational procedure in case of driver unavailability, to be covered in the SMS.</p> <p>Concerning the non harmonised functions in the trackside, Infrastructure Manager has to ensure that this does not harm the operation of an TSI conform vehicle. So this is an requirement for infrastructure authorisation and not for Vehicle Authorisation and should be removed. Regarding additional functions onboard, they shall of course not compromise the correct operation: this is a generic requirement, which is checked at authorization, but not an NTR.</p>	<p>National rule should be repealed</p>
<p><u>12.1.2.2-Other GSM-R requirements</u> Pour les équipements de bord baseline 0, le demandeur s'informerait quant à la gestion des éventuelles interférences avec le réseau GSM public (voir °18 du § 12.2.1.a de la partie A)</p>	<p>Agency : First part: B1 (last TSI to be applicable) can be required for first authorisation but not for an already authorised vehicle when the radio part is not intended to be changed. It is therefore an exported constraint and cannot be accepted. Second part <i>From 1 August 2019 and pursuant to Articles 70 and 75 of the Rail Code, the infrastructure manager and the safety authority may, if they consider it necessary, reduce or prohibit the movement of any vehicle whose Failure of the GSM-R equipment to comply with ETSI TS 102 933-1 (version 2.1.1 or above) and TS 102 933-2 (version 2.1.1 or above) would create a risk to safety or regularity traffic. "</i> When this is a warning it should be placed in the network access info or somewhere else. There is no direct link to VA.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>12.2.2-STM requirements</u> Le fonctionnement de ces systèmes, l'interaction avec les systèmes installés sur l'infrastructure et la transition d'un système vers un autre fait l'objet</p>	<p>Agency : Valid rule relates to ESC also when not completely clear in regard to testing (eventually).</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
des études de sécurité appropriées et de parcours d'essais éventuels.		
<p><u>12.2.3-Transitions</u> Le fonctionnement de ces systèmes, l'interaction avec les systèmes installés sur l'infrastructure et la transition d'un système vers un autre fait l'objet des études de sécurité appropriées et de parcours d'essais éventuels. Signalisation de cabine ETCS : l'équipement bord CCS est compatible avec l'équipement sol. L'équipement ETCS 'bord' est conçu pour pouvoir effectuer correctement les transitions en cas d'avarie soit du groupe de balises d'annonce, soit du groupe de balises d'exécution.</p>	<p>Agency : Valid rule relates to ESC As the requirement covers ETCS operation and transitions it should be in 12.2.5.7 or split in 2 requirements.</p>	Accepted
<p><u>12.2.5.2-Braking safety margins</u> Les performances de freinage calculées par le système de signalisation de cabine ne sont pas supérieures aux performances de freinage réelles du train. Valide pour la baseline 2 ETCS</p>	<p>Agency : Open point in Baseline 2 Valid for baseline 2</p>	Accepted
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> En ce qui concerne le mode non-leading en BL 2, le CR 513 du subset 108 (V 1.2.0) est d'application.</p>	<p>Agency : Valid for baseline 2</p>	Accepted

5.3 Member state BG

5.3.1 Summary of actions

Action	Responsible
NSA BG to provide the additional information required in some national rules	NSA BG
NSA BG to publish the cleaned NRs in RDD	NSA BG
NSA BG and ERA to take into account the list of actions referred in the detailed assessment	NSA BG/ ERA

5.3.2 Rolling Stock Subsystem

5.3.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table and RDD RDD: rules imported in RDD, pending check and publication by BG
	LoP version: New
	-
Assessment status	ERA provided the assessment to the MS. Discussion ongoing for some rules.
Amount of remaining NRs in addition to latest TSIs	8

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	4 parameters: 6.2.1.2-Exhaust gas emissions 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.3.1-Maximum electro-magnetic fields	Other directives covering : • Exhaust emission directive • EMC directive
Rules related to documentation	Parameters listed in section 3.2.4	0 parameters	
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	
Other rules related to compatibility with network / legacy system	See subsection 2 below	0 parameters	
Other rules not covered above (e.g	See subsection 3 below	1 parameter: 3.3.5-Sanding system	Detailed analysis per parameter provided in section 3 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
potential TSI deficiency)			
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	3 parameters: 8.4.2.1.1-Rail return current 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.3.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.3.2.2.1 Requirements covering open points

No requirements.

5.3.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.3.2.2.3 Other rules related to compatibility with existing network/legacy system

No requirements.

5.3.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<u>3.3.5-Sanding system</u> Locomotives and railcars shall be equipped with sanding systems	The national rule refers to clause 7.4 of Loc&Pas TSI 1302/2014. Agency: The rule can be maintained until chapter 7.4 of Loc&Pas TSI is reviewed to include this specific condition for Bulgaria. Bulgaria will have to present a request for specific conditions. NSA BG: BG will apply for a specific conditions to be introduced in 7.4	Accepted NSA BG will apply for for specific conditions to be added in 7.4

5.3.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> Requirements for 75Hz currents: The total reverse traction current in the two track rails in electrified sections using alternating rail circuits may be up to 300 A. The permissible	The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: What about the maximum currents for the other	Under review by ERA ERA and NSA BG to further discuss

National rules	Agency evaluation	Agency evaluation status
reverse traction current in each of the rails may be up to 150 A with a maximum permissible asymmetry of up to $\pm 4\%$, i.e. in one rail - reverse traction current up to 156 A and in the other - up to 144 A.	frequencies?	based on the provided input
<p>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</p> <p>EN 50238 CLC/TS 50238-3</p>	<p>The national rule refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Please revise the rule and identify the possible applicable Open Point for this parameter (please confirm if is TSI Loc&Pas 4.2.3.3.1.2, Rolling stock characteristics for compatibility with train detection system based on axle counters -EMC, Rolling stock characteristics for compatibility with train detection system based on axle counters - EMC- Magnetic track brake, Eddy current brake, Open Point).</p>	<p>Not accepted</p> <p>NRs should be modified</p> <p>ERA and NSA BG to further discuss based on the provided requirements</p>
<p>12.2.4.5-Compatibility with fixed installations of CCS</p> <p>§ 3.1.2.6 of the ERA/ERTMS/033281 CCS TSI Interface document: Distance bx = 4200 mm max in CCS TSI, but in BG the maximum distance = 3000 mm (Specific case is needed)</p> <p>NTR on open point in TSI CCS Request for a specific case for BG - Additional information underway to be provided by as several requirements seem to be influenced</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Please provide more details related to the need for bx maximum distance set to 3000mm.</p> <p>When dully justified, the rule may be accepted for technical compatibility with existing network - until SC is included in the TSI revision with an action to Bulgaria to require the Specific Case.</p> <p>NSA BG: The corresponding document is Ordinance 58, point 452, dot 3 provided as attached file</p> <p>The rule originates from Art. 452, para. 3 of Ordinance No 58 on the rules for technical operation, train movements and signalling in railway transport. The rule reads: "At stations with safety equipment, the insulating rail restraint shall be placed not less than 3 000 mm and no more than 6 000 mm from the remote indicator (point after which the rolling stock is forbidden to enter). The rule applies to existing security equipment. In new construction, when upgrading or renovating safety equipment this parameter is required to be at least 4200 mm.</p>	<p>Under review by ERA</p> <p>ERA and NSA BG to further discuss based on the provided input</p>

5.3.3 CCS onboard Subsystem

5.3.3.1 Requirements covering open points for Baselines 2 and 3

No requirements

5.3.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature: Excel table and RDD		
	RDD: rules imported in RDD, pending check and publication by BG		
	LoP version: New list as in Decision 2015/2299/EU		
Assessment status	Closed		
	Taken into account by MS: yes		
Amount of remaining NRs in addition to latest TSIs	2		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	0 parameters	

5.3.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> Analog system ВДРВ (Train Dispatching Radio) BDS 16988-89, UIC 751-3 Ordinance № 58 of 2 August 2006 on the rules for technical operation, train circulation and signalling in railways, issued by the Ministry of Transport - Article 123 to 125, Article 192 (1) point. 32	Agency: Rule acceptable	Accepted
<u>12.2.1-National on-board signalling systems</u> Class B used in Bulgaria is EBICAB 700. For vehicle authorisation, it is not required to be equipped with the class B system.	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency: Rule acceptable	Accepted

5.3.3.2.2 Analysis of rules for ETCS and GSM-R

No requirements.

5.4 Member state CH

5.4.1 Summary of actions

Action	Responsible
NSA CH has in final stage of preparation a revision of national rules – this is not taken into account in this assessment. The revision is envisaged to be adopted by Switzerland end of June 2019. This revision includes some changes that will address some of the issues raised by ERA in this assessment. NSA CH will provide to ERA (in RDD) as soon as possible the reviewed version of the rules.	NSA CH
Further ERA assessment will continue based on the changes/adjustments introduced by the 06/2019 planned revision.	NSA CH/ERA
NSA CH and ERA to take into account the list of actions referred in the detailed assessment	NSA CH/ ERA

5.4.2 Rolling Stock Subsystem

5.4.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : Excel table based on published rules in RDD. The file contains the latest development and is ready for upload in RDD. RDD : rules published in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	On going: the discussion/exchange on the rules (including the revised rules) will be organised to achieve a final position.
Amount of remaining NRs in addition to latest TSIs	29

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	1 parameter: 6.2.1.2-Exhaust gas emissions	Other directives covering : • Exhaust emission directive
Rules related to documentation	Parameters listed in section 3.2.4	0 parameters	
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	
Other rules related to compatibility with network / legacy system	See subsection 2 below	13 parameters: 2.1.2.1-Load conditions and weighed mass 3.1-Vehicle gauge 3.2.1-Running safety and dynamics 3.2.4-Track loading compatibility parameters	Detailed analysis per parameter and rule provided in section 2 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
		4.2.2-Reliability of traction/braking interlocking 4.4.1-Emergency braking command 4.5.1-Emergency braking performance 5.1.1-Exterior doors 7.2.2.2-Marker lights 8.2.1.4-Maximum power and maximum train current 8.2.2.3-Pantograph contact force (including static contact force, dynamic behaviour and aerodynamic effects) 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 9.3.3-Controls and indicators	
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	5 parameters: 3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius 4.6.2-Wheel slide protection system (“WSP”) 8.2.2.2-Pantograph head geometry 9.3.3-Controls and indicators 9.7-Remote control function from the ground	Detailed analysis per parameter and rule provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	1 parameter: 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.4.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.4.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.3.4-Wheel/rail interaction influencing systems</u> Flange lubrication Description: Flange lubrication, requirements for construction of locomotives with flange lubrication system to protect track in tight bends.	The national rules refers to clause 7.5.3.1, Track interaction (clause 4.2.3) - Flange or track lubrication of Loc&Pas TSI 1302/2014 Agency: - Is the requirement a condition for authorisation? All locomotives has to be equipped with such a device? As formulated, it seems that if a locomotive is equipped with flange lubrication systems has to comply with your requirements. - Please confirm the identified Open Point - Please provide for assessment and to be attached in the rule, the referenced document - RTE 49410 NSA CH will send the relevant document RTE 49410.	Not accepted, NRs should be modified MS to provide the requested information and documents

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>4.7.4-Eddy current track brake</u> Use of braking systems without friction Description: The use of braking systems independent of wheel-rail adhesion conditions (e.g. eddy current track brakes, magnetic track brakes) for service braking is not permissible in Switzerland. The superstructural constructions used in Switzerland and calculated according to IP-RailO on Art. 31, para. 2.1 are not designed for the additional forces and temperatures generated by these braking systems. The weldability limits of long welded rails set according to the stability calculation (IP-RailO on Art. 31, para. 5) (set for Switzerland in R RTE 200.41) do not take account of the additional forces and temperatures generated by these braking systems. Magnetic brakes for emergency braking as required by INF TSI are permitted.</p>	<p>The national rules refers to clause 4.2.4.8.3, Braking system independent of adhesion conditions: eddy current track brake of Loc&Pas TSI 1302/2014. Agency: The requirement is not clearly expressed. The eddy current brake is allowed only as emergency brake or shall be switched off? Please confirm the identified TSI reference Open Point.</p> <p>The requirement for the usage of magnetic track brake (parameter 4.7.3) - allowed as emergency brake is already covered in the TSI: Already covered in the TSI: LOC PAS TSI 1302 2014 - 4.2.4.8.2 Magnetic track brake (2): A magnetic track brake is allowed to be used as an emergency brake, as mentioned in the TSI INF, clause 4.2.6.2.2. The rule needs to be revised NSA CH will check the TSI and reflect the situation.</p>	<p>Not accepted, NRs should be modified MS to provide the requested information and documents</p>

5.4.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.4.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>2.1.2.1-Load conditions and weighed mass</u> Tight track curves Description: The following minimum track requirements must be met for the free use of train lines in the SBB infrastructure network: Minimum radius for railcars (and trainsets): Rmin = 125 m Minimum radius for main-line locomotives: Rmin = 100 m Minimum radius for passenger carriages: Rmin = 80 m</p>	<p>The national rules refers to clauses 4.2.2.10 and 6.2.3.1 of Loc&Pas TSI 1302/2014. Agency: Rule duplicated with ID 47506 which is correctly placed to the parameter 3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius Rule shall be removed - please confirm NSA CH:The rule is duplicated and will eliminate this one.</p>	<p>Not accepted, NRs should be repealed Action NSA CH to remove the rule as duplicate in RDD</p>
<p><u>3.1-Vehicle gauge</u> Reference contour (gauge) general Description: Justification according to EN 15273 A-derogation (see page 2).</p>	<p>The national rules refers to clauses 4.2.3.1of Loc&Pas 1302/2014. Agency: The TSI requirements for gauging concerns only the rules for calculation and verification; the applicable methods are set out in EN 15273-2.</p>	<p>Not accepted NSA CH to provide additional documents</p>

National rules	Agency evaluation	Agency evaluation status
	<p>The TSI does not mandate any specific reference profile. Can you please precise the deviation from the TSI requirements.</p> <p>NSA CH:</p> <p>NSA CH indicated that the referenced document SBB R I-20030 in the description will be added</p>	
<p><u>3.2.1-Running safety and dynamics</u> Cant deficiency Description: When speed limits are defined on the Swiss railway network, cant deficiency in the track of 130 mm (freight trains) and 150 mm (passenger trains) is applied without further operating tests. It is therefore essential for rolling stock to be tested for these levels of cant deficiency. Rolling stock not tested for these cant deficiency levels may not be used on the Swiss railway network.</p>	<p>The national rules refers to clause 4.2.3.4 of Loc&Pas TSI 1302/2014.</p> <p>Agency: In accordance to EN 14363 referenced by the TSI (Loc&Pas and WAG) the applicant has the responsibility to choose the combination(s) of speed and cant deficiency to be used for acceptance. Choosing the inappropriate combination(s) of speed and cant deficiency may lead to operational restrictions, e.g. trains will not be able to operate to a certain level of performance. The specified values should be in RINF.</p> <p>NSA CH:</p> <p>Must be discussed. The Swiss system with train categories does not tolerate a free combination of speed and cant deficiency. The RINF is no solution.</p>	<p>Not accepted</p> <p>ERA and NSA CH to further discuss based on the received input.</p>
<p><u>3.2.1-Running safety and dynamics</u> Authorisation of rolling stock with Series N tilting system Description: In Switzerland tilting trains run on tracks designed for the R-series. For rolling stock homologation on specific lines it shall be shown that tipping trains can be driven at the envisaged speed. Currently, in Switzerland only trains constructed with an active tilting system to achieve high cant deficiency are regulated by law and permitted under the term 'tilting trains'. Where necessary, other systems can be similarly defined according to the tilting train specifications.</p>	<p>The national rule refers to clause 4.2.3.4 of Loc&Pas TSI 1302/2014.Agency: Seems a mixture of requirements for authorisation and requirements for unlimited access to all infrastructure. What are your additional requirements compared to the TSI requirements (based on the referenced standard EN 14363)?</p> <p>NSA CH:</p> <p>Must be discussed. NSA CH understand that this is not covered by the TSI. The admission and process of tilting trains must be discussed. NSA CH will provide the relevant document SBB I R-20019.</p>	<p>Under review</p> <p>NSA CH to provide justification and additional documents.</p>
<p><u>3.2.1-Running safety and dynamics</u> Narrow switches/Test of passage through switches Description: In comparison with other European countries, the line layout in some station areas in Switzerland is technically difficult to exploit due to the presence of tight deflection curves and</p>	<p>The national rule refers to clause 4.2.3.4 of Loc&Pas TSI 1302/2014.</p> <p>Agency: From the available information seems that it is a gauging issue - please confirm. It is a rules concerning the complete network (for authorisation) or it is a rule which concerns certain lines/stations only ?</p>	<p>Under review</p> <p>NSA CH to provide justification and additional documents.</p>

National rules	Agency evaluation	Agency evaluation status
<p>short intermediate sections of track with correspondingly small distance between track centres. This places specific requirements on the homologation of new rolling stock that shall be taken account of with special testing.</p>	<p>Please provide for assessment and to be attached in the rule, the referenced regulation SBB R I 50007. NSA CH: Must be discussed. This is not a gauging issue: In Switzerland minimal Radius is of 160 m in the junctions of the stations while in the rest of Europe the minimal radius is 250 m. The trains are running with up to 40 km/h over these junctions with 160 m. The test shows that it is safe to run with up to 40 km/h over the junctions and that the forces are below the limits. Sometimes speed restrictions are applied.</p>	
<p><u>3.2.1-Running safety and dynamics</u> Tight curves $r < 250$ m Description: The Swiss rail network has a relatively large number of lines with curves ($R < 250$ m) that do not covered by the prescribed technical assessment. Regulations for assessment area 5 ($R < 250$ m) referring to EN 14363 in progress (FOT, SBB I, BLS I, SOB I working group). The current status can be found in the interim guideline (SBB R I 50127).</p>	<p>The national rule refers to clause 4.2.3.4 of Loc&Pas TSI 1302/2014. Agency: What are your additional requirements compared to the TSI requirements (based on the referenced standard EN 14363)? Please provide for assessment and to be attached in the rule, the referenced regulation SBB R I 50127. NSA CH: Must be discussed The regulation is for all the lines which have radius below 250 m. We will send the SBB R I 50127.</p>	<p>Under review NSA CH to provide the additional document.</p>
<p><u>3.2.4-Track loading compatibility parameters</u> Track displacement force Description: The maximum permitted sum of guiding forces of rolling stock per wheelset is limited by the permitted track displacement resistance of the infrastructure. Due to the design of the superstructure, in Switzerland a coefficient of $\alpha = k1 = 0.85$ should be generally used as the control value when calculating the maximum sum of guiding forces. A coefficient of $\alpha = k1 = 1.0$ can only be applied in exceptional cases and requires special verification. On track tests should be carried out on the basis $\alpha = k1 = 0.85$.</p>	<p>The national rule refers to clause 4.2.3.4 of Loc&Pas TSI 1302/2014. Agency: What are your additional requirements compared to the TSI requirements (based on the referenced standard EN 14363)? Why it is necessary a coefficient of $\alpha = k1 = 0.85$ for all kind of vehicle categories (see choices made for the affected vehicle categories)? What are the exceptional cases and what are the special verification required for the cases of $\alpha = k1 = 1.0$? NSA CH: In Switzerland the limit is $\alpha = k1 = 0.85$ which must be fulfilled. Only vehicles, which fulfil that, will be given access on the lines.</p>	<p>Under review NSA CH to provide justification.</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>3.2.4-Track loading compatibility parameters</u> Safety against derailment Y/Q Description: The alternative verification procedure on respect of coefficient Y/Q in accordance with clause 4.3.10, ERA/TD2012-17 INT rev 3.0 may not be applied in Switzerland for vehicles which are the subject of this TSI.</p>	<p>The national rule refers to clause 4.2.3.4 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The ERA/TD2012-17 INT rev 3.0 is applicable for all Loc&Pas TSI compliant vehicles. Please provide the justification for not applying the referenced technical document or part of it. NSA CH:Must be discussed. Switzerland is not accepting any alternative calculation method.</p>	<p>Not accepted Reviewed and nNot accepted</p> <p>ERA and NSA CH to further discuss based on the received input.</p>
<p><u>4.2.2-Reliability of traction/braking interlocking</u> Safe traction cut-off Description: It shall be ensured that when the emergency brake is activated by the ETCS on-board unit on the leading vehicle, traction is also cutoff on the non-leading vehicles. The tolerated unavailability for traction cut-off on the leading vehicle and for multi-unit traction vehicles is set at $1 \cdot 10^{-7}$. On manned non-leading traction vehicles (ETCS on-board unit in Non Leading mode) it shall be ensured by technical means that the traction is cut off if the leading vehicle reduces the pressure in the main brake pipe. The tolerated unavailability is set at $1 \cdot 10^{-5}$. Traction cut-off comprises the whole chain, from the ETCS on-board unit to the unit which performs the traction cut-off on the vehicle. Reasons/explanation In the case of the emergency brake has been activated, safe traction cut-off must also be ensured when trains are running as multiunit traction vehicles or a traction vehicle is at the rear of the train as a booster-locomotive. or a so called Q-locomotive. Traction is normally cut-off 'safely' via two channels, whereby one channel takes effect via pressure reduction in the main pipe. The multi-unit control or the train driver (in the case of a booster locomotive, Q-locomotive or double-headed train) may act as the second channel. A deviation from this two-channel system is only permitted if it can be shown that other measures with an equivalent degree of safety are in place and therefore that the train will stop safely before the point of danger. The vehicle integrator and the vehicle keeper are responsible for demonstrating in the "SiNa VI" and "SiNa II" that the requirement is met or that</p>	<p>The national rule refers to clauses 4.2.4.2.2, 4.2.4.4.1 and 4.2.4.7 of Loc&Pas TSI 1302/2014.</p> <p>Agency:</p> <ul style="list-style-type: none"> - The TSI is covering issues related to traction/braking interlocking. - Is your requirement limited to situation when ETCS is activating the brake and when non-leading vehicles are concerned/involved? - It seems that you have a requirement for the identified issue (to be confirmed, see above) and also you provide a possibility to comply with the requirement via the "two channels" solution described. <p>You are not excluding compliance based on other solutions - to be confirmed. Your NTR may contain the requirement and an ANMC - to further investigate.</p> <p>NSA CH: The national requirement defines the unavailability for the safe traction cut-off for multiple controlled vehicles and as well as for non-leading vehicles. There no corresponding unavailability requirement for the safe traction cut-off in the TSI.</p>	<p>Under review</p> <p>ERA and NSA CH to further investigate the rule.</p>

National rules	Agency evaluation	Agency evaluation status
<p>equivalent measures are in place. For this purpose, the corresponding regulations must exist, and these must be bindingly applied even if the vehicle keeper is not the vehicle operator.</p>		
<p><u>4.4.1-Emergency braking command</u> Resetting the emergency brake Description: It shall only be possible to reset an emergency brake applied by the ETCS on-board unit in standstill. It shall only be possible to reset the emergency brake by a nonstandard multiple manipulation. Reasons/explanation In Switzerland, the emergency brake is only applied in safety relevant events. The vehicle must therefore reach standstill as quickly as possible. It must be a conscious action for the driver to reset the brake when the train is at standstill.</p>	<p>The national rules refers to clauses :</p> <ul style="list-style-type: none"> - 4.2.4.4.1 of Loc&Pas TSI 1302/2014. - 4.2.2 of CCS TSI. <p>Agency: How the ETCS is ensuring that an emergency brake command does not lead to the situation that the train is not stopping in dangerous location like tunnel, bridge etc.?</p> <p>NSA CH: This requirement does not deal with the question when an EB is commanded by ETCS. In case of an EB activated by ETCS the request is, it shall lead to standstill and is just released by a driver action (not automatically). There are still questions discussed in the currently ongoing revision, modifications might be done.</p>	<p>Under review</p> <p>NSA CH to provide justification and the revised form of the rule.</p>
<p><u>4.5.1-Emergency braking performance</u> Sufficient braking performance during emergency braking Description: It shall be ensured that the effective braking means during emergency braking can achieve at least the same braking performance as the safe braking means that have been considered in the calculation of ETCS braking curves. In particular, the following scenario shall be taken into account for trains whose number of powered axles is greater than 20 % of the number of all axles, and for all trains with a maximum speed > 160 km/h: If the regenerative brake is used during emergency braking from a high speed, it shall be demonstrated by how much the braking distance increases if the catenary voltage fails. This increase in braking distance shall be taken into account when braking performance is calculated. The braking effect of the emergency braking activated by the train control system in the leading traction vehicle shall not be reduced by either the leading vehicle or by other vehicles in the train (e.g. due to replenishment of the main brake pipe). This requirement applies independently of the ETCS mode of the non-leading vehicles.</p>	<p>The national rule refers to clause 4.2.4.5.2, Emergency braking of Loc&Pas TSI 1302/2014.</p> <p>Agency: In the Loc&Pas TSI there are no requirements for specific braking performance, except for vehicles of speed above 200 km/h. The information regarding the available emergency brake performance (e.g. regenerative brake not available) should be delivered by RST to CCS and CCS should adjust. RST - not changing the braking effort It is a requirement related to unavailability? NSA CH: This requirement has been modified in the currently ongoing revision. Generally, a value for acceptable unavailability is defined. NSA CH propose to discuss the modified edition.</p>	<p>Under review</p> <p>NSA CH to provide the revised form of the rule.</p>

National rules	Agency evaluation	Agency evaluation status
<p>The emergency brake application shall meet the following value: Tolerated unavailability: $1 \cdot 10^{-7}$</p> <p>The emergency brake application comprises the entire pathway from the output by the ETCS on-board unit to the lowering of the air pressure in the main brake pipe on the vehicle equipped with the ETCS on-board unit.</p> <p>Reasons/explanation</p> <p>If the braking distance is increased in case of an emergency brake, this may lead to a hazardous situation.</p> <p>Requirement relates to CH-TSI CCS-007.</p>		
<p><u>5.1.1-Exterior doors</u></p> <p>Gauge, doors</p> <p>Description:</p> <p>The norms set out in the implementing provisions of the Railway Ordinance (version 01.07.2016) apply.</p> <p>Please also refer to EN 15273:2013 (esp. Swiss A-derogation) and UIC leaflets 505 and 506 and esp. 560.</p>	<p>The requirement refers to clause 4.2.3.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency:</p> <p>From the available information seems that it is a gauging issue - please confirm.</p> <p>The TSI requirements for gauging concerns only the rules for calculation and verification; the applicable methods are set out in EN 15273-2. The TSI does not mandate any specific reference profile.</p> <p>Can you please precise the deviation from the TSI requirements.</p> <p>NSA CH:</p> <p>Correct, this is a gauging issue at standstill on 55 cm platforms. This is described in the SBB R I-20030, chapter 7.</p>	<p>Under review</p> <p>NSA CH to provide the additional documents</p>
<p><u>7.2.2.2-Marker lights</u></p> <p>Optical warning signal at front of train: 3 x red</p> <p>Description:</p> <p>Vehicles shall be able to display 3 x red at the front of the train in order to warn the oncoming train of danger. Requirement goes beyond TSI requirements.</p>	<p>The national rule refers to clauses 5.3.7 and 4.2.7.1.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency:</p> <p>Basically it is not acceptable to have additional requirements beyond TSI requirements unless justified needs of technical compatibility with existing network.</p> <p>Please provide for assessment and to be attached in the rule, the referenced document RSR R 300.2.</p> <p>It has to be assessed to distinguish the operational requirements.</p> <p>NSA CH :</p> <p>Must be discussed</p> <p>As in Switzerland we have a</p> <ul style="list-style-type: none"> - very dense traffic, - short block distances and - mixed traffic on the network (passenger, freight incl. dangerous goods) <p>and not yet everywhere a complete available radio communication system (partly any emergency calls possible), the signalization of 3 red lights has to be considered as a (operational</p>	<p>Not accepted</p> <p>ERA and NSA CH to assess the provided justification.</p>

National rules	Agency evaluation	Agency evaluation status
	<p>compatibility) caused of the existing network. (Another (theoretical) possibility would be to reduce the speed of all trains to avoid collisions with high speeds, but this would limit the capacity of the network in a way that is - on an economic point of view - impossible.)</p> <p>The aim of Switzerland is to cancel the 3 red lights as soon as possible, but this will only be possible, when the network will have a complete available radio communication and every loc/train is obliged by IM to have the same communication system available.</p>	
<p><u>8.2.1.4-Maximum power and maximum train current</u> that is permissible to draw from the overhead contact line Traction power limitation Description: 1.) Frequency-dependent traction limitation 2.) Voltage-dependent traction limitation</p>	<p>The national rule refers to clauses 4.2.8.2.5 and 4.2.8.2.4 of Loc&Pas TSI 1302/2014. Agency: What are your additional requirements compared to the TSI requirements? Please provide to be attached in the rule the referenced regulation SBB R I – 50068/50069 to further assess. NSA CH: NSA CH will send the relevant documents SBB R I-50068/50069</p>	<p>Under review NSA CH to provide the additional documents.</p>
<p><u>8.2.2.3-Pantograph contact force (including static contact force, dynamic behaviour and aerodynamic effects)</u> Pantograph/Contact line interaction Description: Proof that maximum permissible contact pressure is respected and therefore also the maximum permissible contact line uplift under defined operating conditions in single and multiple traction.</p>	<p>The national rule refers to clauses 4.2.8.2.9.5 and 4.2.8.2.9.6 of Loc&Pas TSI 1302/2014. Agency: The pantograph contact force is covered by the TSI requirements (at subsystem and IC level). Compatibility with specific lines is not a matter of authorisation. Specificities of lines are to be described in RINF. NSA CH: Must be discussed NSA CH will send the relevant document SBB R I-50088</p>	<p>Not accepted NSA CH to provide justification and to submit the additional documents</p>
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> Admittance Description: In order to reliably prevent the grid converter of converter-driven vehicles (including corresponding grid converter control system) from inducing grid resonance and so causing instability in the railway power supply grid, the frequency response of the input admittance shall be passive above a cut-off frequency.</p>	<p>The national rule refers to clause 4.2.8.2.7 of Loc&Pas TSI 1302/2014. Agency: Acceptable requirement. Shall be moved to parameter 8.4.2.3. Vehicle entrance impedance. Please indicate also the relevant section of the of the EBV. NSA CH: AB-EBV Art. 47.1 Ziff. 4 NSA CH will send the relevant document SBB R I-20005</p>	<p>Under review NSA CH to submit the additional documents.</p>
<p><u>9.3.3-Controls and indicators</u> The "non leading input signal"</p>	<p>The national rule refers to clause 4.2.9.3.4 of Loc&Pas TSI 1302/2014.</p>	<p>Under review</p>

National rules	Agency evaluation	Agency evaluation status
<p>Description: The vehicle shall provide the "non leading input signal" to the ETCS on-board unit via the train interface.</p> <p>2) The "non leading input signal" shall only send the value "Nonleading permitted" when the replenishment suppression for the main brake pipe is active.</p> <p>3) The "non leading input signal" shall not depend on the position of the direction selector.</p> <p>Reasons/explanation Requirement 2) refers to the automatic brake (indirect brake – with a main brake pipe). With the active replenishment suppression it is avoided that the vehicle can delay braking. The requirement in 3) for the "non leading input signal" value to be independent of the position of the direction selector corrects requirement 2.2.3.3.1 b) in Subset-034, Version 3.1.0 to be consistent with operational rules in Switzerland. Requirement relates to CH-TSI CCS-006.</p>	<p>Agency: No such type of requirements in TSI Loc&Pas - the missing requirement is identified in the ETCS TIU specification. The selected parameter is not appropriate Partial duplication with the rule ID 45911 To further investigate if a TSI Loc&Pas deficiency can be confirmed.</p> <p>NSA CH: NSA CH confirm that this is a duplication of ID 45911 and that it should be deleted in the RDD.</p>	<p>NSA CH agreed to remove the rule as duplicate in RDD.</p>

5.4.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements.

5.4.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> Application of country-specific parameterisation Description: Requirement When an ETCS on-board unit has non-Swiss parameter values available in addition to Swiss parameter values, it shall be assured by technical means that only the Swiss parameter values are used on Swiss ETCS lines. This requirement applies only for parameters that are not transmitted by ETCS trackside equipment. Reasons/explanation E.g. this applies for parameters for braking curve calculation on Baseline 2 on-board units, for the use of pantographs, for switching on/off eddy-current brakes, etc.. The application of the correct parameter values is either safety relevant (e.g. braking curve parameters) or necessary for technical compatibility (e.g. use of correct pantograph), which has an indirect impact on track availability.</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Partly now in CH 21 Further discussion is needed, CH to clarify which parameters are concerned. It is still not clear what are the requirements and which parameter are concerned. To require a technical solution is an exported constraint. ERA proposal for a wording: It has to be ensured that added functions and deviations from the TSI CCS and the SWISS NTRs which may have an impact on safe operation are be inhibited. CH will check the NTR wording and come back with a proposal.</p> <p>- Please add information below in the NTR ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2</p> <p>NSA CH: CCS-016 In the frame of the currently ongoing revision this (N)NTR has been adapted to be more precise.</p>	<p>Under review NSA CH to submit the modified rule.</p>
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> Compatibility with track-free announcing devices Description: Track current interrupted by railway vehicles which lie in the operating frequency range of track circuits.</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Please indicate the relevant section of the EBV. This requirement can be acceptable under this parameter if it is related to for example dynamic shunting. - please confirm/clarify. If related to maximum harmonic traction currents to be moved to parameter 8.4.2.1.1.</p> <p>NSA CH: LOC&PAS-014 EBV Art. 47 Abs. 1 EN 50238-1 CLC TS 50238-2/-3 SBB R I-50097/50098</p>	<p>Under review ERA and NSA CH to assess the provided justification.</p>

No requirements.

5.4.3 CCS onboard Subsystem

5.4.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover the open points:

- 12.2.5.2 B2 “braking aspects
- 12.2.5.4; 12.2.5.5 B2 “ETCS DMI”
- 12.2.5.6 B2 “braking aspects”

The parameters below do not contain national rules to cover the open points:

- 12.2.5.3 B2 and B3 “Availability”

5.4.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	No		
	Nature: - RDD: an old publication based on the former list of parameters. Migration to the new list of parameters is imported in RDD, not published.		
	LoP version: New list as in Decision 2015/2299/EU		
	According to the information received from NSA AT, a working group is now reviewing the list of national rules. The forecast is that the list of rules will be available end of September 2019		
Assessment status	-		
Amount of remaining NRs in addition to latest TSIs	-		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	12.1.2.2-Other GSM-R requirements 12.2.2-STM requirements 12.2.3-Transitions 12.2.5.2-Braking safety margins (on top of open point) 12.2.5.7-Other ETCS requirements (related to existing not interoperable networks) 12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances	

5.4.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.2.1-National on-board signalling systems</u> Prohibition of level STM/NTC “SIGNUM/ZUB” Description:	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI.	Accepted

National rules	Agency evaluation	Agency evaluation status
<p>Requirement The ETCS on-board unit shall not offer level STM “SIGNUM/ZUB” (Baseline 2) or level NTC “SIGNUM/ZUB” (Baseline 3). Reasons/ explanation The Swiss standard gauge network is designed so that ETCS vehicles outside of ETCS level 2 lines run in level 0 (Baseline 2 vehicles) or level 1 (Baseline 3 vehicles). STM and NTC levels are not supported.</p>	<p>Agency: New NTR is extended to B3 Trackside installation does not foresee STM operation. As this is a technical requirement, it is seen as an exported constraint to ETCS on-board. It is also not clear how it should work from technical point of view in case a vehicle is equipped with a non-Swiss STM. The driver can select the STM at SoM. Conclusion: Requirement (based on a specific trackside installation) not in line with the TSI. In case it is an requirement on operation it should be part of the SMS. Further discussion is needed, to be discussed in the NSA Focus Group too. 15.02.2018 When applying for the area of use (CH), the on-board default list has to be configured for the transitions ordered, in CH transition to level STM/NTC is not transmitted therefore a TSI conform vehicle will fulfil this requirement. > Type 8 Please add information below in the NTR ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2 NSA CH: Request for cancelation of the parameter in the ERA document is in preparation. This (N)NTR is valid for Baseline 2 as well as for Baseline 3. This is already marked in the (N)NTR.</p>	<p>In case the parameter is cancelled</p>

5.4.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.2.2-Other GSM-R requirements</u> GSM-R Proof of Quality of Service Description: The ETCS data channel shall meet the QoS parameters in Subset-093 V2.3.0 “GSM-R Interfaces Class 1 Requirements”. Version 3.0 shall be used for document O-2475 “ERTMS/GSM-R Quality of Service Test Specification” referenced in Subset-093. For on-board units with SRS version 3.6.0 (ETCS Baseline 3 Release 2) or higher, the respectively valid version shall be met. Compliance with required QoS</p>	<p>Agency: Former CH 03; SS093 (QoS) and Q2475 (test spec) specify the end to end QoS. Requirement and required tests to be performed on IC level. CH will upload a list of EDOR's positively tested, the applicant has to provide the proof (IC Certificate) that the EDOR has passed the tests.</p>	<p>Accepted To be questioned</p>

National rules	Agency evaluation	Agency evaluation status
parameters for GSM-R in order to ensure reliable operation on ETCS L2 lines in Switzerland.		
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> Simultaneous handling of two GSM-R data channels Description: Requirement For the RBC handover, the ETCS on-board unit shall be capable of handling two communication sessions simultaneously. Reasons/ explanation For capacity reasons, an ETCS on-board unit needs to be able to establish a data connection with both RBCs during an RBC handover. Requirement relates to CH-TSI LOC&PAS-024.</p>	Agency: accepted	Accepted
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> Provision of two GSM-R data channels Description: A vehicle shall make two GSM-R data channels available to the ETCS on-board unit. Reasons/ explanation For capacity reasons, an ETCS on-board unit needs to be able to establish a data connection with both RBCs during an RBC handover. Requirement relates to CH-TSI CCS-015.</p>	Agency: accepted	Accepted
<p><u>12.2.2-STM requirements</u> SIGNUM/ZUB not permitted on vehicles with ERTMS/ETCS Baseline 3 Description: Vehicles equipped with an ETCS on-board unit with Baseline 3 shall not support a train control system specific to Switzerland (ETM, ZUB, SIGNUM). Reasons/ explanation Vehicles equipped with an ETCS on-board unit with Baseline 3 run in Switzerland with ETCS. Trackside is not equipped to allow such</p>	<p>The national rules refers to clauses 6.2.4.2 and 4.2.6.1 of CCS TSI. Agency: Baseline 3 vehicles can run all over the network with ETCS, no class B system is needed. Please add information below in the NTR ETCS Baseline 3MR1 ETCS Baseline 3R2 NSA CH: It is already marked in the (N)NTR that it is (only) valid for 3MR1 and 3MR2.</p>	Accepted

National rules	Agency evaluation	Agency evaluation status
trains to switch to train control systems specific to Switzerland.		
<p><u>12.2.3-Transitions</u> Train data: NC_TRAIN, M_AXLELOAD, V_MAXTRAIN Description: Train data entry shall allow the ETCS train data NC_TRAIN, M_AXLELOAD and V_MAXTRAIN to be set to values that allow to run in the optimum Swiss operational train category. Example: It shall be possible to enter ETCS train data according to Swiss operational train category R, A and D on a locomotive that can run in R, A or D. On tilting trains train data entry shall allow the ETCS train data NC_TRAIN, M_AXLELOAD and V_MAXTRAIN to be set to values that also allow the train to run in Swiss operational train category R≤18t. Table 1 shows to which values the ETCS train data shall be set to be able to run in the corresponding Swiss operational train category. On internationally operated trains, NC_TRAIN shall be set by selecting the 'label' according to Baseline 3 (see Table 41 in ERA_ERTMS_015560 v340) or by selecting the train type / brake position according to Table 2. It shall not be necessary to enter or select a cant deficiency (e.g. '150 mm'). Train data entry that conforms to Baseline 3 is preferred. On internationally operated trains, M_AXLELOAD shall be set by selecting the axle load category according to Baseline 3 (see Figure 121 in ERA_ERTMS_015560 v340) or by entering the value in tons. Train data entry that conforms to Baseline 3 is preferred. On trains operating exclusively in Switzerland, NC_TRAIN and M_AXLELOAD shall be entered in the same way as on internationally operated trains or by selecting the Swiss operational train category e.g. R, A or D. When showing that this requirement has been met, it shall be demonstrated to which values the ETCS train data (at least NC_TRAIN, M_AXLELOAD, V_MAXTRAIN and L_TRAIN) are set depending on the input on the DMI. 19 19 M_AXLELOAD, NC_TRAIN and V_MAXTRAIN shall not be set to values that allow to run in a Swiss operational train category or at a top speed for which the train is not authorised. The values shall</p>	<p>The national rules refers to clauses 4.2.6.1 and 7.2.4 of CCS TSI. Agency: Requirement to be moved to 12.2.5.7 Former CH27, CH 32, CH 33 and CH 36 NTR is now extended to B3. To be further discussed if border crossing trains are impacted too. 15.02.2018 The basic requirement concerning the train data mentioned is covered in B3 but a valid requirement for B2. Concerning the other requirements, CH will check and come back with a proposal / clarifications. - Please add information below in the NTR ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2 NSA CH: This is definitely also impacting border crossing trains too. We (definetly) do need this requirement and hence can't be repealed. It is already marked in the (N)NTR that it is valid for Baseline 2 as well as for Baseline 3.</p>	<p>Reviewed and not accepted NSA CH should modify the rule.</p>

National rules	Agency evaluation	Agency evaluation status
<p>correspond to the actual characteristics of the train as permitted in Switzerland.</p> <p>Further requirements and exceptions to Table 1: The entry of V_MAXTRAIN according to Table 1 is only necessary for operation on the Mattstetten-Rothrist and Solothurn-Wanzwil lines.</p> <p>The 'x' in NC_TRAIN indicates that this bit may be set to 1 or 0.</p> <p>Trains conforming to Baseline 3 set this bit to 1.</p> <p>Concerning N and N≤17t: Based on the homologation test runs, it shall be decided in accordance with the ETCS system manager for Switzerland which M_AXLELOAD value is to be used on a tilting train.</p> <p>The value 000 0000 0000 0000 for NC_TRAIN (according to Baseline 2) is only permissible for ETCS on-board units according to SRS 2.2.2+.</p> <p>On some lines with maximum speed above 160 km/h, the combination NC_TRAIN = 000 x001 0000 0000 and M_AXLELOAD ≤ 16 t (axle load category A) leads to a speed profile intended for test drives at overspeed. This combination shall therefore not be used in normal operation.</p> <p>The NC_TRAIN value 000 1000 0000 0000 leads to a speed profile according to 275 mm cant deficiency. The NC_TRAIN values 000 0100 000x 0000 and 000 0010 000x 0000 lead to a speed profile according to 150 mm cant deficiency with a top speed of 160 km/h. Depending on the M_AXLELOAD value, the speed profile is further restricted.</p> <p>If NC_TRAIN values not listed in this table are used, the ETCS system manager for Switzerland shall be consulted concerning the resulting speed supervision and if this is acceptable.</p> <p>Because Swiss Rail Service Regulations calculate brake-weights in brake position P, 'FP x' (see column headed 'Label') shall be selected for freight trains. NC_TRAIN values corresponding to Label FG x' shall therefore not be used under normal circumstances.</p>		
<p><u>12.2.3-Transitions</u> Activation / Deactivation of transfer of packet 44 to SIGNUM/ZUB Description: When the ETCS on-board switches the ETCS level or mode, transmission of packet 44 with NID_XUSER=2 read from the ETCS balise to ZUB and SIGNUM (ETM or ZUB 262) shall be activated or deactivated according to the following table.</p>	<p>The national rules refers to clauses 4.2.6.1 and 7.2.4 of CCS TSI.</p> <p>Agency: Automatic transition to and from class B via L0 is implemented (no STM available). Baseline 2 requirement only, a Baseline 3 train can run all over the network with ETCS. - Please add information below in the NTR ETCS Baseline 2</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>Transmission shall be activated or deactivated within 1700 milliseconds. Tolerated unavailability: 10-4/h When the interface between the ETCS on-board unit and ETM or ZUB 262 is interrupted (e.g. in the event of an error), transmission shall be activated. Abbreviations in the table Y: Transmission activated N: Transmission deactivated N/A: Not applicable Remaining abbreviations according to SRS (SUBSET-026)</p>	<p>NSA CH: It is already marked in the (N)NTR that it is valid for Baseline 2 (only).</p>	
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> Euroloop functionality Description: Requirement The ETCS on-board unit shall be able to read and process telegrams sent by Euroloop. Reasons/ explanation In many stations the overlap at departure signals is very short or nonexistent. If a train departs despite the departure signal indicating stop, a hazardous situation could arise. In such situations a Euroloop is used to send an infill movement authority with release speed = 0 km/h to prevent that the signal is being passed. The reading and processing of Euroloop by the ETCS onboard unit therefore is safety relevant. It should be noted that the Euroloop transmits restrictive supervision data when it registers an error. If the departure signal indicates a movement authority, the Euroloop telegram allows the signal to be passed. Euroloops are also installed on line sections with high capacity requirements. In order to ensure the efficient and safe operation of the railway network, the ETCS on-board unit must therefore be able to read and process telegrams sent by Euroloop in both of the above cases.</p>	<p>Agency: The rule was moved to 12.2.5.7 as indicated Option in the TSI (when trackside conditions are fulfilled) relevant for B3 L1LS - Please add information below in the NTR ETCS Baseline 3MR1 ETCS Baseline 3R2 NSA CH: In the NNTR it is already marked as valid for Baseline 3 (only). There are no preferences regarding the assignment to the basic parameter 12.2.5.7. But the requirement concerns B3 and 12.2.5.7 concerns only B2.</p>	Accepted
<p><u>12.2.5.2-Braking safety margins</u> Braking curve requirements for ERTMS/ETCS</p>	<p>The national rules refers to clauses 4.2.3, 4.2.2 and Annex A 4.2.3.b, Annex A References,</p>	Accepted

National rules	Agency evaluation	Agency evaluation status
<p>Baseline 2 Description: ETCS on-board unit Requirement See document “Anforderungen an die Parametrisierung und Validierung der Bremskurven für ETCS Level 2” (Requirements for parameterisation and validation of braking curves for ETCS level 2) Version 1.0. Reasons/ explanation on Requirement relates to CH-TSI LOC&PAS-035.</p>	<p>4.2.3.b, Annex A 4.2.2.b, Annex A References, 4.2.2.b of CCS TSI. Agency: BK are an open point in B2, valid NTR - Please add information below in the NTR ETCS Baseline 2 NSA CH: In the (N)NTR it is already marked to be valid for Baseline 2 (only).</p>	
<p><u>12.2.5.4-Safety requirements</u> Non Leading mode Description: ETCS on-board unit Requirement 1) The ETCS on-board unit shall only switch to Non Leading mode when · the driver selects Non Leading AND · the train is at standstill AND · the "Non-leading permitted" input value is received. 2) When the ETCS on-board unit is in Non Leading mode and it is not receiving the "Non-leading permitted" input value from the train interface, the ETCS on-board unit shall display the text message according to point 3). 3) The following text shall be displayed on the DMI depending on the selected language: · EN: NL not allowed · DE: Betriebsart NL unzulässig · FR: NL pas valable · IT: NL non valido Reasons/ explanation on Requirement 1) corresponds to condition [46] in the SRS of Baseline 2, which hereby is also required for Baseline 2 on-board units. Due to the text message the driver can react immediately when the "Non-leading permitted" input value is lost. Requirement relates to CH-TSI LOC&PAS-019.</p>	<p>The national rules refers to clauses 4.2.1,4.2.1.a, Index 78, and 4.2.1.1 of CCS TSI. Agency: 4 requirements in the NTR and only for L2 operation: 1. ETCS to switch to NL only, when NL permitted information received from the TIU. This is ensured by transition 46 (SRS chapter 4) This part of the requirement should be deleted as a TSI conform vehicle fulfil this requirement.. 2. Non Leading permitted in only to be sent from RS when the NL loco is disconnected from the brakes and the info should be independent from the direction of the direction controller. This is a requirement for RS and not for CCS, requirement to be deleted. 3. In case the NL permitted signal its lost and the train is running, ETCS has to break and display the message in rebus. This is not in line what is specified in the TSI and moreover it would lead to a ETCS brake while running. It is not acceptable that RS constraints are exported to ETCS and that ETCS has to inform the driver when something happen on the RS side of the TIU. Requirement to be deleted. 4. DMI shall indicate : NL not allowed It is not acceptable that RS constraints are exported to ETCS. ETCS will switch to SB mode (transition 47) Conclusion: NTR to be deleted, requirements (if any valid) to be part of RS SS. CH to clarify what will remain as requirement (to be further discussed if something remains). NSA CH: In the currently ongoing revision it is foreseen to</p>	Not accepted

National rules	Agency evaluation	Agency evaluation status
	<p>modify this requirement. This modification includes also that the ERA comment 3 that no SB is applied. The new version should be discussed together.</p> <p>Remark: In SUBSET-034 (TIU), paragraph 2.2.3.3.1, the selected travel direction is a criteria for NL, which is useless</p>	
<p><u>12.2.5.4-Safety requirements</u> Automatic acceptance and display of train data Description: Requirement The ETCS on-board unit shall be able to receive train data via the train interface. Train data shall be displayed on the DMI so that the train driver can modify them if necessary and confirm them. Reasons/explanation The automatic transfer of train data reduces the risk of the driver entering incorrect train data. Requirement relates to CH-TSI LOC&PAS-034.</p>	<p>The national rules refers to clauses 4.2.1, 4.2.1.a, Index 78 and 4.2.1.1 of CCS TSI. Agency: This is an option in the specifications. Display is on driver request Train data changes are always possible To be further discussed, normally to be rejected - Please add information below in the NTR ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2 NSA CH: In the currently ongoing revision this (N)NTR is modified. The modified requirement should be discussed.</p>	Under review
<p><u>12.2.5.4-Safety requirements</u> Automatic transmission of train data on train sets Description: New train sets shall automatically determine the required train data (SRS, Section 3.18.3) and transmit it via train interface to the ETCS on-board unit. Reasons/explanation When train data are automatically determined and transmitted to the ETCS on-board unit, this reduces the risk of the train data being entered incorrectly by the train driver. Train sets retrofitted with an ETCS on-board unit should automatically determine the required train data (SRS, Section 3.18.3) and transmit it via train interface to the ETCS on-board unit. Requirement relates to CH-TSI CCS-019.</p>	<p>The national rules refers to clauses 4.2.1, 4.2.1.a, Index 78 and 4.2.1.1 of CCS TSI. Agency: Former CH 026: It is up to the RU, SMS B3 TIU document allow this function, but it is up to the RU to use it. The requirement contain 4 topics: 1. ETCS shall be able to receive train data via the TIU 2. The received train data shall be displayed on the DMI 3. The driver should be able to confirm them 4. The driver should be able to change them ERA does not agree on topic 2, as this depends on the on-board configuration of the RU. ERA will provide a feedback on what is today specified in relation to the topics listed above, CH will check and come back for further discussion. - Please add information below in the NTR ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2 NSA CH: As part of the currently ongoing cleanup this (N)NTR is foreseen to be repealed. If this is taken over only 47483 will remain. It is already marked in the (N)NTR for which baselines it is valid.</p>	Under review

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.5.5-Ergonomic aspects of DMI</u> Text message display Description: Requirement: It shall be possible to display on the DMI text messages of up to 40 characters sent from trackside without scrolling. Reasons/explanation The driver must be able to see, identify and read text messages quickly and easily.</p>	<p>The national rules refers to clauses 4.2.13 and 4.2.12 of CCS TSI. Agency: DMI is an open Point in B2 The DMI should be able to display text messages of 40 characters. - Please add information below in the NTR ETCS Baseline 2 NSA CH: It is already marked in the (N)NTR that it is valid vor Baseline 2 (only)</p>	<p>Accepted</p>
<p><u>12.2.5.5-Ergonomic aspects of DMI</u> One-time train running number entry for the ETCS on-board unit and the GSM-R CabRadio Description: IT shall be technically ensured that the train running number has to be entered only once and that it shall be available to the ETCS onboard unit and to the GSM-R CabRadio (GSM-R voice) so that both use the same train running number. The ETCS on-board unit and the GSM-R CabRadio shall have the necessary interface and functional features. Reasons/explanation The train driver can be reached by CabRadio using the train running number (functional addressing). In particular in long tunnels it must be ensured that the driver can be reached immediately (e.g. due to an incident). This can be done if the same train running number is used. Requirement relates to CH-TSI LOC&PAS-021.</p>	<p>The national rules refers to clauses 4.2.13 and 4.2.12 of CCS TSI. Agency: CH see here a safety problem for long tunnels. Exported constraints from a specific trackside solution (no MA in L2 when wrong train running number). To be part of the SMS. NTR to be deleted - Please add information below in the NTR ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2 NSA CH: This remains valid also after the currently ongoing revision. This requirement is related to a safety as well as an usability issue!!! It is already marked in the (N)NTR to be valid for Baseline 2 and 3.</p>	<p>Not accepted</p>
<p><u>12.2.5.6-Interface with service brake</u> Non Leading mode Description: Requirement 1) The ETCS on-board unit shall only switch to Non Leading mode when · the driver selects Non Leading AND · the train is at standstill AND · the "Non-leading permitted" input value is received. 2) When the ETCS on-board unit is in Non Leading mode and it is not receiving the "Non-leading permitted" input value from the train interface, the ETCS on-board unit shall display the text message according to point 3). 3) The following text shall be displayed on the</p>	<p>The national rules refers to clauses 4.2.2 of CCS TSI. Agency: 4 requirements in the NTR and only for L2 operation: 1. ETCS to switch to NL only, when NL permitted information received from the TIU. This is ensured by transition 46 (SRS chapter 4) This part of the requirement should be deleted as a TSI conform vehicle fulfil this requirement.. 2. Non Leading permitted in only to be sent from RS when the NL loco is disconnected from the brakes and the info should be independent from the direction of the direction controller. This is a requirement for RS and not for CCS, requirement to be deleted. 3. In case the NL permitted signal ist lost and the train is running, ETCS has to break and display</p>	<p>Not accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>DMI depending on the selected language:</p> <ul style="list-style-type: none"> · EN: NL not allowed · DE: Betriebsart NL unzulässig · FR: NL pas valable · IT: NL non valido <p>Reasons/ explanati on</p> <p>Requirement 1) corresponds to condition [46] in the SRS of Baseline 3, which hereby is also required for Baseline 2 on-board units.</p> <p>Due to the text message the driver can react immediately when the "Non-leading permitted" input value is lost.</p> <p>Requirement relates to CH-TSI LOC&PAS-019.</p>	<p>the message in requ.</p> <p>This is not in line what is specified in the TSI and moreover it would lead to a ETCS brake while running. It is not acceptable that RS constraints are exported to ETCS and that ETCS has to inform the driver when something happen on the RS side of the TIU.</p> <p>Requirement to be deleted.</p> <p>4. DMI shall indicate : NL not allowed</p> <p>It is not acceptable that RS constraints are exported to ETCS. ETCS will switch to SB mode (transition 47)</p> <p>Conclusion: NTR to be deleted, requirements (if any valid) to be part of RS SS.</p> <p>CH to clarify what will remain as requirement (to be further discussed if something remains).</p> <p>CH has deleted requirement 3</p> <p>Requirement 2 and 3 is valid for B2</p> <p>Requirement 4 (valid for all baselines) is an exported constraint, agency cannot agree.</p> <p>- Please add information below in the NTR</p> <p>ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2</p> <p>NSA CH:</p> <p>This is an double entry, see 47475. This (47476) should be deleted in the RDD.</p>	
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u></p> <p>Minimally implemented change requests</p> <p>Description:</p> <p>Scope of application</p> <p>ETCS on-board unit</p> <p>Requirement An 'X' in the following table indicates, which change requests (CRs) shall be implemented in addition to the ETCS on-board unit's SRS version. It shall be possible to release the brakes in Reversing mode when the vehicle is at standstill.</p> <p>- In Reversing mode at standstill, brakes shall never be applied, even when the remaining reversing distance is 0 m or the permitted reversing distance has been exceeded.</p> <p>Note: The amendment to SRS section 4.4.18.1.3 by CR 138 shall be ignored, as CR 907 shall be fully implemented.</p> <p>2 CR 154: At least the part relevant for Reversing mode shall be implemented.</p>	<p>Agency:</p> <p>The rule was moved to 12.2.5.7 as indicated</p> <p>Former CH 07, CH 18, CH 19, CH 37 and CH 39</p> <p>14.10.2016: CR for B2 are part of the BCA.</p> <p>-Please move the rule to 12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</p> <p>- Please add information below in the NTR</p> <p>ETCS Baseline 2</p> <p>NSA CH:</p> <p>It can be moved to the 12.2.5.7 Parameter.</p> <p>It is already marked in the (N)NTR to be valid for Baseline 2.</p> <p>This requirement has been modified in the currently ongoing revision and should be re-discussed.</p>	Accepted

National rules	Agency evaluation	Agency evaluation status
<p>3 It is only necessary to implement CR 458 if conditions are possible (e.g. due to odometry problems) under which the ETCS onboard unit sends packet 1, even though there are no single balise groups installed on the track.</p>		
<p><u>12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances</u> Reversing in Unfitted mode Description: Requirement On vehicles that are newly equipped with ETCS the 'Reverse movement protection' function shall be active in Unfitted mode . In vehicles with only one control panel for both directions, it shall be technically ensured that the orientation with respect to the mode and the driving direction can be clearly and easily defined. Reasons/ explanation A vehicle must be prevented from driving backwards over a level border in Unfitted mode without changing the level.</p>	<p>Agency: New requirement and former CH 34. In UN it is the drivers responsibility for the train operation (SRS 4.4.10.3.2). The requirement is an exported constraint from SMS to ETCS and not acceptable. Not clear what is the difference to B2 especially as a B3 train can operate on a B2 line. Remark: Also B3 does not fullfill this requirement.</p> <p>Problem seem to be valid only for specific national locos (one cab, 2 desks) for special national operation. NTR to be deleted</p> <p>In CH B3 trains do not operate in UN mode (L1LS). Also when this is an exported constraint for B2 trains it is only applicable for new authorised B2 trains which need in addition the "rucksack" and the packet 44 function; end of 2017 the whole CH infrastrucuter is equipped with ETCS which allow a B3 train to run on the whole network. Agency therefore agree.</p> <p>- Please add information below in the NTR ETCS Baseline 2</p> <p>NSA CH: The "ERA Comment" is requesting to add information. It is unclear what information should be added.</p>	<p>Not accepted ERA and NSA CH to further discuss.</p>
<p><u>12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances</u> Online on-board monitoring of trackside equipment Description: Vehicles equipped with ETCS shall meet the requirements for trackside availability monitoring according to the system manager generic specification catalogue on online monitoring on ETCS</p>	<p>Agency: Exportet constraint, no CR available, Agency does not agree NSA CH: In the revision this requirement remains but has been modified and is now only valid for Baseline 3.</p>	<p>Not accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>vehicles [Generisches Lastenheft Online Monitoring auf ETCS Fahrzeugen], version 1.2 or above.</p> <p>Reasons/ explanation</p> <p>Meet and ensure high availability of the trackside equipment.</p> <p>Higher availability reduces safety risks resulting from the failure of trackside components.</p>		

5.5 Member state CZ

5.5.1 Summary of actions

Action	Responsible
ERA to finalise and submit the assessment to NSA CZ	ERA
NS CZ to state its position regarding the ERA assessment	NSA CZ

5.5.2 Rolling Stock Subsystem

5.5.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	On going, ERA to complete the assessment and submit it to NSA CZ. Taken into account by MS: -
Amount of remaining NRs in addition to latest TSIs	30

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	11 parameters: 5.5-Toilets 6.2.1.2-Exhaust gas emissions 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.2.4-Psophometric current 8.4.2.5-Transverse voltage limits for compatibility voice/data circuits 8.4.3.1-Maximum electro-magnetic fields 8.4.3.2-Induced interference current/voltage 8.4.3.3-Psophometric current 8.7.2-Pressure vessel systems/pressure equipment 8.7.4-Technical systems in potentially explosive atmospheres	Other directives covering : <ul style="list-style-type: none"> Environment impact, Exhaust emission directive EMC directive Pressure vessel
Rules related to documentation	Parameters listed in section 3.2.4	5 parameters: 1.1-General documentation 1.2.1-Maintenance instructions 1.2.2-The maintenance design justification file 1.3.1-Instructions for operation in normal and degraded modes of the vehicle 1.4-National requirement for testing	

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	
Other rules related to compatibility with network / legacy system	See subsection 2 below	6 parameters: 3.3.5-Sanding system 7.2.2.4-Lamp controls 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 9.7-Remote control function from the ground 10.1-Fire protection concept and protection measures 13.1-Specific items to place on-board	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameters	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	6 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.1.3-Interference current under the vehicle 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 8.4.2.3-Vehicle entrance impedance 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.5.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.5.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.3.4-Wheel/rail interaction influencing systems</u> ČSN EN 15427	Agency: Assesment undergoing	Under review by ERA
<u>8.3.1-Energy consumption measurement</u> ČSN EN 50463-4	Agency: Assesment undergoing	Under review by ERA

5.5.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.5.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>3.3.5-Sanding system</u> Decree 173/1995, Annex 3, Part II, Art. 18 PPD 1/2008 IM Directive (Sand application)	Agency: Assesment undergoing	Under review by ERA
<u>7.2.2.4-Lamp controls</u> Decree 173/1995, §39 Regulation D1 SZDC	Agency: Assesment undergoing	Under review by ERA
<u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> ČSN EN 50163 ed. 2 ČSN EN 50388 ed. 2	Agency: Assesment undergoing	Under review by ERA
<u>9.7-Remote control function from the ground</u> ČSN EN 50238-1	Agency: Assesment undergoing	Under review by ERA
<u>13.1-Specific items to place on-board</u> SŽDC D1	Agency: Assesment undergoing	Under review by ERA

5.5.2.4 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements

5.5.2.5 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> ČSN EN 50238 ČSN EN 50388 ed.2 ČSN CLC/TS 50238-2 ČSN 34 2613 ed. 3 ČSN EN 50617-1	Agency: Assesment undergoing	Under review by ERA
<u>8.4.2.1.2-Heating cable interference current</u> ČSN EN 50238 ČSN CLC/TS 50238-2 ČSN 34 2613 ed. 3	Agency: Assesment undergoing	Under review by ERA
<u>8.4.2.1.3-Interference current under the vehicle</u> ČSN EN 50238 ČSN CLC/TS 50238-2 ČSN 34 2613 ed. 3	Agency: Assesment undergoing	Under review by ERA
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> ČSN EN 50238-1 ČSN CLC/TS 50238-2 ČSN CLC/TS 50238-3 ČSN EN 50592 ČSN EN 50121-3-2 ČSN 34 2613 ed. 3 ERA/ERTMS / 033281 (ver 4.0)	Agency: Assesment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
Rules for the national Class B Automatic Train Control - in preparation		
<u>8.4.2.3-Vehicle entrance impedance</u> ČSN EN 50163 ed. 2	Agency: Assesment undergoing	Under review by ERA
<u>12.2.4.5-Compatibility with fixed installations of CCS</u> Decree 173/1995 ČSN 34 2613 ed. 3 Instruction of SZDC (IM) No. 1/2008 Methodology for fluent and safe rail operation. (Sanding)	Agency: Assesment undergoing	Under review by ERA

5.5.3 CCS onboard Subsystem

5.5.3.1 Requirements covering open points for Baselines 2 and 3

Under review by ERA

5.5.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature: Excel table RDD: ready for upload in RDD		
	LoP version : New list as in Decision 2015/2299/EU		
	-		
Assessment status	On going, ERA to complete the assessment and submit it to NSA CZ. Taken into account by MS: -		
Amount of remaining NRs in addition to latest TSIs	6		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	4 parameters: 12.1.2.2-Other GSM-R requirements 12.2.2-STM requirements 12.2.3-Transitions 12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)	

5.5.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.1-Non-GSM-R radio system</u> Non-GSM-R radio system is required for operation on lines not covered by GSM-R. Act. 90/2016 Decree 173/1995 §71 Government Regulation 133/2005 Government Regulation 426/2016 Government Regulation 116/2016 ČSN EN 50126-1 + op1, 2, Zm.1 ČSN EN 50128 ed. 2 ČSN EN 62368-1 ČSN ETSI EN 300 086-1 ČSN ETSI EN 300 086-2 V.1.3 ČSN ETSI EN 300 113-1 V.1.3 Rule ČD Z11 UIC 751-3 ČSN 342600 ČSN EN 60950-1 ed.2 Notice on the issuance of general authorization of the Czech Telecommunication Office No.VO-R/1/05.2017-2 Directive of SZDC (IM) No. 35/2008 - Technical specification of train communication equipment and rules for their preparation and usage Directive of SZDC (IM) No. 116/2016</p>	<p>Agency: Assesment undergoing</p>	<p>Under review by ERA</p>
<p><u>12.2.1-National on-board signalling systems</u> Decree 173/1995 §7 art.3, §9 art.3,4, §37 art.8, §71 art.2 ČSN EN 50126-1 ČSN EN 50126-2 ČSN EN 50128 ČSN EN 50129 ČSN 34 2600 TNŽ 34 2640 ČSN 342613 ed. 3 ČSN 342614 ed. 3 Class B signalling systems in use: MIREL, LS06</p>	<p>Agency: Assesment undergoing</p>	<p>Under review by ERA</p>

5.5.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.2.2-Other GSM-R requirements</u> Technical specifications of SZDC (IM) No. TS 3/2014-S (www.szdc.cz) Technical specifications of the system. STOP function in GSM-R system.</p>	<p>Agency: Assesment undergoing</p>	<p>Under review by ERA</p>
<p><u>12.2.2-STM requirements</u> Decree 173/1995 §7 art.3 §9 art.3,4, §37 art.8, §71 art.2 ČSN 34 2600</p>	<p>Agency: Assesment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
ČSN 34 2613 ed. 3 ČSN 34 2614 ed. 3 ČSN EN 50126-1 ed.2 ČSN EN 50128 ed. 2 ČSN EN 50129		
<u>12.2.3-Transitions</u> SŽDC PPD-2/2018 Metodology for compatibility tests of system ERTMS/ETCS level 2	Agency: Assesment undergoing	Under review by ERA
<u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> Regulation of NSA CZ : Compatibility tests of ERTMS/ETCS level 2 on-bord track-side systems in preparation SŽDC PPD-2/2018 Kompatibility tests	Agency: Assesment undergoing	Under review by ERA

5.6 Member state DE

5.6.1 77Summary of actions

Action	Responsible
ERA to finalise and submit the assessment to NSA DE	ERA
NS DE to state its position regarding the ERA assesement	NSA DE

5.6.2 Rolling Stock Subsystem

5.6.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	On going, ERA assessment not yet submitted to the NSA DE Taken into account by MS: -
Amount of remaining NRs in addition to latest TSIs	62

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	2 parameters: 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.3.1-Maximum electro-magnetic fields	Other directives covering : • EMC directive
Rules related to documentation	Parameters listed in section 3.2.4	0 parameters	
Rules not retained in TSIs	Parameters listed in section 3.2.5	1 parameter 4.7.1.3-Brake pads	
Other rules related to compatibility with network / legacy system	See subsection 2 below	25 parameters: 3.1-Vehicle gauge 3.2.1-Running safety and dynamics 3.2.2-Equivalent conicity 3.3.2-Wheelset (complete) 3.3.3-Wheel 3.3.5-Sanding system 3.3.7-Axle shaft 3.3.8-Axle bearing condition monitoring 4.1-Functional requirements for braking at train level 4.5-Brake performance	Detailed analysis per parameter provided in section 2 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
		4.5.4-Parking brake performance 4.6.2-Wheel slide protection system (“WSP”) 4.7.1.1-Brake blocks 5.1.1-Exterior doors 6.1.2-Aerodynamic effects on the vehicle 6.1.2.1-Crosswind effects 6.2.3.4-Ballast pick-up and projection onto neighbouring property 7.2.1-Vehicle marking 8.2.2.2-Pantograph head geometry 8.2.2.6-Arrangement of pantographs 8.2.2.8-Pantograph lowering 8.2.3.1-Contact strip geometry 9.1.3.1-Mechanical characteristics 9.1.3.2-Optical characteristics 10.2.2-Rescue services' information, equipment and access	
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameters:	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	4 parameters: 8.4.2-EMC between the vehicle and the railway system 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.6.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.6.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>10.1-Fire protection concept and protection measures</u> Systeme zur Eindämmung und zur Bekämpfung von Bränden in Personenwagen Offener Punkt der TSI LOC&PAS (VO 1302/2014) 4.2.10.3.4 (4) "Wenn anstelle der Trennwände über den gesamten Querschnitt innerhalb der Fahrgast-/Personalbereiche andere FCCS verwendet werden, müssen folgende Anforderungen erfüllt werden: - Die Systeme müssen in jedem Einzelfahrzeug der Einheit eingerichtet werden, das zur	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation / related open points	Agency evaluation status
<p>Beförderung von Personen und/oder Personal ausgelegt ist, - Die Systeme müssen für mindestens 15 Minuten nach Ausbruch des Brandes gewährleisten, dass sich Feuer und Rauch in gefährlichen Konzentrationen nicht über eine Länge von mehr als 30 m innerhalb der Fahrgast-/Personalbereiche einer Einheit ausbreiten. Die Bewertung dieses Parameters ist ein offener Punkt." Siehe Beschreibung feld für die Regelwerk für zusätzliche nationale Prüfung. Description: Regelwerk für zusätzliche nationale Prüfung: "ARGE-Richtlinie - Teil 1 ""Branderkennung in Schienenfahrzeugen"" ARGE-Richtlinie - Teil 2 ""Brandbekämpfung in Schienenfahrzeugen"" ARGE-Richtlinie - Teil 3 ""Systemfunktionalität Brandmelde- und Brandbekämpfungsanlagen in Schienenfahrzeugen"" Aus den ARGE-Richtlinien ergeben sich keine weiteren Anforderungen an Systeme, die nicht unmittelbar mit der Funktionalität der FCCS in Verbindung stehen. Dokumentation der Nachweisführung: #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Offener Punkt #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.10.3.4 #2End #EBA Checklist Referenz: 16.2#</p>		

5.6.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.6.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>3.1-Vehicle gauge</u> Bedingungen für Türen, Tritte, Einstiege und Stufen - zulässige Überschreitung durch Türen beim Öffnen bzw. im geöffneten Zustand - zulässige Überschreitung von Klapptritt - Überschreitung von Schiebetritten oder Rückspiegeln Regelwerk für zusätzliche nationale Prüfung: - UIC 560</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>- DIN EN 15273-2 - EBA-Protokoll 2.3 Eg - Dr. Ing. Zehme vom 25.11.1996 (siehe EBA-Homepage) Description: Nationale Prüfung durch DeBo ist nur notwendig, wenn die Bewertung der Überschreitung der Begrenzungslinie durch Türen nicht in der EG-Prüfbescheinigung enthalten ist. Überschreitungen der Begrenzungslinien nur im Stillstand bis zum Beginn des Anfahrens der Fahrzeuge - z. B. durch öffnende Türen, Trittstufen oder Rückspiegel - sind nicht als Abweichung von den Vorschriften des § 22 der EBO zu betrachten und bedürfen deshalb insoweit keiner Ausnahmegenehmigung. Dokumentation der Nachweisführung: Nachweisführung erfolgt unter Punkt 18.1 #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.1 #2End #EBA Checklist Referenz: 18.6#</p>		
<p><u>3.1-Vehicle gauge</u> Fahrzeugbegrenzung für Stromabnehmer und spannungsführender nicht isolierter Bauteile auf dem Dach - Nachweis entsprechend Begrenzungslinie - Nachweis der Einhaltung der Grenzlinie durch Dachstromabnehmer - Einhaltung des elektrischen Schutzabstandes oder Einhaltung der Begrenzungslinie für Dachstromabnehmer durch nicht isolierte Bauteile Regelwerk für zusätzliche nationale Prüfung: - EBO - UIC 505-1 - DIN EN 15273-2 Description: Nachweis gegen die Grenzlinie nach EBO durch Dachstromabnehmer (DSA) nicht erforderlich, wenn folgendes in der EG-Prüfung enthalten ist / bewertet wurde: - Nachweis der Einhaltung der Begrenzungslinie gemäß UIC 505-1 oder TSI LOC&PAS (VO 1302/2014) bzw. DIN EN 15273 und - max. Wippenbreite nach EBO (1.950 mm) In diesem Fall ist die nationale Anforderung an DSA durch die EG-Prüfung nachgewiesen, weitere nationale Nachweise sind nicht notwendig.</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Dokumentation der Nachweisführung: Berechnungsbericht mit</p> <ul style="list-style-type: none"> - Erläuterung der Randbedingungen - Übersicht der Eingangswerte - Bewertung Kraftschlussbeiwert beim Anfahren für Tfz - Berechnung aller kritischen Punkte in Tabellenform <p>Technische Zeichnung mit Darstellung und Bemaßung der kritischen Punkte</p> <p>#Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.1 #2End #EBA Checklist Referenz: 18.7#</p>		
<p><u>3.1-Vehicle gauge</u> Seitenstromabnehmer</p> <ul style="list-style-type: none"> - Nachweis entsprechend Punkt 18.1 im eingeklappten Zustand <p>Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> - EBO - UIC 505-1 - DIN EN 15273-2 <p>Description: Die Prüfung der Anforderung Fahrzeugbegrenzungslinie bezieht sich auf den definierten Zustand (z.B. eingeklappt)</p> <p>Dokumentation der Nachweisführung: Nachweisführung erfolgt unter Punkt 18.1</p> <p>#Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 18.8#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>3.1-Vehicle gauge</u> Begrenzungslinie 'G1' - international</p> <p>Einhaltung der Bezugslinie und der zugehörigen Regeln</p> <p>Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> - EBO - UIC 505-1 <p>Description: Nationale Prüfung durch DeBo ist nur notwendig, falls die Bewertung der Einhaltung der angewendeten Begrenzungslinie (hier G1 inkl. untere Teile) nicht in der EG-Prüfbescheinigung enthalten ist.</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Dokumentation der Nachweisführung: Berechnungsbericht mit</p> <ul style="list-style-type: none"> - Erläuterung der Randbedingungen - Übersicht der Eingangswerte - Bewertung Kraftschlussbeiwert beim Anfahren für Tfz - Berechnung aller kritischen Punkte in Tabellenform <p>Technische Zeichnung mit Darstellung und Bemaßung der kritischen Punkte</p> <p>#Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.1 #2End #EBA Checklist Referenz: 18.1#</p>		
<p><u>3.1-Vehicle gauge</u> Begrenzungslinie 'G2' - national Einhaltung der Bezugslinie und der zugehörigen Regeln Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> - EBO - UIC 505-1 <p>Description: Nationale Prüfung durch DeBo ist nur notwendig, falls die Bewertung der Einhaltung der angewendeten Begrenzungslinie (hier G2 inkl. untere Teile) nicht in der EG-Prüfbescheinigung enthalten ist. Begrenzungslinie G2 nach EBO bzw. UIC 505-1 Anlage E kann auf Basis zwei- oder mehrseitiger Vereinbarungen international angewendet werden.</p> <p>Dokumentation der Nachweisführung: Berechnungsbericht mit</p> <ul style="list-style-type: none"> - Erläuterung der Randbedingungen - Übersicht der Eingangswerte - Bewertung Kraftschlussbeiwert beim Anfahren für Tfz - Berechnung aller kritischen Punkte in Tabellenform <p>Technische Zeichnung mit Darstellung und Bemaßung der kritischen Punkte</p> <p>#Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.1</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
#2End #EBA Checklist Referenz: 18.2#		
<u>3.1-Vehicle gauge</u> Verwendung anderer Begrenzungslinien Einhaltung der Bezugslinie und der zugehörigen Regeln - ggf. Antrag auf Genehmigung gemäß § 3 EBO Regelwerk für zusätzliche nationale Prüfung: - UIC 505-6 - UIC 506 - weitere Begrenzungslinien gemäß DIN EN 15273-2 Description: Nationale Prüfung durch DeBo ist nur notwendig, falls die Bewertung der Einhaltung der angewendeten anderen Begrenzungslinie nicht in der EG-Prüfbescheinigung enthalten ist. Dokumentation der Nachweisführung: Berechnungsbericht mit - Erläuterung der Randbedingungen - Übersicht der Eingangswerte - Bewertung Kraftschlussbeiwert beim Anfahren für Tfz - Berechnung aller kritischen Punkte in Tabellenform Technische Zeichnung mit Darstellung und Bemaßung der kritischen Punkte #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.1 #2End #EBA Checklist Referenz: 18.3#	Agency: Assessment undergoing	Under review by ERA
<u>3.1-Vehicle gauge</u> Überschreitung der Fahrzeugbegrenzungslinie G1 bzw. G2 Sicheres Zusammenwirken mit der Grenzlinie des lichten Raumes nach EBO § 9 Anlagen 1 und 2 Antrag auf Genehmigung gemäß § 3 EBO Hinweis: Die Genehmigung von Überschreitungen der Begrenzungslinien G1 und G2 wird nur laufwegsbezogenen ausgestellt. Das bedeutet, dass die Inbetriebnahmegenehmigung nur streckenbezogen erteilt wird. Regelwerk für zusätzliche nationale Prüfung: infrastrukturspezifische Vorgaben je nach Einsatzgebiet Description: Antragstellung an zuständige Stelle gem. § 3 Absatz 2 EBO durch das EVU oder durch vom EVU	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
<p>Bevollmächtigten zu § 22 Absatz 2 EBO Inhalt des Antrags:</p> <ul style="list-style-type: none"> - Antrag auf Genehmigung mit <ul style="list-style-type: none"> a) maßlicher Darstellung der Überschreitung, einschließlich des Höhenbereiches, der Fahrzeugbegrenzungslinie nach EBO oder Angabe der eingehaltenen Begrenzungslinie nach Pkt. 18.1.3. und b) Angabe der einschränkungsrelevanten Fahrzeugparameter - Nennung der geplanten Einsatz- und Umleitungsstrecken <p>weitere Prozessschritte nach Antragstellung:</p> <ul style="list-style-type: none"> - Durchführung einer streckenbezogenen Netzverträglichkeitsprüfung auf Grundlage der Grenzlängenbetrachtung gem. EBO durch den Infrastrukturbetreiber (EIU) oder Vergleich des vorhandenen Mindestlichtraums mit dem auf Basis anderer Bezugslinien nach Pkt. 18.1.3 ermittelten Mindestlichtraum durch das EIU - Bekanntgabe des Ergebnisses und Angabe der maximalen Trassierungsparameter durch das EIU (Kompatibilität zwischen Fahrzeug und Infrastruktur geprüft, zusätzlicher benötigter Raumbedarf wird ggf. an zeitliche Befristung geknüpft.) - Bescheid über die Genehmigung von zuständiger Stelle zur Überschreitung der Begrenzungslinie auf Basis der eingereichten Unterlagen und dem Ergebnis der Netzverträglichkeitsuntersuchung <p>Dokumentation der Nachweisführung: Nachweisführung unter Punkt 18.1 und 18.2</p> <p>#Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 18.4#</p>		
<p><u>3.1-Vehicle gauge</u> Fährverkehrsfähigkeit Nachweis zum Befahren von Fährbrücken (Land-Schiff) Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> - UIC 507 - UIC 569 - UIC 627-5 - DIN EN 15273-2 <p>Description: Nationale Prüfung durch DeBo ist nur notwendig, falls die Bewertung nicht in der EG-</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Prüfbescheinigung enthalten ist. Dokumentation der Nachweisführung: Berechnungsbericht mit</p> <ul style="list-style-type: none"> - Erläuterung der Randbedingungen - Übersicht der Eingangswerte - Berechnung der Mindestbodenfreiheit <p>#Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.1 #2End #EBA Checklist Referenz: 18.5#</p>		
<p><u>3.1-Vehicle gauge</u> Neigetechnik</p> <ul style="list-style-type: none"> - Nachweis entsprechend 18.1 und 18.2 bei nicht aktiver Neigetechnik - Nachweis unter Berücksichtigung der Neigetechnikbewegungen analog 18.1 und 18.7 für Überhöhungsfehlbeträge ≤ 300 mm - Störfalluntersuchung <p>Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> - EBO - UIC 505-1 - DIN EN 15273-2 <p>Description: Nationale Prüfung durch DeBo ist nur notwendig, falls die Bewertung der Einhaltung der angewendeten Begrenzungslinie G1 oder G2, jeweils bei aktiver und nicht aktiver Neigetechnik mit Überhöhungsfehlbeträgen ≤ 300 mm nicht in der EG-Prüfbescheinigung enthalten ist. Dokumentation der Nachweisführung: Berechnungsbericht mit</p> <ul style="list-style-type: none"> - Erläuterung der Randbedingungen - Übersicht der Eingangswerte - Bewertung Kraftschlussbeiwert beim Anfahren für Tfz - Berechnung aller kritischen Punkte in Tabellenform <p>Technische Zeichnung mit Darstellung und Bemaßung der kritischen Punkte</p> <p>#Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.1 #2End #EBA Checklist Referenz: 18.9#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>3.1-Vehicle gauge</u> Anwendung der Bezugslinie nach Anlage 8, Bild 3 EBO für Wagen - gemäß §22 (1) EBO darf die Bezugslinie gemäß Anlage 8 Bild 3 EBO für Wagen nur mit besonderer Genehmigung angewendet werden Regelwerk für zusätzliche nationale Prüfung: - EBO Description: Dokumentation der Nachweisführung: Berechnungsbericht mit - Erläuterung der Randbedingungen - Übersicht der Eingangswerte - Bewertung Kraftschlussbeiwert beim Anfahren für Tfz - Berechnung aller kritischen Punkte in Tabellenform Technische Zeichnung mit Darstellung und Bemaßung der kritischen Punkte Besondere Genehmigung von zuständiger Behörde gemäß §3 EBO #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.1 #2End #EBA Checklist Referenz: 18.10#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>3.2.1-Running safety and dynamics</u> Fahrfähigkeit Sicherheit gegen Entgleisen im führungslosen Bereich von Weichen Anwendung nur für Raddurchmesser < 760 mm (Neu- oder Betriebsgrenzmaß) Regelwerk für zusätzliche nationale Prüfung: UIC 510-2 Description: Versuch kann mit Rädern im Neuzustand (Rad-\varnothing > 760 mm) durchgeführt werden, wenn der Anlaufwinkel gemessen wird. Nachweis der Bedingung $H_y = 0,25 \times 2 Q_0$ kann auch durch gesonderte Auswertung (Bögen mit $R = 450$ m) der Messergebnisse der fahrtechnischen Versuche mit MRS erfolgen. Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
#2End #EBA Checklist Referenz: 1.1#		
<p><u>3.2.1-Running safety and dynamics</u> Neigetechnik (Regelbetrieb mit höheren Geschwindigkeiten in Gleisbögen, üf > 150 mm) Kompatibilität mit Neigetechnik-Strecken (max. Radsatzlast, Einhaltung der spezifischen Grenzwerte der Einsatzstrecke i. V. m. dem tatsächlich gefahrenen Überhöhungsfehlbetrag, etc.) und Einsatz einer kontinuierlichen Geschwindigkeitsüberwachung (Geschwindigkeitsüberwachung Neigetechnik - GNT) Regelwerk für zusätzliche nationale Prüfung: EBO § 40 Abs. 7 DIN EN 14363 Anhang G BMV-Entscheidung (Entscheidung des Bundesministeriums für Verkehr an die Deutsche Bahn für NeiTech-Betrieb: "Antrag auf Zulassung einer Ausnahme von den Vorschriften des § 40 Abs. 7 der Eisenbahn-Bau- und Betriebsordnung (EBO) für den Regionaltriebzug der Baureihe VT 611 mit gleisbogenabhängiger Wagenkastensteuerung (GST)", Az. E15/32.31.01/145 DB 96, 16. Juli 1996) Description: Dokumentation der Nachweisführung: Nachweis der Einhaltung der Kriterien der BMV-Entscheidung: 1. Streckenbezogene Nutzungserlaubnis 2. kontinuierliche Geschwindigkeitsüberwachung #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI INF (VO 1299/2014) 4.2.4.3, 6.2.4.5 #2End #EBA Checklist Referenz: 1.3#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>3.2.2-Equivalent conicity</u> Instabilität Die fahrtechnischen Versuche sind in Normal- und Ausfallzustand auf Strecken mit realen, mittleren äquivalenten Konizitäten durchzuführen. Dabei ist der Nachweis für die repräsentativen Werte für das deutsche Streckennetz zu führen: Altbaustreckennetz (120 ≤ V ≤ 160 km/h): tan $\varphi_e \leq 0,8$; Ausbaustreckennetz (160 < V ≤ 230 km/h): tan $\varphi_e \leq 0,5$; Neubaustreckennetz (V > 230 km/h): tan $\varphi_e \leq 0,3$</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Regelwerk für zusätzliche nationale Prüfung: DIN EN 14363 DIN EN 13715 (Radprofil) DIN EN 15302 (Äqu. Konizität) Description: Mittlere äquivalente Konizität wurde ermittelt auf Basis der DIN EN 15302 mit Abzeichnung realer Schienenkopfprofile und realer Spurweiten (Mittelwert über 100 m-Abschnitte) in Paarung mit einem theoretischem Radprofil DIN EN 13715 S1002 mit Spurmaß SR = 1.425 mm. Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 1.2#</p>		
<p><u>3.3.2-Wheelset (complete)</u> Pressverband Radsitz - Berechnung Berechnung des Pressverbandes Einzuhaltendes Schutzziel: "Die Räder eines Radsatzes müssen Spurkränze haben und dürfen auf der Radsatzwelle seitlich nicht verschiebbar sein; Ausnahmen für Spurwechselradsätze sind zulässig; für Räder und Radsätze gelten die Maße der Anlage 6. Hiervon darf abgewichen werden, wenn nachgewiesen ist, dass die Räder und Radsätze die Fahrzeuge im Gleis sicher führen." (bei Treibradsatz: Abgleich mit max. Torsionsmoment) Regelwerk für zusätzliche nationale Prüfung: EBO (§ 21 Abs. 1 und 2) Je nach Art des Pressverbandes: DIN 7190-1 bzw. DIN 7190-2 Spezifikation 'Messung und Auswertung von Radsatz-Torsions-schwingungen' gem. DIN Taschenbuch 491/1 Description: Dokumentation der Nachweisführung: Berechnungsbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.5.2.1 (6.2.3.7) #2End #EBA Checklist Referenz: 5.1#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>3.3.2-Wheelset (complete)</u> Pressverband Radsitz - Maximales Torsionsmoment für Treibradsätze Die für die Pressverbandsberechnung erforderliche Eingangsgröße "maximales Torsionsmoment" ist mittels der Vorgaben der Spezifikation zu bestimmen. Regelwerk für zusätzliche nationale Prüfung: Spezifikation 'Messung und Auswertung von Radsatz- Torsionsschwingungen' gem. DIN Taschenbuch 491/1 Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.5.2.1 (6.2.3.7) #2End #EBA Checklist Referenz: 5.2#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>3.3.3-Wheel</u> Festigkeit Vollrad Für alle Fahrzeugbauarten ist der Lastfall außergewöhnliche Belastung nach UIC 510-5, Punkt 7.2.1.1 (ergänzend zum Nachweis nach DIN EN 13979-1) nachzuweisen. Bei neuartigen Werkstoffen sind zusätzliche Dauerfestigkeitsuntersuchungen erforderlich. Regelwerk für zusätzliche nationale Prüfung: UIC 510-5 Description: Dokumentation der Nachweisführung: Berechnungsbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.5.2.2 (6.1.3.1) #2End #EBA Checklist Referenz: 5.4#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>3.3.3-Wheel</u> Materialeigenschaften der Räder Ferromagnetische Eigenschaften Regelwerk für zusätzliche nationale Prüfung: ERA/ERTMS/033281 Kapitel 3.1.3. Description: Für Fahrzeuge, bei denen keine EG-Prüfung nach</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>TSI ZZS durchgeführt wird, ist dies als NNTR einzuhalten, in anderen Fällen ist dies Gegenstand der EG-Prüfung nach TSI ZZS und nicht durch den DeBo prüfen. Dokumentation der Nachweisführung: Beschreibung #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOK & PAS 2014 (2014/1302/EU) Anlage J.2 Ziffer 1) #2End #EBA Checklist Referenz: 12.9#</p>		
<p><u>3.3.5-Sanding system</u> Sandstreuanlage - Einbau - verteilte Sandmenge - max. Anzahl aktiver Sandstreuanlagen - Unterbrechungsvorrichtungen für Fälle: - in Weichenbezirken - bei Stillstand (außer Anfahren und Anlagentest) - beim Bremsen unter $v = 20$ km/h Regelwerk für zusätzliche nationale Prüfung: - Ergänzungsregelung Nr. B011 zum Sanden Description: Für Fahrzeuge, deren Inbetriebnahmegenehmigung vor dem 01.03.2016 beantragt wurde, und deren Regelwerksstand somit festgeschrieben ist, gelten die Anforderungen des Kapitels 9. Bestandsfahrzeuge Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG-Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig. Dokumentation der Nachweisführung: Prüfbericht (Fahrzeuge mit Antrag nach 01.03.2016) Bewertungsmatrix für Bestandsfahrzeuge nach Anlage 4 (Fahrzeuge die die Kriterien der Bemerkung erfüllen) #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
TSI ZZS (2016/919/EU) Anhang A, Tabelle A.2, Ziffer 77 #2End #EBA Checklist Referenz: 6.17#		
<u>3.3.7-Axle shaft</u> Mechanisches Verhalten von Radsatzwellen Ermittlung der Torsionsmomente mittels den Vorgaben der Spezifikation. Bei der Auslegung der Radsatzwelle sind auch die Beanspruchungen aus den geregelten Schwingungen zu berücksichtigen. Regelwerk für zusätzliche nationale Prüfung: Spezifikation 'Messung und Auswertung von Radsatz- Torsionsschwingungen' gem. DIN Taschenbuch 491/1 Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.5.2.1 (6.2.3.7) #2End #EBA Checklist Referenz: 5.3#	Agency: Assessment undergoing	Under review by ERA
<u>3.3.7-Axle shaft</u> Mechanisches Verhalten von Radsatzwellen Ermittlung der Torsionsmomente mittels den Vorgaben der Spezifikation. Bei der Auslegung der Radsatzwelle sind auch die Beanspruchungen aus den geregelten Schwingungen zu berücksichtigen. Regelwerk für zusätzliche nationale Prüfung: Spezifikation 'Messung und Auswertung von Radsatz- Torsionsschwingungen' gem. DIN Taschenbuch 491/1 Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.5.2.1 (6.2.3.7) #2End #EBA Checklist Referenz: 5.3#	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
<p>3.3.7-Axle shaft Pressverband Radsatz - Maximales Torsionsmoment für Treibradsätze Die für die Pressverbandsberechnung erforderliche Eingangsgröße "maximales Torsionsmoment" ist mittels der Vorgaben der Spezifikation zu bestimmen. Regelwerk für zusätzliche nationale Prüfung: Spezifikation 'Messung und Auswertung von Radsatz- Torsionsschwingungen' gem. DIN Taschenbuch 491/1 Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.3.5.2.1 (6.2.3.7) #2End #EBA Checklist Referenz: 5.2#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p>3.3.8-Axle bearing condition monitoring Überwachung durch streckenseitige Ausrüstung (Heißläuferortungsfähigkeit) Festlegung des in der technischen Dokumentation aufgezeichneten Temperaturgrenzwerts. Kompatibilität mit dem betroffenen Schienennetz muss geprüft werden. Grenzwert Infrastrukturbetreiber (DB Netz AG) gemäß Beschreibung "Infrastrukturregister Grundsätze": - Warmalarm 70 °C - Heißalarm 100 °C - Differenzalarm 65 °C Regelwerk für zusätzliche nationale Prüfung: DIN EN 15437-1 Description: Nationale Prüfung durch DeBo ist nur notwendig, falls die Bewertung nicht in der EG-Prüfbescheinigung enthalten ist. Dokumentation der Nachweisführung: Spezifikation Wälzlager oder Herstellererklärung #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014)4.2.3.5.2.1, 4.2.3.3.2, 4.2.3.3.2.2</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
#2End #EBA Checklist Referenz: 5.5#		
<p><u>4.1-Functional requirements for braking at train level</u> Nachweis der Erfüllung der aus AEG und EBO abgeleiteten Schutzziele zum Kuppeln von Fahrzeugen Nachweis der Kuppelkriterien Regelwerk für zusätzliche nationale Prüfung: Ergänzungsregelung Nr. B 015 "Aus §4 AEG und EBO abgeleitete Schutzziele zum Kuppeln von Fahrzeugen mit automatischer Kupplung im Stand" Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.2.1., 4.2.7.1.2., 4.2.7.1.3. #2End #EBA Checklist Referenz: 13.1#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>4.1-Functional requirements for braking at train level</u> Prüfung Steuerungsfunktionen Hauptbremssystem Kompatibilität mit interoperablen Fahrzeugen Siehe Beschreibung feld für die Regelwerk für zusätzliche nationale Prüfung. Description: Regelwerk für zusätzliche nationale Prüfung: "• ""Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen"". In Abhängigkeit vom zu prüfenden Fahrzeug sind die folgenden Prüfverfahren anzuwenden: - für Hochgeschwindigkeitszüge DIN EN 15734-2, - für Triebzüge DIN EN 16185-2, - für Reisezugwagen gemäß ""Anhang II zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Reisezugwagen (Typprüfung für Einzelfahrzeuge)"" - für Güterwagen gemäß ""Anhang III zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Güterwagen (Typprüfung für Einzelfahrzeuge)"" - für Lokomotiven DIN EN 16185-2, soweit</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>anwendbar.</p> <ul style="list-style-type: none"> • ""Ergänzungsregelung Nr. B007 zur Kraftschlussausnutzung"" • ""Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen"", Punkte 4, 16, 21, 29, 45" <p>Dokumentation der Nachweisführung: Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG-Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig.</p> <p>Prüfbericht</p> <p>#Zusätzliche Information</p> <p>#1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz</p> <p>#1End</p> <p>#2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.2.1 , 4.2.4.4.1, 4.2.4.4.2.</p> <p>#2End</p> <p>#EBA Checklist Referenz: 6.1#</p>		
<p><u>4.1-Functional requirements for braking at train level</u></p> <p>Prüfung Steuerungsfunktionen weiterer Bremssysteme (Zusatzbremse)</p> <p>Max. Kraftschlussausnutzung Zusatzbremse</p> <p>Rückfallebene für Hauptbremssystem</p> <p>Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> - Ergänzungsregelung Nr. B007 zur Kraftschlussausnutzung, - Ergänzungsregelung Nr. B013 zu Zusatzbremsen - Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen, Punkte 21, 22, 56 <p>Description:</p> <p>Dokumentation der Nachweisführung: Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG-Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig.</p> <p>Prüfbericht</p> <p>#Zusätzliche Information</p> <p>#1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz</p> <p>#1End</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>#2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.2.1, 4.2.4.7 4.2.4.8, 4.2.4.4.3 #2End #EBA Checklist Referenz: 6.2#</p>		
<p><u>4.1-Functional requirements for braking at train level</u> Prüfung Steuerungsfunktionen weiterer Bremsysteme (Dynamische Bremse) Max. Kraftschlussausnutzung dynamische Bremse Übergang dynamische auf pneumatische Bremse Regelwerk für zusätzliche nationale Prüfung: - Ergänzungsregelung Nr. B007 zur Kraftschlussausnutzung - Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen, Punkte 21, 56 Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.4.4, 4.2.4.6.1, 4.2.4.6.2, 4.2.4.7, 4.2.4.5.3 #2End #EBA Checklist Referenz: 6.3#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>4.1-Functional requirements for braking at train level</u> Prüfung Steuerungsfunktionen weiterer Bremsysteme (Magnetschienenbremse) Funktion, Einbaubedingungen, Prüfverfahren von Magnetschienenbremsen Regelwerk für zusätzliche nationale Prüfung: - DIN EN 16207 Description: Dokumentation der Nachweisführung: Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG-Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig. Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
#2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.8.1, 4.2.4.8.2 #2End #EBA Checklist Referenz: 6.4#		
<u>4.5-Brake performance</u> Prüfung der Bremssteuerung bei simulierten Systemausfällen Hinreichende Verzögerung: Ermittlung der Bremsleistung bei simulierten Systemausfällen (eingeschränkter Modus) Siehe Beschreibung field für die Regelwerk für zusätzliche nationale Prüfung. Description: Regelwerk für zusätzliche nationale Prüfung: "• UIC 544-1 • ""Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen"" In Abhängigkeit vom zu prüfenden Fahrzeug sind die folgenden Prüfverfahren anzuwenden: - für Hochgeschwindigkeitszüge DIN EN 15734-2, - für Triebzüge DIN EN 16185-2, - für Reisezugwagen gemäß ""Anhang II zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Reisezugwagen (Typprüfung für Einzelfahrzeuge)"" - für Güterwagen gemäß ""Anhang III zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Güterwagen (Typprüfung für Einzelfahrzeuge)"" - für Lokomotiven DIN EN 16185-2, soweit anwendbar. • ""Ergänzungsregelung Nr. B013 zu Zusatzbremsen"" • ""Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen"", Punkte 22, 49" Prüfung Zusammenwirken der Bremssysteme / Ausfallsituationen bezüglich funktionaler Auswirkung Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG-Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig. Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
<p>#1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.5.2 #2End #EBA Checklist Referenz: 6.14#</p>		
<p><u>4.5-Brake performance</u> Mehrfachtraktion (falls vorgesehen) Nachweis der hinreichenden Verzögerung beim Einsatz in Deutschland Offener Punkt TSI LOC&PAS (VO 1302/2014) 4.1.2: "Die Mehrfachtraktion der zu bewertenden Einheit mit anderen Arten von Fahrzeugen fällt nicht in den Anwendungsbereich dieser TSI." Siehe Beschreibung feld für die Regelwerk für zusätzliche nationale Prüfung. Description: Regelwerk für zusätzliche nationale Prüfung: "• UIC 544-1 • ""Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen"" In Abhängigkeit vom zu prüfenden Fahrzeug sind die folgenden Prüfverfahren anzuwenden: - für Hochgeschwindigkeitszüge DIN EN 15734-2, - für Triebzüge DIN EN 16185-2, - für Reisezugwagen gemäß ""Anhang II zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Reisezugwagen (Typprüfung für Einzelfahrzeuge)"" - für Güterwagen gemäß ""Anhang III zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Güterwagen (Typprüfung für Einzelfahrzeuge)"" - für Lokomotiven DIN EN 16185-2, soweit anwendbar." "Die unter diese TSI fallenden Fahrzeuge (im Rahmen dieser TSI als „Einheit“ bezeichnet) sind in der EG-Prüfbescheinigung unter Verwendung eines der folgenden Merkmale zu beschreiben: - nicht trennbare Triebzugeinheit und, soweit erforderlich, ein oder mehrere vordefinierte Zugverbände aus mehreren Triebzügen für Mehrfachtraktion, - Einzelfahrzeuge oder feste Fahrzeuggruppen, die für einen oder mehrere vordefinierte Zugverbände ausgelegt sind, und - Einzelfahrzeuge oder feste Fahrzeuggruppen, die für den freizügigen Fahrbetrieb</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>ausgelegt sind, und, soweit erforderlich, eine oder mehrere vordefinierte Zugverbände aus mehreren Einzelfahrzeugen (Lokomotiven) für Mehrfachtraktion.“</p> <p>Wenn die Bewertung durch den NoBo gemäß der in Spalte ""Regelwerk für zusätzliche nationale Prüfung"" aufgeführten anzuwendenden Regelwerke durch EG-Prüfbescheinigung erfolgt ist, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig."</p> <p>Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014):2.2,4.1.2,4.2,6.2.7 #2End #EBA Checklist Referenz: 6.15#</p>		
<p><u>4.5-Brake performance</u> Steilstreckentauglichkeit Betrieb auf Strecken mit > 40 ‰: sichere Funktion und hinreichende Verzögerung "Die erforderliche Mindestbremsleistung eines Zuges für den Betrieb auf einer Strecke mit einer vorgesehenen Geschwindigkeit hängt von den Streckenmerkmalen (Signalsystem, Höchstgeschwindigkeit, Steigungen/Gefälle, Bremswegreserve) ab und gilt als Merkmal der Infrastruktur." (TSI LOC&PAS (VO 1302/2014) 4.2.4.1) Regelwerk für zusätzliche nationale Prüfung: - Ergänzungsregelung Nr. B017 zur bremstechnischen Ausrüstung von Fahrzeugen zum Betrieb auf Steilstrecken - Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen, Punkt 49 Description: Prüfung der Steilstreckentauglichkeit (falls vorgesehen) Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.1 #2End #EBA Checklist Referenz: 6.16#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>4.5-Brake performance</u> Hauptbremssystem Hinreichende Verzögerung: Ermittlung der nominalen Bremsleistung Regelwerk für zusätzliche nationale Prüfung - siehe Beschreibung (Description). Description: Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> • UIC 544-1 • "Anhang I zu den Regelungen für die bremstechnische Beurteilung von Schienenfahrzeugen im Rahmen der Abnahme nach § 32 EBO - Prüfmodul: Bremstechnische Prüfung von Triebfahrzeugen im Rahmen der Abnahme nach § 32 EBO (Typprüfung für Einzelfahrzeuge)", Kapitel 2.1, 2.2, 2.3, 2.10 • "Anhang II zu den Regelungen für die bremstechnische Beurteilung von Schienenfahrzeugen im Rahmen der Abnahme nach § 32 EBO - Prüfmodul: Bremstechnische Prüfung von Reisezugwagen im Rahmen der Abnahme nach § 32 EBO (Typprüfung für Einzelfahrzeuge)", Kapitel 2.2, 2.3 • "Anhang IV zu den Regelungen für die bremstechnische Beurteilung von Schienenfahrzeugen im Rahmen der Abnahme nach § 32 EBO - Grundsätze der Bremsbewertung in Anlehnung an UIC 544-1" • Ergänzungsregelung B007 • "Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen", Punkte 1, 7, 9, 21, 28, 29, 31, 36, 49, 56 <p>Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.2.2.4, 4.2.4.2.1,4.2.4.2.2,4.2.4.5,4.2.4.6.1,4.2.4.9,4.2.4.10,6.2.3.8, 6.2.3.9 #2End #EBA Checklist Referenz: 6.7#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>4.5-Brake performance</u> Weitere Bremssysteme (Dynamische Bremse) Hinreichende Verzögerung: Ermittlung der nominalen Bremsleistung der dynamischen Bremse Siehe Beschreibung feld für die Regelwerk für zusätzliche nationale Prüfung.</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Description:</p> <p>Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> • UIC 544-1 • "Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen". <p>In Abhängigkeit vom zu prüfenden Fahrzeug sind die folgenden Prüfverfahren anzuwenden:</p> <ul style="list-style-type: none"> - für Hochgeschwindigkeitszüge DIN EN 15734-2, - für Triebzüge DIN EN 16185-2, - für Reisezugwagen gemäß "Anhang II zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Reisezugwagen (Typprüfung für Einzelfahrzeuge)" - für Güterwagen gemäß "Anhang III zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Güterwagen (Typprüfung für Einzelfahrzeuge)" - für Lokomotiven DIN EN 16185-2, soweit anwendbar. <ul style="list-style-type: none"> • "Ergänzungsregelung Nr. B007 zur Kraftschlussausnutzung", • "Ergänzungsregelung Nr. B013 zu Zusatzbremsen" • "Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen", Punkte 21, 22, 36, 49, 56" <p>Dokumentation der Nachweisführung:</p> <p>Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG-Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig.</p> <p>Prüfbericht</p> <p>#Zusätzliche Information</p> <p>#1-Verweis auf Art. 22 2008/57/EG</p> <p>Kompatibilität mit dem Netz</p> <p>#1End</p> <p>#2-TSI-Bezug</p> <p>TSI LOC&PAS (VO 1302/2014) 4.2.4.5, 4.2.4.6, 4.2.4.7</p> <p>#2End</p> <p>#EBA Checklist Referenz: 6.8#</p>		
<p><u>4.5-Brake performance</u></p> <p>Weitere Bremssysteme (Magnetschienenbremse)</p> <p>Hinreichende Verzögerung: Ermittlung der nominalen Bremsleistung der</p>	<p>Agency:</p> <p>Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Magnetschienenbremse Regelwerk für zusätzliche nationale Prüfung - siehe Beschreibung (Description). Description: Dokumentation der Nachweisführung: Prüfbericht "• UIC 544-1 • DIN EN 16207 • ""Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen"", in Abhängigkeit vom zu prüfenden Fahrzeug sind die folgenden Prüfverfahren anzuwenden: - für Hochgeschwindigkeitszüge DIN EN 15734-2, - für Triebzüge DIN EN 16185-2, - für Reisezugwagen gemäß ""Anhang II zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Reisezugwagen (Typprüfung für Einzelfahrzeuge)"" - für Güterwagen gemäß ""Anhang III zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Güterwagen (Typprüfung für Einzelfahrzeuge)"" - für Lokomotiven DIN EN 16185-2, soweit anwendbar. • ""Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen"", Punkte 1, 7, 9, 31, 32, 36, 49" Regelwerk für zusätzliche nationale Prüfung: Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG-Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig. #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.5, 4.2.4.6, 4.2.4.7 4.2.8.2.3, Appendix J #2End #EBA Checklist Referenz: 6.9#</p>		
<p><u>4.5-Brake performance</u> Weitere Bremssysteme (Wirbelstrombremse) Hinreichende Verzögerung: Ermittlung der nominalen Bremsleistung der Wirbelstrombremse</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Offener Punkt der TSI LOC&PAS (VO 1302/2014) 4.2.4.8.3: Die Anforderungen, die Wirbelstrombremsen erfüllen müssen, gelten als offener Punkt.</p> <p>Regelwerk für zusätzliche nationale Prüfung - siehe Beschreibung (Description).</p> <p>Description:</p> <p>Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> • UIC 544-1 • DIN EN 16207 • "Anhang I zu den Regelungen für die bremstechnische Beurteilung von Schienenfahrzeugen im Rahmen der Abnahme nach § 32 EBO - Prüfmodul: Bremstechnische Prüfung von Triebfahrzeugen im Rahmen der Abnahme nach § 32 EBO (Typprüfung für Einzelfahrzeuge)", Kapitel 1.2.4, 1.7, 2.2 • "Anhang II zu den Regelungen für die bremstechnische Beurteilung von Schienenfahrzeugen im Rahmen der Abnahme nach § 32 EBO - Prüfmodul: Bremstechnische Prüfung von Reisezugwagen im Rahmen der Abnahme nach § 32 EBO (Typprüfung für Einzelfahrzeuge)", Kapitel 1.1.2, 1.2.4, 1.6, 2.2 • "Anhang IV zu den Regelungen für die bremstechnische Beurteilung von Schienenfahrzeugen im Rahmen der Abnahme nach § 32 EBO - Grundsätze der Bremsbewertung in Anlehnung an UIC 544-1", Kapitel 2.6 • "Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen", Punkte 1, 7, 9, 31, 36, 49 <p>Bremsbewertung mit maximal zulässigem Luftspalt der jeweiligen Konstruktion</p> <p>Dokumentation der Nachweisführung: Prüfbericht</p> <p>#Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.8.3 #2End #EBA Checklist Referenz: 6.10#</p>		
<p><u>4.5-Brake performance</u></p> <p>Prüfung Zusammenwirken der Bremssysteme / Ausfallsituationen</p> <p>Hinreichende Verzögerung: Ermittlung der nominalen Bremsleistung</p> <p>Regelwerk für zusätzliche nationale Prüfung - siehe Beschreibung (Description)</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Description: Prüfung Zusammenwirken der Bremsysteme/Ausfallsituationen bezüglich funktionaler Auswirkung; Anforderung bezieht sich auf Hinweis in TSI-Punkt 4.2.4.5.3</p> <p>Betriebsbremsung: "Aus Sicherheitsgründen kann ein Mitgliedstaat die Anforderung stellen, dass die Notbremsleistung höher ist als die maximale Betriebsbremsleistung. In keinem Fall jedoch kann der Zugang von Eisenbahnverkehrsunternehmen, die eine höhere maximale Betriebsbremsleistung einsetzen, verhindert werden, es sei denn, der Mitgliedstaat kann nachweisen, dass die nationalen Sicherheitsansprüche gefährdet werden."</p> <p>Regelwerk für zusätzliche nationale Prüfung:</p> <ul style="list-style-type: none"> • UIC 544-1 • "Anhang I zu den Regelungen für die bremstechnische Beurteilung von Schienenfahrzeugen im Rahmen der Abnahme nach § 32 EBO - Prüfmodul: Bremstechnische Prüfung von Triebfahrzeugen im Rahmen der Abnahme nach § 32 EBO (Typprüfung für Einzelfahrzeuge)", Kapitel 1.8, 2.11, 2.12 • "Anhang II zu den Regelungen für die bremstechnische Beurteilung von Schienenfahrzeugen im Rahmen der Abnahme nach § 32 EBO - Prüfmodul: Bremstechnische Prüfung von Reisezugwagen im Rahmen der Abnahme nach § 32 EBO (Typprüfung für Einzelfahrzeuge)", Kapitel 1.7.4, 2.6, 2.7 • "Anhang IV zu den Regelungen für die bremstechnische Beurteilung von Schienenfahrzeugen im Rahmen der Abnahme nach § 32 EBO - Grundsätze der Bremsbewertung in Anlehnung an UIC 544-1", Kapitel 1.4 • "Ergänzungsregelung Nr. B007 zur Kraftschlussausnutzung", • "Ergänzungsregelung Nr. B013 zu Zusatzbremsen" • "Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen", Punkte 21, 22, 36, 49, 56 <p>Dokumentation der Nachweisführung: Prüfbericht</p> <p>#Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.2.1, 4.2.4.7,</p>		

National rules	Agency evaluation	Agency evaluation status
4.2.4.9 #2End #EBA Checklist Referenz: 6.11#		
<p><u>4.5.4-Parking brake performance</u> Prüfung Feststellbremse Hinreichende Sicherung durch die Feststellbremse in 40 % für alle Ladezustände Siehe Beschreibung feld für die Regelwerk für zusätzliche nationale Prüfung. Description: Regelwerk für zusätzliche nationale Prüfung: "• UIC 544-1 • ""Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen"". In Abhängigkeit vom zu prüfenden Fahrzeug sind die folgenden Prüfverfahren anzuwenden: - für Hochgeschwindigkeitszüge DIN EN 15734-2, - für Triebzüge DIN EN 16185-2, - für Reisezugwagen gemäß ""Anhang II zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Reisezugwagen (Typprüfung für Einzelfahrzeuge)"" - für Güterwagen gemäß ""Anhang III zu den Regelungen für die bremstechnische Beurteilung von Eisenbahnfahrzeugen - Prüfmodul: Bremstechnische Prüfung von Güterwagen (Typprüfung für Einzelfahrzeuge)"" - für Lokomotiven DIN EN 16185-2, soweit anwendbar. • ""Ergänzungsregelung Nr. B004 zur Ausführung von Bremsfunktionen zur Stillstandsicherung"" • ""Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen"", Punkte 3, 15, 49, 51" Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG-Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig. Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.5.5</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
#2End #EBA Checklist Referenz: 6.12#		
<p><u>4.6.2-Wheel slide protection system (“WSP”)</u> Prüfung des Gleitschutzes Verhinderung von Radsatzblockierungen und Begrenzung von Bremswegverlängerungen Regelwerk für zusätzliche nationale Prüfung: - UIC 541-05 - Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen, Punkte 12, 14, 34, 35, 39, 40, 49,50 Description: Dokumentation der Nachweisführung: Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG- Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig. Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.6, 5.3.5, 6.1.3.2,6.1.6, 6.2.3.9, 6.2.3.10 #2End #EBA Checklist Referenz: 6.13#</p>	<p>Agency: Assessment undergoing</p>	Under review by ERA
<p><u>4.7.1.1-Brake blocks</u> Prüfung Bremskraftherzeugung (Bremsklotzsohlen) Qualifizierung Bremsklotzsohlen Regelwerk für zusätzliche nationale Prüfung: - UIC 541-4 oder anwendungsspezifischer Nachweis zur Einhaltung der techn. Anforderungen des UIC-Merkblatts - Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen, Punkte 25, 41 Description: Anmerkung: Bei Verwendung zertifizierter IK- Bremsklotzsohlen nach TSI WAG keine nationale zusätzliche Prüfung. Der Verwendungsbereich ist zu beachten. Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG- Prüfbescheinigung bestätigt wurde, ist keine</p>	<p>Agency: Assessment undergoing</p>	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
<p>nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig. Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.4.2, 4.2.4.3, 4.2.4.5 #2End #EBA Checklist Referenz: 6.5#</p>		
<p><u>5.1.1-Exterior doors</u> Spaltsituation Vermeiden des Hineinfallens in den Spalt zwischen Bahnsteig und Fahrzeug Regelwerk für zusätzliche nationale Prüfung: "Technische Regeln für die Ermittlung und Bewertung des Spaltes zwischen Bahnsteig und Fahrzeug im Bereich des Fahrgasteinstiegs im Rahmen der Inbetriebnahmegenehmigung des Fahrzeugs" Description: Die VDV-Schrift 759 "Abfertungsverfahren im Eisenbahn-Personenverkehr" wird zurzeit erstellt. Hierin sollen die Anforderungen (insbesondere technische Ausrüstung der Fahrzeuge bzw. Türeinrichtungen) i. V. m. den Abfertungsverfahren festgelegt werden. Diese Schrift ist wesentliche Voraussetzung für die Anwendung der "Technischen Regeln für die Ermittlung und Bewertung des Spaltes zwischen Bahnsteig und Fahrzeug im Bereich des Fahrgasteinstiegs im Rahmen der Inbetriebnahmegenehmigung des Fahrzeugs". Die "Technischen Regeln ..." sind auf der EBA-Homepage veröffentlicht. Anmerkung: Bei allen Abfertungsverfahren, die automatisch und/oder dezentral schließende Türen und technisches Feststellen der Abfahrbereitschaft zulassen (z. B. TAV), sind die "Technischen Regeln für die Ermittlung und Bewertung des Spaltes zwischen Bahnsteig und Fahrzeug ..." zwingend zu beachten. Bei anderen Abfertungsverfahren kann die gleiche Sicherheit auf andere Weise erreicht werden (z. B. infrastrukturelle und/oder betriebliche Maßnahmen). Dokumentation der Nachweisführung: Nachweis der max. Spaltbreite zwischen Fahrzeug und Bahnsteig:</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Technische Zeichnung Berechnungsbericht mit Eingangsgrößen #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI PRM (EU) Nr. 1300/2014 4.2.2.12, 4.2.2.12.1, 4.2.2.12.2 #2End #EBA Checklist Referenz: 10.1#</p>		
<p><u>6.1.2-Aerodynamic effects on the vehicle</u> Aerodynamik bei anderen Spurweiten als 1 435 mm Offener Punkt der TSI LOC&PAS (VO 1302/2014) 4.2.6.2: "Aerodynamische Wirkungen für Spurweiten 1.520 mm, 1.524 mm und 1.668 mm. In der TSI genannte normative Dokumente beruhen auf Erfahrungen mit der Spurweite 1.435 mm." Es gibt keine nationalen Anforderungen zur aerodynamischen Wirkungen für andere Spurweiten als 1.435 mm im Anwendungsbereich der TSI. Regelwerk für zusätzliche nationale Prüfung: Description: Dokumentation der Nachweisführung: #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Offener Punkt #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.6.2 #2End #EBA Checklist Referenz: 15.2#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>6.1.2.1-Crosswind effects</u> Aerodynamik/ Seitenwind Die Einhaltung der fahrzeugseitigen Grenzwerte bezüglich dem Fahrzeugverhalten bei Seitenwind ist erforderlich. Regelwerk für zusätzliche nationale Prüfung: Bericht gem. DB Ril oder gem. „Leitfaden "Sicherstellung der technischen Kompatibilität für Fahrzeuge mit Seitenwindnachweis nach TSI LOC&PAS zu Anforderungen der Ril 807.04" Description: Dokumentation der Nachweisführung: gem. DB Ril #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
TSI LOC&PAS (VO 1302/2014) 4.2.6.2.4. #2End #EBA Checklist Referenz: 15.1#		
<u>6.2.3.4-Ballast pick-up and projection onto neighbouring property</u> Schotterflug Offener Punkt der TSI LOC&PAS 2014 (1302/2014/EU) 4.2.6.2.5: "Aerodynamische Wirkungen auf Schottergleisen für Fahrzeuge mit bauartbedingter Höchstgeschwindigkeit ≥ 190 km/h" keine nationalen Anforderungen Regelwerk für zusätzliche nationale Prüfung: Description: Dokumentation der Nachweisführung: #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Offener Punkt #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.6.2.5 #2End #EBA Checklist Referenz: 15.3#	Agency: Assessment undergoing	Under review by ERA
<u>7.2.1-Vehicle marking</u> Anschriften und Zeichen Für Betrieb, Instandhaltung und Arbeitsschutz erforderliche Anschriften richtig anbringen Regelwerk für zusätzliche nationale Prüfung: • DIN EN 15877-2 • "Ergänzungsregelung Nr. B001 zur Anordnung und Ausführung von Bremsanschriften", Kapitel 3.2, 3.7, 4 • "Laufende Beschlussliste des Arbeitskreises Bremse zu verschiedenen, die Bremse betreffenden Einzelthemen", Punkt 58" Description: Dokumentation der Nachweisführung: Wenn die Bewertung durch den NoBo gemäß der in Spalte "Regelwerk für zusätzliche nationale Prüfung" aufgeführten anzuwendenden Regelwerke erfolgte und mittels EG-Prüfbescheinigung bestätigt wurde, ist keine nationale Prüfung gemäß dieser Regelwerke durch den DeBo mehr notwendig. Technische Zeichnung mit Stückliste #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 23.1#	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
<p><u>8.2.2.2-Pantograph head geometry</u> Stromabnehmerwippe Alternativlösungen der TSI LOC&PAS (VO 1302/2014): Stromabnehmer mit einer Wippenbreite von 1.600 mm oder 1.950 mm sind TSI-konform. Die Ausrüstung der Fahrzeuge mit einer konkreten Stromabnehmerwippe ergibt sich nach DIN EN 50367, Tabelle B.3. Regelwerk für zusätzliche nationale Prüfung: DIN EN 50367, Tabelle B.3 Description: Dokumentation der Nachweisführung: Beschreibung / Zeichnung #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Offener Punkt #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.8.2.9.2 #2End #EBA Checklist Referenz: 8.1#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>8.2.2.6-Arrangement of pantographs</u> Anzahl der Stromabnehmer Zugelassen ist im Netz (außer S-Bahnstrecken) der Betrieb mit maximal zwei gehobenen Stromabnehmern in einem Abstand von $x < 35$ m bzw. $x > 85$ m. Der Ausschlussbereich zwischen 35 m und 85 m ist notwendig, um die im Netz vorhandenen offenen Schutzstrecken ohne Schaden für die Stromversorgungsanlagen befahren zu können. Ausnahmeregelung zur Anordnung der Stromabnehmer: Bei mehr als zwei arbeitenden Stromabnehmern oder bei einem Abstand der Stromabnehmer untereinander von weniger als 18 m gilt folgendes: Die Grenzwerte für die Kontaktkräfte und den Anhub des Fahrdrabtes am Stützpunkt sowie in Feldmitte müssen eingehalten werden. Regelwerk für zusätzliche nationale Prüfung: Ril 810.0242 Kap. 3 Description: Die Überprüfung des Anhubs in Feldmitte ist erforderlich, damit unter Bauwerken die elektrischen Mindestabstände nicht unterschritten werden. Entstehen beim Bilden der Züge mit mehreren Triebfahrzeugen Stromabnehmerabstände im Ausschlussbereich, kann durch den Infrastrukturbetreiber eine besondere Freigabe für diese Triebfahrzeuge erteilt werden.</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Voraussetzung für diese Freigabe ist, dass durch zusätzliche technische Einrichtungen die offenen Schutzstrecken immer mit gesenktem Stromabnehmer befahren werden. Dokumentation der Nachweisführung: Beschreibung/Zeichnung #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 8.4#</p>		
<p><u>8.2.2.8-Pantograph lowering</u> Absenken der Stromabnehmer Elektrische Einheiten sind mit einer Vorrichtung zur automatischen Absenkung auszurüsten. Regelwerk für zusätzliche nationale Prüfung: DIN EN 50206-1 Description: Dokumentation der Nachweisführung: Beschreibung der Senkeinrichtung #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.8.2.9.10 #2End #EBA Checklist Referenz: 8.2#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>8.2.3.1-Contact strip geometry</u> Schleifstückabstand Der Schleifstückabstand (l1) muss mindestens 290 mm und darf maximal 643 mm betragen. Regelwerk für zusätzliche nationale Prüfung: Ril 810.0242 Kap. 3 Description: Definition des Schleifstückabstands l1 in Ril 810.0242 der DB Netz AG Dokumentation der Nachweisführung: Beschreibung/Zeichnung #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 8.3#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>9.1.3.1-Mechanical characteristics</u> Mechanische Eigenschaften Windschutzscheibe im Führerstand Penetrationsfestigkeit (Beschussfestigkeit)</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Regelwerk für zusätzliche nationale Prüfung: DIN EN 15152 Description: Beschussversuche sind abweichend zur DIN EN 15152 mit Vmax des zu bewertenden Fahrzeugs plus einer Gegenzuggeschwindigkeit von 200 km/h durchzuführen. (Hintergrund: In Deutschland sind im Mischverkehr auch Fahrzeuge mit offenbaren Fenstern mit Vmax = 200 km/h im Einsatz.) Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.9.2.1 #2End #EBA Checklist Referenz: 9.1#</p>		
<p><u>9.1.3.2-Optical characteristics</u> Farbortverschiebung (Darstellung im CIE - System) Prüfung der Farben rot, gelb, grün, weiß, blau Regelwerk für zusätzliche nationale Prüfung: DIN 6163 DIN EN 15152 Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 9.2#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>10.2.2-Rescue services' information, equipment and access</u> Eindringen in das Fahrzeug Funktionsanforderung gemäß Verwaltungsvorschrift zur Prüfung von Notein- und Notausstiegsfenstern (NEA) in Schienenfahrzeugen Abschnitt 3.2 Regelwerk für zusätzliche nationale Prüfung: Verwaltungsvorschrift zur Prüfung von Notein- und Notausstiegsfenstern (NEA) in Schienenfahrzeugen Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
#1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.10.5 #2End #EBA Checklist Referenz: 16.1#		
<u>10.2.2-Rescue services' information, equipment and access</u> Eindringen in das Fahrzeug Funktionsanforderung gemäß Verwaltungsvorschrift zur Prüfung von Notein- und Notausstiegsfenstern (NEA) in Schienenfahrzeugen Abschnitt 3.2 Regelwerk für zusätzliche nationale Prüfung: Verwaltungsvorschrift zur Prüfung von Notein- und Notausstiegsfenstern (NEA) in Schienenfahrzeugen Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC&PAS (VO 1302/2014) 4.2.10.5 #2End #EBA Checklist Referenz: 16.1#	Agency: Assessment undergoing	Under review by ERA

5.6.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements

5.6.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2-EMC between the vehicle and the railway system</u> Verträglichkeit mit Gleisstromkreisen und Radsensoren/Achszählern Nachweis der Kompatibilität von Schienenfahrzeugen mit Gleisschaltmitteln Regelwerk für zusätzliche nationale Prüfung: Bekanntgabe 04 - AK EMV "Ergänzende Regelungen zur Kompatibilität mit Systemen der Gleisfreimeldung" Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
<p>#1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 12.7#</p>		
<p><u>8.4.2.1.1-Rail return current</u> Verträglichkeit mit Gleisstromkreisen Störstromgrenzwerte für Triebfahrzeuge Regelwerk für zusätzliche nationale Prüfung: Technische Regelung für den Nachweis der elektromagnetischen Verträglichkeit zwischen Schienenfahrzeugen und der Infrastruktur im Geltungsbereich der EBO (TR-EMV) Teil 1 – Allgemeines Teil 2 – Nachweis der Einhaltung der Störstromgrenzwerte Bekanntgabe 05 - AK EMV Ergänzende Regelungen zur TR EMV – Teil 2 sowie zur Bekanntgabe 02-AK EMV Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 12.2#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>8.4.2.1.1-Rail return current</u> Verträglichkeit mit Gleisstromkreisen Störstromgrenzwerte für elektrische Energieversorgungsanlagen auf Triebfahrzeugen Regelwerk für zusätzliche nationale Prüfung: Technische Regelung für den Nachweis der elektromagnetischen Verträglichkeit zwischen Schienenfahrzeugen und der Infrastruktur im Geltungsbereich der EBO (TR-EMV) Teil 1 – Allgemeines Teil 2 – Nachweis der Einhaltung der Störstromgrenzwerte Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 12.3#		
<u>8.4.2.1.2-Heating cable interference current</u> Verträglichkeit mit Gleisstromkreisen Störstromgrenzwerte für elektrische Energieversorgungsanlagen auf Reisezugwagen Regelwerk für zusätzliche nationale Prüfung: Technische Regelung für den Nachweis der elektromagnetischen Verträglichkeit zwischen Schienenfahrzeugen und der Infrastruktur im Geltungsbereich der EBO (TR-EMV) Teil 1 – Allgemeines Teil 2 – Nachweis der Einhaltung der Störstromgrenzwerte Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 12.4#	Agency: Assessment undergoing	Under review by ERA
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Verträglichkeit mit Gleisschaltmitteln MK, DMK, WSSB-Impulsgeber Nachweis der Kompatibilität von Schienenfahrzeugen mit Gleisschaltmitteln Regelwerk für zusätzliche nationale Prüfung: Technische Regelung für den Nachweis der elektromagnetischen Verträglichkeit zwischen Schienenfahrzeugen und der Infrastruktur im Geltungsbereich der EBO (TR-EMV) Teil 1 – Allgemeines Teil 3 – Sensorik Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 12.5#	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Verträglichkeit mit Radsensoren/Achszählern Nachweis der Kompatibilität von Schienenfahrzeugen mit Gleisschaltmitteln Regelwerk für zusätzliche nationale Prüfung: Technische Regelung für den Nachweis der elektromagnetischen Verträglichkeit zwischen Schienenfahrzeugen und der Infrastruktur im Geltungsbereich der EBO (TR-EMV) Teil 1 – Allgemeines Teil 3 – Sensorik Description: In ERA/ERTMS/033281 sind Anforderungen an das Fahrzeug für das Frequenzmanagement für Achszähler enthalten. Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC & PAS 2014(2014/1302/EU) Anlage J.2 Ziffer 1 #2End #EBA Checklist Referenz: 12.6#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Vom Fahrzeug einzuhaltende Anforderungen zur EMV Einhaltung der Anforderungen aus ERA/ERTMS/033281 bei Fahrzeugen, die nicht nach TSI ZZS geprüft werden Regelwerk für zusätzliche nationale Prüfung: ERA/ERTMS/033281 Description: Für Fahrzeuge, bei denen keine EG-Prüfung nach TSI ZZS durchgeführt wird, ist dies als NNTR einzuhalten, in anderen Fällen ist dies Gegenstand der EG-Prüfung nach TSI ZZS und nicht durch den DeBo zu prüfen. Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI LOC PAS 2014 (2014/1302/EU) Anlage J.2.</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
Ziffer 1 #2End #EBA Checklist Referenz: 12.8#		

5.6.3 CCS onboard Subsystem

5.6.3.1 Requirements covering open points for Baselines 2 and 3

Undergoing assessment

5.6.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature: Excel table RDD: ready for upload in RDD		
	LoP version : New list as in Decision 2015/2299/EU		
Assessment status	On going, ERA assessment not yet submitted to the NSA DE Taken into account by MS : -		
Amount of remaining NRs in addition to latest TSIs	10		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	1 parameter: 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	2 parameters: 12.1.2.2-Other GSM-R requirements 12.2.3-Transitions 12.2.5-ETCS cab signalling system	

5.6.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.2.1-National on-board signalling systems</u> "Linienförmige Zugbeeinflussung LZB Einhaltung der grundsätzlichen Bedingungen für die Installationspflicht LZB oder STM LZB gemäß EBO § 28 (1) 5" Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZFS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.2.1 i.V. mit Kapitel 2)"	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
<p>Description: "Anforderung gilt nur für Triebfahrzeuge und andere führende Fahrzeuge, die nach EBO § 28 Abs. 1 Nr. 5 mit einer Höchstgeschwindigkeit von mehr als 160 km/h betrieben werden sollen und auf Strecken in Deutschland betrieben werden, die nicht mit ETCS ausgerüstet sind Hinweis: es gibt Strecken, für die in den Netzzugangsbedingungen für die Fahrzeuge eine LZB-Ausrüstung gefordert wird (z.B. Strecken mit Teilblockabschnitten zur Erhöhung der Streckenleistungsfähigkeit). "</p> <p>Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI ZZS (VO 2016/919) EIRENE-Spezifikationen #2End #EBA Checklist Referenz: 19.2#</p>		
<p><u>12.2.1-National on-board signalling systems</u> Nationale fahrzeugseitige Signalsysteme Einhaltung der grundsätzlichen Bedingungen für die Installationspflicht PZB oder STM PZB gemäß EBO § 28 (1) 4 Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZZS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.2.2 i.V. mit Kapitel 2)" Description: Anforderung gilt nur für Triebfahrzeuge und andere führende Fahrzeuge, die nach EBO § 28 Abs. 1 Nr. 4 bis zu einer Höchstgeschwindigkeit von 160 km/h betrieben werden sollen und die auf Strecken in Deutschland betrieben werden, die nicht mit ETCS ausgerüstet sind. Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 19.3#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>12.2.1-National on-board signalling systems</u> Linienförmige Zugbeeinflussung LZB Einhaltung der grundsätzlichen Bedingungen für die Installationspflicht GNT gemäß EBO § 28 (1)4</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZSS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.2.4.1 i.V. mit Kapitel 2)"</p> <p>Description: Die Ausrüstung ist verpflichtend für Triebfahrzeuge und andere führende Fahrzeuge, die nach EBO § 28 Abs. 1 Nr. 4 bis zu einer Höchstgeschwindigkeit von 160 km/h bogenschnell betrieben werden sollen (Üf > 150 mm) und die auf Strecken in Deutschland betrieben werden, die nicht mit ETCS ausgerüstet sind. Die GNT überwacht die Einhaltung der zulässigen Geschwindigkeiten im Gleisbogen bei Fahrzeugen, die abweichend von § 40 Abs. 7 EBO gemäß der BMV-Entscheidung (Entscheidung des Bundesministeriums für Verkehr an die Deutsche Bahn für NeiTech-Betrieb: "Antrag auf Zulassung einer Ausnahme von den Vorschriften des § 40 Abs. 7 der Eisenbahn-Bau- und Betriebsordnung (EBO) für den Regionaltriebzug der Baureihe VT 611 mit gleisbogenabhängiger Wagenkastensteuerung (GST)", Az. E15/32.31.01/145 DB 96) im Neigetechnikbetrieb (Betrieb auf allen nach DB-Konzernrichtlinie 821.2002 inspizierten Strecken für Neigetechnikbetrieb mit Maximalgeschwindigkeit 160 km/h) betrieben werden.</p> <p>Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 19.4#</p>		
<p><u>12.2.1-National on-board signalling systems</u> "Allgemeine Anforderungen an das jeweilige Zugbeeinflussungssystem Anforderungsgerechter Bremszugriff und ggf. Traktionsabschaltung"</p> <p>Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZSS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.2.4.1 i.V. mit Kapitel 2)"</p> <p>Description: Die Einstufung der Sicherheitsanforderungen der Bremse sind gemäß TSI LOC&PAS (VO 1302/2014) 4.2.4.2.2 durch EG-Prüfung nach TSI</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>LOC&PAS abgedeckt. Die Kohärenz zu den Sicherheitseinstufungen der Komponenten des Zugsicherungssystem ist sicherzustellen. Hierbei sind die Anforderungen der ZTS-spezifischen Regelwerke, der Auflagen bzw. Bedingungen der Typzulassung in Bezug auf den anforderungsgerechten Bremszugriff und ggf. Traktionsabschaltung zu beachten. Dokumentation der Nachweisführung: Nachweis der funktionalen Sicherheit der Bremsfunktionen, die durch ZTS-Einrichtung beeinflusst werden #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug "Sicherheitsanforderungen an Bremse gemäß TSI LOC&PAS (VO 1302/2014) 4.2.4.2.2" #2End #EBA Checklist Referenz: 19.5#</p>		
<p><u>12.2.1-National on-board signalling systems</u> "Allgemeine Anforderungen an das jeweilige Zugbeeinflussungssystem Anforderungsgerechte Gestaltung der Bedienung und Anzeige des Zugsicherungssystems" Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZTS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.2.4.2 i.V. mit Kapitel 2)" Description: Die Prüfung erfolgt anhand des Validierungsberichts (ggf. Sicherheitsnachweises) des Systemintegrators/Fahrzeugherstellers (basierend auf technischen Dokumenten der Einrichtungen, Einbaupläne etc.) sowie der Lastenhefte. Dokumentation der Nachweisführung: "Validierungsbericht, ggf. Sicherheitsnachweis, Integrationsprüfung" #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 19.6#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>12.2.1-National on-board signalling systems</u> "Allgemeine Anforderungen an das jeweilige Zugbeeinflussungssystem</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Anforderungsgerechtes Zusammenwirken der ZFS mit der Fahrzeuggesteuerung; Sicherheitsanforderung und Zeit- und Kapazitätsverhalten an der Schnittstelle ZFS-Einrichtung (fahrzeugseitig) zum/vom Fahrzeug (mit Ausnahme der Bremse)" Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZFS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.2.4.3, 3.2.4.5 i.V. mit Kapitel 2)" Description: Dokumentation der Nachweisführung: "Validierungsbericht, Nachweis der funktionalen Sicherheit der Fahrzeugfunktionen, die durch ZFS-Einrichtung beeinflusst werden" #Zusätzliche Information</p> <p>#1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug "TSI ZFS (VO 2016/919) Annex A - Subset 119 (FFFIS)" #2End #EBA Checklist Referenz: 19.7#</p>		
<p><u>12.2.1-National on-board signalling systems</u> "Allgemeine Anforderungen an das jeweilige Zugbeeinflussungssystem anforderungsgerechtes Zusammenwirken mit Aufzeichnungsgesät (JRU)" Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZFS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.2.4.4 i.V. mit Kapitel 2)" Description: Dokumentation der Nachweisführung: unabhängige Feststellung der Funktionsfähigkeit der JRU im Fahrzeug #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 19.8#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

5.6.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1-On-board radio system</u> Zugfunkeinrichtungen Einhaltung der grundsätzlichen Bedingungen für die Installationspflicht gemäß EBO § 28 (1) 7" Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZVS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.1 i.V. mit Kapitel 2)" Description: Dokumentation der Nachweisführung: Prüfbericht #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI ZVS (VO 2016/919) EIRENE-Spezifikationen #2End #EBA Checklist Referenz: 19.1#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>12.2.3-Transitions</u> "Transition Einhaltung der Anforderungen hinsichtlich des Übergangs zwischen unterschiedlichen ZVS-Streckeneinrichtungen gemäß EBO § 28 Abs. 4 bis 5; Rückwirkungsfreiheit der ausländischen Zugsicherungssysteme gegenüber der deutschen Infrastruktur" Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZVS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.4 i.V. mit Kapitel 2)" Description: Anforderungen gelten in Bezug auf die fahrzeugseitigen ZVS-Einrichtungen i. V. m. den (zu befahrenden) Streckeneinrichtungen. Dokumentation der Nachweisführung: "Validierungsbericht, ggf. Sicherheitsnachweis" #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug #2End #EBA Checklist Referenz: 19.10#</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>12.2.5-ETCS cab signalling system</u> "European Train Control System ETCS Fahrzeugseitige Anforderungen ergänzend zur TSI ZVS"</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
<p>Regelwerk für zusätzliche nationale Prüfung: "Bekanntgabe 09 - AK EMV Regelwerk zur sicheren Integration von ZVS-Komponenten in das Teilsystem Fahrzeuge (Kapitel 3.3 i.V. mit Kapitel 2)" Description: "Ausrüstungspflicht: Siehe TSI ZVS (VO 2016/919) Kap. 7.4.2" Dokumentation der Nachweisführung: Prüfbericht / Nachweis der Integrationsprüfung Fahrzeug/Strecke #Zusätzliche Information #1-Verweis auf Art. 22 2008/57/EG Kompatibilität mit dem Netz #1End #2-TSI-Bezug TSI ZVS (VO 2016/919) #2End #EBA Checklist Referenz: 19.9#</p>		

5.7 Member state DK

5.7.1 Summary of actions

Action	Responsible
No action, all rules on top of TSIs are accepted	

5.7.2 Rolling Stock Subsystem

5.7.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD RDD : published
	LoP version : New
	-
Assessment status	Taken into account by MS : Yes
Amount of remaining NRs in addition to latest TSIs	4

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	0	-
Rules related to documentation	Parameters listed in section 3.2.4	2 parameters : 1.2.1-Maintenance instructions 1.3.1-Instructions for operation in normal and degraded modes of the vehicle	National rule: "Approval of Railway Vehicles: EO 653 of 2015".
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter	-
Other rules related to compatibility with network / legacy system	See subsection 2 below	0 parameter	-
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameter	-
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	1 parameter : 8.4.2.1.1-Rail return current	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameter	-

5.7.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.7.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>4.7.4-Eddy current track brake</u> Technical Compatibility: EO 1465 of 2016 Description : "Locomotives, Trainsets, Passengers caches and OTMs not covered by TSI: Eddy current brakes may not be used in Denmark. It shall be documented that the system can be disconnected. Not relevant for freight wagons.	The national rule refers to open point 4.2.4.8.3 - Braking system independent of adhesion conditions: eddy current track brake in Loc&Pas TSI 1302/2014.	Accepted
<u>8.4.2.1.1-Rail return current</u> Technical Compatibility: EO 1465 of 20165 For electric vehicles, the requirements in Annex 4 shall be met.	The national rule refers to open 4.2.3.3.1.1 - Compatibility with track circuits-EMC- EMC interference in Loc&Pas TSI 1302/2014.	Accepted

5.7.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.7.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

Not applicable

5.7.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> Technical Compatibility: EO 1465 of 20165 For electric vehicles, the requirements in Annex 4 shall be met.	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : the rule covers the open point of TSI.	Accepted

5.7.3 CCS onboard Subsystem

5.7.3.1 Requirements covering open points for Baselines 2 and 3

In Denmark only B3 vehicles will be authorised, therefore only open points for B3 are relevant.

The parameters below contain national rules to cover open points:

- 12.2.5.3 B2 and B3 "Availability"

The parameters below do not contain national rules to cover open points:

None

5.7.3.2 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD RDD : published
	LoP version : New
	-
Assessment status	Taken into account by MS : Yes <ul style="list-style-type: none"> Rules assessed by ERA:All rules are agreed

Amount of remaining NRs in addition to latest TSIs	4		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	No rule	
ETCS and GSM-R	Parameters listed in section 3.2.1	4 parameters : 12.2.2-STM requirements 12.2.3-Transitions 12.2.5.1-Level crossing functionality 12.2.5.3-Reliability - availability requirements (requirement only for first authorisation.	Accepted

5.7.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

No requirements.

5.7.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<u>12.2.2-STM requirements</u> Technical Compatibility: EO 1465 of 20165 For vehicles with Driver's Cab: Verification of Danish STM is handled in accordance with verification instructions for DK-STM BL3, BDk doc. ID IN 655.00 Q4236. 2016	Valid NTR	Accepted
<u>12.2.3-Transitions</u> Technical Compatibility: EO 1465 of 2016 For vehicles with Driver's Cab, not fitted with ETCS baseline 3, SRS version 3.6.0 or higher, and is to be used on cross-border ETCS lines, the mobile equipment shall fulfil the requirements in SRS 3.6.0, chapter 3.5.2.4.	Valid NTR, On-board shall be able to manage 2 communication sessions at the same time. Applicable for Baseline 3 MR1 only (deficiency which was corrected in B3 R2. Remark: NTR to remain in chapter 12.2.3 is this is only a requirement for transitions at the border otherwise it should be in 12.2.5.7	Accepted
<u>12.2.5.1-Level crossing functionality</u> Technical Compatibility: EO 1465 of 2016 For vehicles with Driver's Cab, not fitted with ETCS baseline 3, SRS version 3.6.0 or higher, and is to be used on ETCS lines, the on-board control command and signalling system shall be able to issue a MAR (Movement Authority Request) for SvL (Supervised Location) when such is more restrictive than EoA (End of movement Authority).	Valid NTR Applicable for Baseline 3 MR1 only (deficiency which was corrected in B3 R2.	Accepted
<u>12.2.5.3-Reliability - availability requirements</u> Technical Compatibility: EO 1465 of 2016 For Locomotives and Trainsets: Regulation for open point 4.2.1.2 in TSI CCS:2016 applicable to first authorisations of on-board	Valid NTR Open point in Baseline 3.	Accepted

National rules	Agency evaluation	Agency evaluation status
<p>control command: Vehicles with cab equipment that is to be used for freight and/or passenger transport on ETCS lines shall have a calculated value of at least 75 000 for the average number of hours in service between failures in the on-board control command and signalling system requiring disconnection of the control command functions.</p>		

5.8 Member state EE

5.8.1 Summary of actions

Action	Responsible
NSA EE to take into account the actions identified below as “Action NSA EE”	NSA EE
Agency to take into account the actions identified below as “Action ERA”	ERA

5.8.2 Rolling Stock Subsystem

5.8.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD RDD : published
	LoP version : New
	-
Assessment status	Taken into account by MS : Yes
Amount of remaining NRs in addition to latest TSIs	33

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	10 parameters: 6.2-Impact of the vehicle on the environment 6.2.1.2-Exhaust gas emissions 8.4.1-EMC within the vehicle 8.4.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.2.4-Psophometric current 8.4.3.1-Maximum electro-magnetic fields 8.4.3.2-Induced interference current/voltage 8.4.3.3-Psophometric current 8.7.2-Pressure vessel systems/pressure equipment 8.7.3-Steam boiler installations	Other directives covering : <ul style="list-style-type: none"> Environment impact, Exhaust emission directive EMC directive Pressure vessel
Rules related to documentation	Parameters listed in section 3.2.4	4 parameters : 1.2.1-Maintenance instructions 1.2.2-The maintenance design justification file 1.3.1-Instructions for operation in normal and degraded modes of the vehicle 1.4-National requirement for testing	Parameters 1.2.1, 1.2.2 and 1.3.1: <ul style="list-style-type: none"> Rule cover the content and structure of the maintenance and operation file. Parameter 1.4 : <ul style="list-style-type: none"> Rule address conditions for performing on track test

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter	-
Other rules related to compatibility with network / legacy system	See subsection 2 below	1 parameter: 9.3.1-Speed indication	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	4 parameters: 2.2.1-Automatic coupling 2.2.2-Characteristics of rescue coupling 2.2.3-Conventional screw coupling and other non-automatic coupling systems 2.2.4-Buffering	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	2 parameters: 8.4.2.1.1-Rail return current 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	1 parameter: 7.1-Integrity of software employed for safety related functions	Reference to EN 50128 remain pending the revision of TSI Loc&Pas application guide. Action ERA: publication of the revised application guide that refer to EN 50128.

5.8.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.8.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>3.2.1-Running safety and dynamics, 3.4-Limit of maximum longitudinal positive and negative acceleration</u> EVS-EN 14363:2016 Railway applications - Testing for the acceptance of running characteristics of railway vehicles - Testing of running behaviour</p>	<p>The national rule refers to open point 4.2.3.4.2 - Running dynamic behaviour for 1520 mm track gauge system in Loc&Pas TSI 1302/2014. Agency : The EN143636:2016 do not allow to close the open point related to 1520 mm track gage as it does not cover the quality of track of 1520mm.</p>	<p>Accepted Action ERA/1520mm: to take actions to close the open point as revision of EN 14363 to cover 1520mm track gage</p>
<p><u>3.2.3-Wheel profile and limits</u> Regulation No 39 section 142 of the Ministry of Roads and Communications of 09/07/1999 Rules for Technical Use GOST 11018-87 1520 mm gauge railway rolling stock wheelsets; GOST 10791-2004 All-rolled wheels specifications</p>	<p>The national rule refers to open point 4.2.3.4.3.1Design values for new wheel profiles : 1520mm / 1600mm in Loc&Pas TSI 1302/2014.</p>	<p>Accepted</p>

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>8.4.2.1.1-Rail return current</u> <u>8.4.2.2.1-Electro-magnetic _____ fields/Induced voltages in the track/under the vehicle</u></p>	<p>The national rules refer to open points in Loc&Pas TSI 1302/2014 :</p> <p>4.2.3.3.1.1 - Compatibility with track circuits-EMC-EMC interference and 4.2.3.3.1.2 - Compatibility with axle counters – EMC - Electromagnetic fields (frequency management for 1520 and 1524 mm system</p>	<p>See section “Analysis of rules related to compatibility with TDS</p>

5.8.2.2.2 Requirements covering specific cases not described in TSIs

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>6.2.2.1-Stationary noise impact, 6.2.2.2-Starting noise impact, 6.2.2.3-Pass-by noise impact</u> GOST R 50952-96 Diesel locomotives. Ecological requirements. General.</p>	<p>The national rule refers to specific case 7.3.2.1 - For units from third countries with 1 520mm wheel set gauge the application of national technical rules instead of the requirements in this TSI is permitted in NOI TSI 1304/2014.</p>	<p>Accepted</p>

5.8.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>9.3.1-Speed indication :</u> Regulation No 39 section 138 of the Ministry of Roads and Communications of 09/07/1999 Rules for Technical Use of Railway.</p>	<p>The national rule refers to clause 4.2.9.3.2 of Loc&Pas TSI 1302/2014. The rule is maintained as it covers the Estonia Class B system.</p>	<p>Accepted</p>

5.8.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<p><u>2.2.1-Automatic coupling</u> GOST 3475-81 Automatic coupler equipment of railway rolling stock for railway track gauge 1520 (1524) mm. Assembling dimensions; GOST 21447-75 Coupler contour line. Dimensions; GOST 22253-76 Friction draft gears for 1520 mm gauge railway rolling stock. Specifications. <u>2.2.2-Characteristics of rescue coupling</u> GOST 3475-81 Automatic coupler equipment of railway rolling stock for railway track gauge 1520 (1524) mm. Assembling dimensions; GOST 21447-75 Coupler contour line. Dimensions; GOST 22253-76 Friction draft gears for 1520 mm gauge railway rolling stock. Specifications. <u>2.2.3-Conventional screw coupling and other non-automatic coupling systems</u> Regulation No 39 section 146 of the Ministry of Roads and Communications of 09/07/1999 Rules for Technical Use of Railway <u>2.2.4-Buffering :</u></p>	<p>The national rule refers to clauses 4.2.2.2.2,4.2.2.2.3 and 4.2.2.2.4 of Loc&Pas TSI 1302/2014. The rule specifies the SA3 coupler type as it is not defined in the TSI Loc&Pas.</p>	<p>Accepted</p> <p>Action ERA : Next revision of Loc&Pas TSI should cover the specification of SA3 coupler.</p>

National rules	Agency evaluation	Agency evaluation status
GOST 3475-81 Automatic coupler equipment of railway rolling stock for railway track gauge 1520 (1524) mm. Assembling dimensions; GOST 21447-75 Coupler contour line. Dimensions; GOST 22253-76 Friction draft gears for 1520 mm gauge railway rolling stock. Specifications.		

5.8.2.4 Analysis of rules related to compatibility with TDS

National rules	Agency evaluation	Agency evaluation status																											
<p><u>8.4.2.1.1-Rail return current</u> GOST 29205-91 Electromagnetic compatibility of technical means. Man-made noise from electrical transport. Limits and test methods; EVS-EN 50238:2003 Compatibility between rolling stock and train detection systems; CLC/TS 50238-2:2015 Compatibility between rolling stock and train detection systems - part 2 compatibility with track circuits.</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency : Based on the outcome of the bilateral discussions: Proposal for a national rule</p> <table border="1"> <thead> <tr> <th>Track Circuit info (Manufacturer-Type)</th> <th>Frequency Band</th> <th>Part of the ERA/ERTMS/033281 Circuits listed in Annex EN 50238-2)</th> </tr> </thead> <tbody> <tr> <td>25 and 50 Hz Track Circuits</td> <td>25 and 50 Hz</td> <td>No</td> </tr> <tr> <td>Bombardier Audio Frequency Track Circuit Style TI21- 4</td> <td>1996,2296,1699, 2146,1848,1549,25 93,2445 Hz</td> <td>Yes</td> </tr> <tr> <td>тональные р.ц.(АНШ-1230)</td> <td>425,475,725 Hz</td> <td>No</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>RDD parameter</th> <th>Requirement</th> <th>Co ar</th> </tr> </thead> <tbody> <tr> <td>8.4.2.1.1-Rail return current</td> <td>НБ ЖТ ЦТ 01-98, Annex A.38 НБ ЖТ ЦТ 02-98, Annex A.38 НБ ЖТ ЦТ 03-98, Annex A.38 НБ ЖТ ЦТ 04-98, Annex A.38</td> <td>Di Di Ele Ele</td> </tr> <tr> <td>8.4.2.4 Psophometric current</td> <td>НБ ЖТ ЦТ 01-98, Table I (2) - § 4.2 НБ ЖТ ЦТ 02-98, Table I (2) - § 4.2</td> <td>Di Di</td> </tr> <tr> <td>8.4.3.3 Psophometric current</td> <td>НБ ЖТ ЦТ 03-98, Table I (2) - § 4.2 НБ ЖТ ЦТ 04-98, Table I (2) - § 4.2</td> <td>Ele Ele</td> </tr> <tr> <td>8.4.3.1 Maximum Electro-Magnetic fields</td> <td>НБ ЖТ ЦТ 01-98, Annex A.91 and A.92 НБ ЖТ ЦТ 02-98, Annex A.91 and A.92 НБ ЖТ ЦТ 03-98, Annex A.91 and A.92 НБ ЖТ ЦТ 04-98, Annex A.91 and A.92</td> <td>Di Di Ele Ele</td> </tr> </tbody> </table> <p>Following the assessment performed by the Agency, NSA EE indicates that they will start the procedure to enforce national rule related to rail-current, taking into account bilateral discussions with the Agency and the information in the report.</p>	Track Circuit info (Manufacturer-Type)	Frequency Band	Part of the ERA/ERTMS/033281 Circuits listed in Annex EN 50238-2)	25 and 50 Hz Track Circuits	25 and 50 Hz	No	Bombardier Audio Frequency Track Circuit Style TI21- 4	1996,2296,1699, 2146,1848,1549,25 93,2445 Hz	Yes	тональные р.ц.(АНШ-1230)	425,475,725 Hz	No	RDD parameter	Requirement	Co ar	8.4.2.1.1-Rail return current	НБ ЖТ ЦТ 01-98, Annex A.38 НБ ЖТ ЦТ 02-98, Annex A.38 НБ ЖТ ЦТ 03-98, Annex A.38 НБ ЖТ ЦТ 04-98, Annex A.38	Di Di Ele Ele	8.4.2.4 Psophometric current	НБ ЖТ ЦТ 01-98, Table I (2) - § 4.2 НБ ЖТ ЦТ 02-98, Table I (2) - § 4.2	Di Di	8.4.3.3 Psophometric current	НБ ЖТ ЦТ 03-98, Table I (2) - § 4.2 НБ ЖТ ЦТ 04-98, Table I (2) - § 4.2	Ele Ele	8.4.3.1 Maximum Electro-Magnetic fields	НБ ЖТ ЦТ 01-98, Annex A.91 and A.92 НБ ЖТ ЦТ 02-98, Annex A.91 and A.92 НБ ЖТ ЦТ 03-98, Annex A.91 and A.92 НБ ЖТ ЦТ 04-98, Annex A.91 and A.92	Di Di Ele Ele	<p>Accepted if the national rule is drafted according to the proposal and available in RDD</p> <p>Action NSA EE : to revise the rule</p>
Track Circuit info (Manufacturer-Type)	Frequency Band	Part of the ERA/ERTMS/033281 Circuits listed in Annex EN 50238-2)																											
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<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> GOST 29205-91 Electromagnetic compatibility of technical means. Man-made noise from electrical transport. Limits and test methods; EVS-EN 50238:2003 Compatibility between rolling stock and train detection systems; CLC/TS 50238-3:2013 Compatibility between rolling stock and train detection systems - part 3 compatibility with axle counters</p>	<p>The national rule refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency : Based on the outcome of the bilateral discussions: Proposal for a national rule</p> <table border="1"> <thead> <tr> <th>Axle counter info (Manufacturer-Type)</th> <th>Frequency Band</th> <th>Par ERA (De Ann 502</th> </tr> </thead> <tbody> <tr> <td>PINTSCH TIEFENBACH DSS 2N59-1R-200-40</td> <td>37,5 - 42,5 kHz</td> <td>No</td> </tr> <tr> <td>ALTPRO ZK24-2</td> <td>300-330 kHz</td> <td>Yes</td> </tr> <tr> <td>Siemens – Zp 43</td> <td>42.8-43.2 kHz</td> <td>Yes</td> </tr> </tbody> </table> <p>Frequency management for PINTSCH TIEFENBACH DSS 2N59-1R-200-40 available in „Technische Regelung für den Nachweis der elektromagnetischen Verträglichkeit zwischen Schienenfahrzeugen und der Infrastruktur im Geltungsbereich der EBO (TR-EMV) Teil 3 – Sensorik; Anhang G Tabelle G.1 - Grenzwerte und Bewertungsparameter (Nahband)“ issued by EBA</p> <p>Following the assessment performed by the Agency, NSA EE indicates that EE will start the procedure to enforce national rule related to rail-current, taking into account bilateral discussions with the Agency and the information in the report</p>	Axle counter info (Manufacturer-Type)	Frequency Band	Par ERA (De Ann 502	PINTSCH TIEFENBACH DSS 2N59-1R-200-40	37,5 - 42,5 kHz	No	ALTPRO ZK24-2	300-330 kHz	Yes	Siemens – Zp 43	42.8-43.2 kHz	Yes	<p>Accepted if the national rule is drafted according to the proposal and available in RDD Action NSA EE : to revise the rule</p>
Axle counter info (Manufacturer-Type)	Frequency Band	Par ERA (De Ann 502												
PINTSCH TIEFENBACH DSS 2N59-1R-200-40	37,5 - 42,5 kHz	No												
ALTPRO ZK24-2	300-330 kHz	Yes												
Siemens – Zp 43	42.8-43.2 kHz	Yes												

5.8.3 CCS onboard Subsystem

5.8.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover open points:

None

The parameters below do not contain national rules to cover open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.2 B2 “braking aspects”
- 12.2.5.4; 12.2.5.5 B2 “ETCS DMI”

- 12.2.5.6 B2 “braking aspects”

5.8.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes, but Estonia has no rule notified concerning ETCS and GSM-R. The rules notified in the RDD are related to the legacy systems, there is no requirement for a TSI CCS conform vehicle on top.		
	Nature : RDD RDD : published		
	LoP version : New		
	If no, forecast		
Assessment status	Taken into account by MS : Yes		
Amount of remaining NRs in addition to latest TSIs	2		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1 subclause 4)	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1 (subclause 4)	No rule	

5.8.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems):

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1 Non-GSM-R radio system</u> Regulation No 39 sections 98 of the Ministry of Roads and Communications of 09/07/1999 Rules for Technical Use of Railway. Ltd Eesti Raudtee: MOTOTRBO (Motorola) 136-174 MHz, 12.5 kHz Edelaraudtee Infrastruktuuri Ltd: ESTER operating frequency range 380–400 MHz	The national rules refers to clauses 4.2.5.1 (Radio communication with the train) of CCS TSI. Agency : They are related to the class B radio communication system.	Accepted
<u>12.2.1 National on-board signalling systems</u> Regulation No 39 sections 138 of the Ministry of Roads and Communications of 09/07/1999 Rules for Technical Use of Railway ALSN: Automatic locomotive signalling of continuous operation - (General, technical and functional description) V.E.P.S system Version 2.1 (General, technical and functional description)	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency : They are related to on-board class B system.	Accepted

5.8.3.2.2 Analysis of rules for ETCS and GSM-R

No requirements

5.9 Member state ES

5.9.1 Summary of actions

Action	Responsible
Agency to take into account the actions identified below as “Action ERA”	ERA
Spain to take into account the actions identified below as “Action NSA SP”	NSA SP
NRs agreed to be published in RDD	ERA/NSA SP
NRs, if any, related to OTM should be delivered	NSA SP

5.9.2 Rolling Stock Subsystem

Spain National rules refer to subsystem in the scope of Loc&Pas TSI 1302/2014 except for OTM see above

For Freight wagon : no national rule published, full application of TSI WAG.

For metric gage: ERA recommend that the national rules related to metric gage rolling stock should be published in AESF website pending availability of the Single Rules Database.

5.9.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Excel table
	Nature : Draft Excel table
	RDD : not yet uploaded
	LoP version : New
	-
Assessment status	Taken into account by MS : Yes
Amount of remaining NRs in addition to latest TSIs	45

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	6 parameters : 6.2.1.2-Exhaust gas emissions 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.3.1-Maximum electro-magnetic fields 8.7.2-Pressure vessel systems/pressure equipment 9.2.2-Other health and safety requirements	Other directives covering : <ul style="list-style-type: none"> Exhaust emission EMC directive Pressure vessel Health and safety
Rules related to documentation	Parameters listed in section 3.2.4	2 parameters : 1.1-General documentation 1.4-National requirement for testing	Parameter 1.1 covers the authorisation file Parameter 1.4 address rules for tests laboratories selection.
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter:	-

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Other rules related to compatibility with network / legacy system	See subsection 2 below	6 parameters: 3.1-Vehicle gauge 3.3.1-Bogies 3.3.2-Wheelset (complete) 3.3.3-Wheel 3.3.4-Wheel/rail interaction influencing systems 9.6-Recording device	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	6 parameters: 2.1.5-Fixing of devices to car body structure 3.3.2-Wheelset (complete) 7.2.2.1-Headlights 7.2.2.2-Marker lights 7.2.2.3-End-of-train signal 8.3.3-High voltage components	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	4 parameters : 8.4.2.1.1-Rail return current 8.4.2.3-Vehicle entrance impedance 12.2.4.3-Metal and inductive components-free space between wheels 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	1 parameter: 3.3.2-Wheelset (complete)	

5.9.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.9.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>2.3-Passive safety</u> IF MR ALC- XX- 4.2.2.5:Ver el anexo K.	The national rule refers to open point 4.2.2.5 Passive Safety in Loc&Pas TSI 1302/2014.	Accepted
<u>3.3.2-Wheelset (complete)</u> IF MR ALC- XX- 4.2.3.5.2.3, 6.2.3.7, Annex G: Exigencias de los ejes. Concepcion, fabricacion y validación de conjuntos de rodadura de ancho variable, apartados G.3.3 y G3.4.3 Los ensayos a vehículo completo se incluyen en el anexo G (apartados G.5.2.2 a G.5.2.4).	The national rule refers to open 4.2.3.5.2.3 - Variable gauge wheelsets in Loc&Pas TSI 1302/2014.	Accepted
<u>6.1.2.1-Crosswind effects</u> IF MR ALC- XX- 4.2.6.2.4: Para vehículos destinados a circular por ancho de vía 1668 mm, se cierra el punto abierto de la ETI Loc. & Pas. 2014 mediante la aplicación de los	The national rule refers to open point 4.2.6.2.4 Aerodynamic effects for 1520 mm,1524 mm or 1600 mm and 1668 mm track gauge systems: cross wind in Loc&Pas TSI 1302/2014.	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
valores límites y la evaluación de la conformidad propuesta en la cláusula 4.2.6.2.4 de dicha ETI para ancho de vía 1435 mm.		
<p><u>6.1.2.2-Maximum pressure variation in tunnels</u> <u>IF MR ALC- XX- 4.2.6.2.3:</u> Para vehículos destinados a circular por ancho de vía 1668 mm, se cierra el punto abierto de la ETI Loc. & Pas. 2014 mediante la aplicación de los valores límites y la evaluación de la conformidad propuesta en la cláusula 4.2.6.2.3 de dicha ETI para ancho de vía 1435 mm.</p>	The national rule refers to open point 4.2.6.2.3 Aerodynamic effects for 1520 mm,1524 mm or 1600 mm and 1668 mm track gauge systems: maximum pressure variations in tunnels in Loc&Pas TSI 1302/2014.	Accepted
<p><u>6.2.3.1-Head pressure pulses, 6.2.3.2-Aerodynamic impact on passengers/materials on the platform, 6.2.3.3-Aerodynamic impact on track workers</u> <u>IF MR ALC- XX- 4.2.6.2,6.2.3.9:</u> Ver la metodología de evaluación en el apartado 6.2.3.9. Todo el material rodante Para el caso de la evaluación de los efectos de estela y pulso de presión por paso de cabeza, en vez del proceso completo de validación requerido, se permite llevar a cabo una validación simplificada para material rodante cuyo diseño sea similar al de un material rodante que ya haya sido objeto de validación completa. En tal caso, la evaluación simplificada de la conformidad definida en las especificaciones técnicas indicadas en el Anexo C, cuadro C.2, índices [37] y [38], pudiendo aplicarse siempre que las diferencias en el diseño permanezcan dentro de los límites de dicha especificación. Para el caso de material rodante que vaya a circular por líneas de ancho 1668 mm se cumplirá con lo anterior, con la particularidad de que el punto de medida debe ser tomado a una distancia de: •Para la evaluación del efecto estela sobre los viajeros en los andenes y en los trabajadores al lado de la vía: 3,1 m del eje de la vía. •Para la evaluación del pulso de presión por paso de cabecera del tren: 2,6 m del eje de la vía.</p>	<p>The national rule refers to open points:</p> <ul style="list-style-type: none"> - 4.2.6.2.2 Aerodynamic effects for 1520 mm,1524 mm and 1668 mm track gauge systems: head pressure pulse - 4.2.6.2.1 Aerodynamic effects for 1520 mm,1524 mm or 1600 mm and 1668 mm track gauge systems: slipstream effects on passengers on platform. <p>in Loc&Pas TSI 1302/2014.</p>	Accepted
<p><u>12.2.4.3-Metal and inductive components-free space between wheels</u> <u>IF MR ALC- XX- 4.2.3.3.1.2 :</u> El material rodante no deberá tener elementos que puedan interferir en el funcionamiento, ni partes metálicas (a excepción de las llantas y pestañas de las ruedas) conforme a la especificación técnica indicada en el Anexo C, cuadro C.2, índice [4].</p>	The national rule refers to open point 4.2.3.3.1.2 Compatibility with axle counters – Vehicle design : metal free space in Loc&Pas TSI 1302/2014.	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
<p>Aplicaciones específicas, tales como los frenos de Foucault, cumplirán con los requisitos que establezca la autoridad responsable de la seguridad ferroviaria para no interferir con el funcionamiento de los contadores de ejes.</p>		

5.9.2.2.2 Requirements covering specific cases not described in TSIs

No requirements

5.9.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>3.1-Vehicle gauge</u> IF-MR-ALC-XX-4.2.3.1: Las unidades diseñadas para circular exclusivamente por las líneas de ancho 1668 mm cumplirán con el gálibo de partes altas GHE16, GEA16, GEB 16 o GEC16 y con el gálibo de partes bajas GEI1, GEI2 o GEI3 de acuerdo con la Orden FOM/1630/2015, Instrucción Ferroviaria de Gálivos. Las unidades de ancho variable diseñadas para circular por las líneas de ancho 1668 mm y 1435 mm cumplirán con el gálibo de partes altas G1, GA, GB o GC y con el gálibo de partes bajas GI1, GI2 o GI3 de acuerdo con la Orden FOM/1630/2015, Instrucción Ferroviaria de Gálivos. Ver metodología de evaluación apartado 6.2.3.2</p>	<p>The requirement refers to clause 4.2.3.1 of Loc&Pas TSI 1302/2014. Spain justifies the rules for technical compatibility with existing network 1668 mm track gauge and variable-gauge units:</p> <ul style="list-style-type: none"> - Differentiate high and low gauge gauges (EN 15273-2 define complete gauge, but it does not differentiate between the reference profile for higher parts and lower parts). - Specific rules are required for the calculation of the pantograph gauge. According to the TSI the section of the EN to be applied is the A.3.12 of application to the gauge G1, needing to apply the rules defined in the annex P to consider the particularities corresponding to the GHE16, GEA16, GEB16 and GEC16. <p>Agency : TSI requires that the compliance of rolling stock with reference profile is checked in accordance to the chosen profile(s) by the applicant. This value (s) are registered in the vehicle technical file. TSI refers to EN 15273-2 (that covers GHE16, GEA16, GEB 16 o GEC16), so :</p> <ol style="list-style-type: none"> 1. If the relevant Spain reference profiles (either upper, lower or full parts) miss in the referred EN. Spain should request their inclusion in the EN standard. 2. If it is not foreseen the eventual revision of the EN standard, Spain should bring it at the WP for revision of TSI Loc&Pas and declare a specific case (if it concerns the network and not a specific line). 3. Until the situation is solved the rule could be maintained, only for the part of the rule not 	<p>Accepted pending discussion at TSI working party Action ERA : TSI WP to consider request from NSA ES</p>

National rules	Agency evaluation	Agency evaluation status
	covered by the EN 15273-2 referred by the TSI.	
<p><u>3.3.1-Bogies</u> IF-MR-ALC-XX-4.2.3.5.1: Para bogies de ancho 1668 mm, los parámetros alfa y beta tomarán los valores 0,15 y 0,35 respectivamente, de acuerdo a la opción de la especificación técnica indicada en el Anexo C, cuadro C.2, índice Error! Reference source not found..</p>	<p>The requirement refers to clause 4.2.3.5.1 of Loc&Pas TSI 1302/2014. Spain indicates that the annex F of EN 13749 includes some general considerations that should be taken into account and some examples for the tests. Point F.2.2.2 indicates that, in general, the values for the parameters α and β are 0.1 and 0.2. But it also says that these values could be changed depending on the operation conditions, such as track gauge. This is the reason why Spain, basing on its experience, demands different values of the ones included in the EN 13749, with the aim of guaranteeing compatibility with 1668 mm track gauge. Agency : The requirement remains for technical compatibility with 1668mm track gauge, the Agency will consider the rule either in the application guide of Loc& Pas TSI or as a specific case for 1668 mm track gauge.</p>	<p>Accepted Action NSA SP: Spain to require a specific case to be coordinated with PT To be discussed at TSI working party</p>
<p><u>3.3.3-Wheel</u> IF-MR-ALC-XX-4.2.3.5.2.2: Sólo se admitirán ruedas forjadas y laminadas conforme a lo establecido en la especificación técnica indicada en el Anexo C, cuadro C.2, índice Error! Reference source not found..</p>	<p>The requirement refers to clause 6.1.3.1 of Loc&Pas TSI 1302/2014. The requirement mentions that other type of wheel referred in to clause 6.1.3.1 (3) of Loc&Pas TSI 1302/2014 are not allowed.</p>	<p>Accepted</p>
<p><u>3.3.4-Wheel/rail interaction influencing systems</u> IF-MR-ALC-XX- 4.2.3.8: De conformidad con el apartado 7.5.3.1 de la ETI de Locomotoras y Material Rodante de viajeros para proteger los carriles y las ruedas contra el desgaste excesivo, particularmente en curvas, el material rodante deberá equiparse con lubricación de pestaña como mínimo en el eje de cabeza. Ver metodología de evaluación en el apartado 6.2.3.8. IF-MR-ALC-XX- 6.2.3.8: En el ensayo tipo a vehículo completo, se comprobará que el aplicador del lubricante está correctamente situado y que el sistema actúa según el modo previsto. En el ensayo serie a vehículo completo, se comprobará que el aplicador del lubricante está correctamente situado, de manera que el lubricante se deposite en la pestaña de la rueda.</p>	<p>The requirement refers to clause 7.5.3.1 of Loc&Pas TSI 1302/2014. The rules remain as it covers an aspect relevant for the EU railway system but out of the scope of TSI.</p>	<p>Accepted</p>
<p><u>9.6-Recording device</u> IF-MR-ALC-XX-4.2.9.6:</p>	<p>The requirement refers to clause 4.2.9.6 of Loc&Pas TSI 1302/2014.</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
Si el vehículo dispone de sistema de protección embarcado Clase B, el aparato registrador debe registrar la lista de información detallada en el anexo H de esta IF (Error! Reference source not found.).	The requirement relates to Class B systems (ASFA, LZB, EBICAB) and maintained as it covers the Class B systems.	

5.9.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<p><u>2.1.5-Fixing of devices to car body structure</u> IF-MR-ALC-XX-4.2.2.7: Las fijaciones de los equipos bajo bastidor deberán estar dimensionadas para soportar las cargas de prueba y servicio definidas en la especificación técnica indicada en el Anexo C, cuadro C.2, índice Error! Reference source not found., con objeto de garantizar que no existe riesgo de caída a la vía de estos elementos.</p>	<p>The requirement refers to clause 4.2.2.7 of Loc&Pas TSI 1302/2014. Spain justifies the rule by the need to better cover the verification & validation of fixing of external equipments. Agency : TSI Loc&Pas defines functional requirements that cover mechanical fixation of equipments and refer to the EN 12663. The rule is maintained pending discussion at TSI Working party to consider the clause 6.7.3 of EN 12663 regarding dynamic aspects in the application guide or in the TSIs (not imposing a number of cycles).</p>	<p>Accepted pending discussion at TSI Working party Action ERA/NSA SP</p>
<p><u>3.3.2-Wheelset (complete)</u> IF MR ALC-XX-6.2.3.6: Dimensiones geométricas de los ejes montados Para los ensayos se tendrá en cuenta lo siguiente: - Ensayo tipo: Medir las distancias entre caras internas de ruedas con el vehículo completo cargado. Se permitirá la realización de esta medición con el bogie en prensa simulando el peso del vehículo cargado.</p>	<p>The requirement refers to clause 4.2.3.5.2.1 of Loc&Pas TSI 1302/2014. Spain indicates that the requirement does not establish additional requirements to Loc&Pas TSI and proposes measurement of the back to back distance wheels within a test bench "press". Spain does not impose this test methodology but considers it as an alternative to assess that should be covered by the TSI application guide. Agency : The TSI already cover the requirement and associate tests (clauses 4.2.3.5.2.1 and 6.2.3.7). An applicant shall demonstrate the compliance and define the validation method that is checked by a NoBo. The TSI working party to decide if the proposal of Spain can be included in the application guide as acceptable means of compliance. The national rule can not prevent the access of TSI compliant rolling stock to the national network.</p>	<p>Accepted pending discussion at TSI Working party Action ERA/NSA SP</p>
<p><u>7.2.2.1-Headlights</u> IF MR ALC-XX- 4.2.7.1.1: Los focos de cabeza deberán cumplir los requisitos de la especificación técnica indicada en el Anexo C, cuadro C.2, índice Error! Reference source not found...</p>	<p>The requirement refers to clause 4.2.7.1.1 of Loc&Pas TSI 1302/2014. Spain considers necessary to maintain the requirement of Luminous intensity within 5° on either side of the optical axis in the horizontal plane (5.3.4, table 2, second line of the UNE-EN 15153-1) because it guarantees visibility in curves.</p>	<p>Accepted pending discussion at TSI Working party Action ERA/NSA SP</p>

National rules	Agency evaluation	Agency evaluation status
	<p>Agency : The rule is maintained pending discussion at TSI Working party to consider the clause 5.3.4 of EN 15153-1.</p> <p>The national rule can not prevent the access of TSI compliant rolling stock to the national network.</p>	
<p><u>7.2.2.2-Marker lights</u> IF MR ALC-XX- 4.2.7.1.2: Las luces de posición deberán cumplir los requisitos de la especificación técnica indicada en el Anexo C, cuadro C.2, índice Error! Reference source not found...</p>	<p>The requirement refers to clause 4.2.7.1.2 of Loc&Pas TSI 1302/2014.</p> <p>Spain considers necessary to demand the requirement of alignment of marker lights because it is important for guaranteeing a correct visibility.</p> <p>Agency : The rule is maintained pending discussion at TSI Working party to consider the clause clause 5.4.5 of EN 15153-1.</p> <p>The national rule can not prevent the access of TSI compliant rolling stock to the national network.</p>	<p>Accepted pending discussion at TSI Working party Action ERA/NSA SP</p>
<p><u>7.2.2.3-End-of-train signal</u> IF MR ALC-XX- 4.2.7.1.3: Las luces de cola deberán cumplir los requisitos de la especificación técnica indicada en el Anexo C, cuadro C.2, índice Error! Reference source not found..</p>	<p>The requirement refers to clause 4.2.7.1.3 of Loc&Pas TSI 1302/2014.</p> <p>Spain considers necessary to demand the requirement of alignment of end-of-train signals because it is important for guaranteeing a correct visibility.</p> <p>Agency : The rule is maintained pending discussion at TSI Working party to consider the clause clause 5.5.5 of EN 15153-1.</p> <p>The national rule can not prevent the access of TSI compliant rolling stock to the national network.</p>	<p>Accepted pending discussion at TSI Working party Action ERA/NSA SP</p>
<p><u>8.3.3-High voltage components</u> IF MR ALC-XX-4.2.8.2.10: Ver la metodología de evaluación en el apartado 6.2.3.10. IF MR ALC-XX- 6.2.3.10: Locomotoras, unidades autopropulsadas y coches con pantógrafo Los disyuntores serán ensayados en banco (ver Cuadro E.2 del anexo E de esta IF) según la metodología establecida en las especificaciones técnicas indicadas en el Anexo C, cuadro C.2, índices Error! Reference source not found. y Error! Reference source not found..</p>	<p>The requirement refers to clause 4.2.8.2.10 of Loc&Pas TSI 1302/2014.</p> <p>Spain indicates that TSI evaluates the circuit breakers as an interoperability component, but it does not establish requirements or methodology for the "how". A fault of the circuit breaker has an impact on safety.</p> <p>Agency : The rule is maintained pending discussion at TSI Working party to consider the standards EN 60077-3 and 4. The national rule can not prevent the access of TSI compliant rolling stock to the national network.</p>	<p>Accepted pending discussion at TSI Working party Action ERA/NSA SP</p>

5.9.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.1-Rail return current</u> IF MR ALC-XX-4.2.3.3.1: Locomotoras y unidades autopropulsadas. Perturbaciones Compatibilidad con los sistemas de mando y control. Perturbaciones</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Spain indicates that ADIF will provide the requirements that shall be incorporated in the IF MR document.</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>Los campos emitidos por los sistemas embarcados y las corrientes de retorno (incluidos los campos generados por los sistemas de freno por corrientes de Foucault) no deberán perturbar los sistemas de control, mando y señalización en tierra que cumplan los límites establecidos en la normativa correspondiente y que se encuentran citados en el registro de infraestructura. Se cumplirán las especificaciones técnicas indicadas en el Anexo C, cuadro C.2, índices Error! Reference source not found. y Error! Reference source not found....</p> <p>Ver la metodología de evaluación en el apartado 6.2.3.3.</p> <p>Corrientes armónicas</p> <p>Locomotoras y unidades autopropulsadas</p> <p>Para asegurar el correcto funcionamiento de los circuitos de vía se establecen unos límites de interferencia para los que se garantiza el correcto funcionamiento de los mismos sin que se produzca una merma de seguridad en la instalación.</p> <p>Por tanto, y con objeto de verificar la compatibilidad del material rodante con los circuitos de vía instalados en la RFIG, en el proceso de validación se deberán tener en cuenta los datos técnicos de los diferentes circuitos de vía recogidos en el anexo L. Para el cálculo de dichos límites se ha tenido como referencia la norma UNE/CLC/TS 50238-2:2015.</p> <p>El material rodante de tracción eléctrica que circula por líneas con corriente continua equipadas con circuitos de vía de 50 Hz no generarán ni permitirán el paso de componentes de corriente de 50 Hz de más de 1,5 A de valor eficaz durante más de 2 s.</p> <p>Este material rodante de tracción eléctrica que circula por líneas con corriente continua equipadas con circuitos de vía de 50 Hz dispondrá de un detector de 50 Hz que actuará sobre el sistema de tracción y sobre el convertidor de servicios auxiliares cuando detecte, durante más de 2 segundos, un nivel de intensidad superior al indicado. La actuación del detector servirá para mitigar el paso de estas corrientes armónicas. El filtro equipado por el detector tendrá un ancho de banda máximo de ± 2 Hz.</p>	<p>Agency : rule accepted</p>	
<p><u>8.4.2.1.1-Rail return current</u></p> <p>IF MR ALC-XX-6.2.3.3:</p> <p>Locomotoras y unidades autopropulsadas</p> <p>Compatibilidad con los sistemas de mando y control. Perturbaciones</p> <p>La metodología del ensayo tipo a vehículo completo se incluye en las especificaciones técnicas indicadas</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Spain indicates that the ADIF will provide the requirements that shall be incorporated in the IF MR document.</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>en el Anexo C, cuadro C.2, índices [24] y [25]. IF MR ALC-XX-6.2.3.4: Corrientes armónicas</p> <p>En el ensayo tipo, se comprobarán la compatibilidad del material rodante objeto de validación con los diferentes circuitos presentes en la RFIG, mediante la verificación de los límites de interferencia identificados en el anexo L. Si durante dichos ensayos se identificará que las emisiones del material rodante superan los límites definidos para alguno de los circuitos de vía presentes en la RFIG, se deberá identificar mediante una restricción de uso.</p> <p>En el ensayo serie, se comprobará la correcta funcionalidad del detector de 50 Hz, aisladamente o sobre el vehículo.</p>	<p>Agency : rule accepted</p>	
<p><u>8.4.2.3-Vehicle entrance impedance</u> IF MR ALC-XX- 4.2.3.3.1.1: Corrientes armónicas Locomotoras y unidades autopropulsadas Mientras no se disponga de requisitos adaptados a la infraestructura y al material rodante actuales, cada unidad influyente (unidad autopropulsada, locomotora en composición simple o coche con pantógrafo) debe poseer 2 Ω de impedancia de entrada mínima a 50 Hz. Ver metodología de evaluación en el apartado Error! Reference source not found.4. IF MR ALC-XX-6.2.3.4: Corrientes armónicas</p> <p>En el ensayo tipo, se comprobarán la compatibilidad del material rodante objeto de validación con los diferentes circuitos presentes en la RFIG, mediante la verificación de los límites de interferencia identificados en el anexo L. Si durante dichos ensayos se identificará que las emisiones del material rodante superan los límites definidos para alguno de los circuitos de vía presentes en la RFIG, se deberá identificar mediante una restricción de uso.</p> <p>En el ensayo serie, se comprobará la correcta funcionalidad del detector de 50 Hz, aisladamente o sobre el vehículo.</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The rule is related to vehicle entrance impedance (between the pantograph and the wheel).</p>	<p>Accepted</p>
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> IF MR ALC-XX- 4.2.3.3.1.1: Locomotoras y unidades autopropulsadas Para estas unidades, estará prohibido el arenado automático continuo a velocidades inferiores a 30</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Rule to technically isolate the sanding system for v < 30 kmh is accepted for the vehicle</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
km/h, salvo por una orden del sistema antipatinaje/antibloqueo.	compatibility with TCs	

5.9.3 CCS onboard Subsystem

5.9.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.2 B2 “braking aspects”

The parameters below do not contain national rules to cover open points:

- 12.2.5.4; 12.2.5.5 B2 “ETCS DMI”
- 12.2.5.6 B2 “braking aspects”

5.9.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Draft Excel table		
	Nature : Draft Excel table		
	RDD : not yet uploaded		
	LoP version : New		
Assessment status	-		
	Taken into account by MS : Rules assessed by ERA: <ul style="list-style-type: none"> • One rule to be moved in another RDD clause • Impacted ETCS Baseline to be added to the rules concerned • ESC and RSC rules to be put on under discussion (waiting the outcome of the test activity) 		
Amount of remaining NRs in addition to latest TSIs	7		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	5 parameters : 12.1.2.2-Other GSM-R requirements 12.2.5.2-Braking safety margins 12.2.5.3-Reliability-availability requirements 12.2.5.7 Other ETCS requirements	

Availability and status of remaining national rules			
		12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances (ESC)	

5.9.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> IF MR ALC-XX-4.2.13.5: Locomotoras, unidades autopropulsadas y coches con cabina de conducción El Tren-Tierra deberá ser conforme a las especificaciones técnicas indicadas en el Anexo C, cuadro C.2, índices Error! Reference source not found. , Error! Reference source not found. y Error! Reference source not found. . Ver metodología de evaluación para el sistema de comunicación GSM-R a nivel de subsistema, en el apartado Error! Reference source not found. 13.	Valid NTR, MS has to notify its class B systems	Accepted
<u>12.2.1-National on-board signalling systems</u> IF MR ALC-XX- : 4.2.13. Sistemas embarcados de control, mando y señalización 4.2.13.2. Sistemas embarcos de control, mando y señalizacion de clase B 6.1.3.12. Sistemas embarcos de control, mando y señalizacion de clase B	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency: Valid NTR, MS has to notify its class B systems	Accepted

5.9.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<u>12.1.2.2-Other GSM-R requirements</u> IF MR ALC-XX-4.2.13.5: Locomotoras, unidades autopropulsadas y coches con cabina de conducción El Tren-Tierra deberá ser conforme a las especificaciones técnicas indicadas en el Anexo C, cuadro C.2, índices Error! Reference source not found. , Error! Reference source not found. y Error! Reference source not found. ... Ver metodología de evaluación para el sistema de comunicación GSM-R a nivel de subsistema, en el apartado Error! Reference source not found. 13. IF MR ALC-XX-6.2.3.13- Comunicación por Radiotelefonía: Analógica (Tren-Tierra) y GSM-R (4.2.13.5) Locomotoras, unidades autopropulsadas y coches con cabina de conducción	RSC tests for GSM-R	Generally accepted Pending discussion on ESC/RSC rules at TSI WP Action ERA/NSA SP

National rules	Agency evaluation	Agency evaluation status
<p>Se realizarán los ensayos incluidos en el protocolo de pruebas para cada sistema. Los ensayos del equipo GSM-r se realizarán conforme al a las especificaciones técnicas indicadas en el Anexo C, cuadro C.2, índices Error! Reference source not found. y Error! Reference source not found..</p>		
<p><u>12.2.5.2-Braking safety margins</u> IF MR ALC-XX- 4.2.13.4: Curvas de frenado del ERTMS/ETCS embarcado En el caso de equipos embarcados ERTMS/ETCS Baseline 2, deberá incluirse obligatoriamente la funcionalidad de curvas de frenado descrita en la especificación funcional SUBSET-026 System Requirements Specification versión 3.4.0 y superiores, referenciada en el conjunto de especificaciones del Anexo A de la ETI CMS.Fiabilidad del ERTMS/ETCS embarcado En la actualidad, se cierra el punto abierto de la ETI de Control, Mando y Señalización relativo a la fiabilidad, mediante la realización de recorridos finales en la RFIG para la obtención de la Autorización de Entrada en Servicio (artículo 15 de la orden FOM/167/2015, de 6 de febrero).</p>	<p>Valid NTR, for ETCS Baseline 2 only Braking curves are an open point in ETCS Baseline 2, MS to notify an NTR.</p>	<p>Accepted</p>
<p><u>12.2.5.3-Reliability-availability requirements</u> IF MR ALC-XX- 4.2.13.4: Curvas de frenado del ERTMS/ETCS embarcado En el caso de equipos embarcados ERTMS/ETCS Baseline 2, deberá incluirse obligatoriamente la funcionalidad de curvas de frenado descrita en la especificación funcional SUBSET-026 System Requirements Specification versión 3.4.0 y superiores, referenciada en el conjunto de especificaciones del Anexo A de la CMS.Fiabilidad del ERTMS/ETCS embarcado En la actualidad, se cierra el punto abierto de la ETI CMSrelativo a la fiabilidad, mediante la realización de recorridos finales en la RFIG para la obtención de la Autorización de Entrada en Servicio (artículo 15 de la orden FOM/167/2015, de 6 de febrero).</p>	<p>Valid NTR (for all ETCS baselines) RAM is an open point, MS to notify an NTR.</p>	<p>Accepted</p>
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> IF MR ALC-XX 4.2.13.3: Cuando sea obligatorio incorporar en el material rodante tanto el sistema ERTMS/ETCS embarcado como el sistema ASFA Digital, para obtener la Autorización de Entrada en Servicio, deberá demostrarse el cumplimiento de lo dispuesto en la especificación técnica indicada en el anexo C, cuadro C.2, índice Error! Reference source not</p>	<p>Valid NTR In the absence of an STM and in order to perform transitions while running, the class B system needs to be interconnected with ETCS (transition master). The NTR is based on performing ETCS functionality and therefore the correct RDD parameter should be 12.2.5.7 (other ETCS requirements)</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>found. sobre el interfaz entre ambos equipos embarcados, así como lo especificado en el documento la especificación técnica indicada en el anexo C, cuadro C.2, índice Error! Reference source not found.sobre las transiciones dinámicas entre el ERTMS/ETCS y el ASFA Digital.</p> <p>En el caso que se prevea el acceso a líneas o rutas donde existan transiciones programadas entre el sistema ERTMS/ETCS y otros sistemas de Clase B distintos al ASFA Digital (cuya funcionalidad esté disponible a través del módulo STM citado en el apartado 4.2.13.2), o entre los propios sistemas de Clase B, deberá evidenciarse para la obtención de la Autorización de Entrada en Servicio, la integración segura del interfaz entre los diferentes sistemas en el caso de que sea necesario para una explotación segura, la ejecución de transiciones dinámicas entre ellos, en función de las características y transiciones programadas entre los sistemas instalados en tierra.</p>		
<p><u>12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances (ESC)</u> IF MR ALC-XX 4.2.13.1 Sistemas embarcados de Control, Mando y Señalización de Clase A. 6.2.3.11. Sistemas embarcados de Control, Mando y Señalización de Clase A. (4.2.13.1)</p>	<p>ESC tests for ETCS on-board</p>	<p>Generally accepted</p> <p>Pending discussion on ESC/RSC rules at TSI WP</p> <p>Action ERA/NSA SP</p>

5.10 Member state EL

5.10.1 Summary of actions

Action	Responsible
EL to state its position regarding the ERA assessment	NSA EL
EL to publish the cleaned NRs in RDD	NSA EL
NSA EL and ERA to take into account the list of actions referred in the detailed assessment	NSA EL/ ERA
NSA EL to notify the existing rules related to compatibility with TDS or to confirm that there are no such rules applicable.	NSA EL

5.10.2 Rolling Stock Subsystem

5.10.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table, based on the rules published in RDD RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -
Amount of remaining NRs in addition to latest TSIs	15

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	3 parameters: 2.1.3-Joining technology 7.2.1-Vehicle marking 8.7.1-Tanks and pipe systems for flammable liquids	Other directives covering : RID published in wrong parameters to be moved to parameter 14.1
Rules related to documentation	Parameters listed in section 3.2.4	0 parameters	
Rules not retained in TSIs	Parameters listed in section 3.2.5	1 parameter: 6.1.1.1-Altitude	
Other rules related to compatibility with network / legacy system	See subsection 2 below	8 parameters: 2.1.3-Joining technology 3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius 3.3.4-Wheel/rail interaction influencing systems 7.2.1-Vehicle marking	Detailed analysis per parameter provided in section 2 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
		7.2.2.1-Headlights 7.2.2.2-Marker lights 7.2.2.3-End-of-train signal 8.7.1-Tanks and pipe systems for flammable liquids	
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	2 parameters: 3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius 3.3.5-Sanding system	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	0 parameters	
Existence of non mandatory rules	-	0 parameters	

5.10.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.10.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.3.4-Wheel/rail interaction influencing systems</u> Lubrication of wheels and sanding facilities are mandatory for tractive vehicles.	The national rule refers to clause 7.5.3.1 of Loc&Pas TSI 1302/2014.	Accepted

5.10.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.10.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius</u> "hump" minimum curve radius 250 m	The requirement refers to clause 4.2.3.1 of Loc&Pas TSI 1302/2014. Agency: The rule mentioned here is not relevant for vehicle authorisation as it describe a characteristic of your infrastructure (should be in RINF). At authorisation, applicant apply TSI Loc&Pas 4.2.3.1 and declare in ERATV the vertical radius characteristic of the RST: 4.8.5 Minimum vertical convex curve radius capability and 4.8.6 minimum concave curve radius capability Please note that after authorisation at route compatibility check RU check the compatibility of	Not accepted National rule should be repealed NSA EL to state its position for the ERA assessment

National rules	Agency evaluation	Agency evaluation status
	the vehicle with the intended route (OPE 4.2.2.5 and annex D). The vertical radius is an item to be checked for siding.	
<p><u>3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius</u> "bowl" minimum curve radius 300m</p>	<p>The requirement refers to clause 4.2.3.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The rule mentioned here is not relevant for vehicle authorisation as it describe a characteristic of your infrastructure (should be in RINF). At authorisation, applicant apply TSI Loc&Pas 4.2.3.1 and declare in ERATV the vertical radius characteristic of the RST: 4.8.5 Minimum vertical convex curve radius capability and 4.8.6 minimum concave curve radius capability Please note that after authorisation at route compatibility check RU check the compatibility of the vehicle with the intended route (OPE 4.2.2.5 and annex D). The vertical radius is an item to be checked for siding.</p>	<p>Not accepted</p> <p>National rule should be repealed</p> <p>NSA EL to state its position for the ERA assessment</p>
<p>3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius For shunting purposes within depots, running at low speed minimum curve (uncoupled vehicle) 80m</p>	<p>The national rules refers to clause 4.2.3.6 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Shunters are not in the scope of TSI see clause 2.3.1 of Loc&Pas TSI. The rule is in the scope of operations and not vehicle authorisation.</p>	<p>Not accepted</p> <p>National rule should be repealed</p> <p>NSA EL to state its position for the ERA assessment</p>
<p><u>7.2.1-Vehicle marking</u> RIV, Jul 2000</p>	<p>Agency: RIV is not relevant for vehicle authorisation</p>	<p>Not accepted</p> <p>National rule should be repealed</p> <p>NSA EL to state its position for the ERA assessment</p>
<p><u>7.2.1-Vehicle marking</u> RIC, Jan 2001</p>	<p>Agency: RIC not relevant for vehicle authorisation</p>	<p>Not accepted</p> <p>National rule should be repealed</p> <p>NSA EL to state its position for the ERA assessment</p>

National rules	Agency evaluation	Agency evaluation status
<u>7.2.2.1-Headlights</u> OSE Traffic Regulation Part A, 2009, Chapter 5 + Chapter 6	The national rules refers to clause 4.2.7.1.1 of Loc&Pas TSI 1302/2014. Agency: OSE document relates to Operational rules? If yes, rule is not relevant for vehicle authorisation. From the OSE Traffic Regulation Part A, 2009, Chapter 5 + Chapter 6 there are no emerging additional requirements in addition to the TSI - please clarify if additional requirements exists.	Not accepted NSA EL to state its position for the ERA assessment
<u>7.2.2.2-Marker lights</u> OSE Traffic Regulation Part A, 2009, Chapter 5 + Chapter 6	The national rules refers to clause 4.2.7.1.2 of Loc&Pas TSI 1302/2014. Agency: OSE document relates to Operational rules? if yes, rule is not relevant for vehicle authorisation. From the OSE Traffic Regulation Part A, 2009, Chapter 5 + Chapter 6 there are no emerging additional requirements in addition to the TSI - please clarify if additional requirements exists.	Not accepted NSA EL to state its position for the ERA assessment
<u>7.2.2.3-End-of-train signal</u> OSE Traffic Regulation Part A, 2009, Chapter 5 + Chapter 6	The requirement refers to clause 4.2.7.1.3 of Loc&Pas TSI 1302/2014. Agency: OSE document relates to Operational rules? if yes, rule is not relevant for vehicle authorisation. Please clarify which aspects of the quoted OSE regulation may be applicable in addition to TSI requirements for this parameter.	Not accepted NSA EL to state its position for the ERA assessment

5.10.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<u>3.3.5-Sanding system</u> Lubrication of wheels and Sanding facilities are mandatory for tractive vehicles.	The requirement refers to clause 7.4 of Loc&Pas TSI 1302/2014. Agency: The rule can be maintained until chapter 7.4 of Loc&Pas TSI is reviewed to include this specific condition for Greece. Greece will have to present a request for specific conditions.	Accepted if the national rule is drafted according to the proposal NSA EL to apply for specific conditions to be introduced in chapter 7.4
<u>3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius</u> minimum horizontal curve radius 120m	The national rules refers to clauses 4.2.3.6 of Loc&Pas TSI 1302/2014. Agency: Please precise up to which extent the specified value is applicable? Is this valid for the complete	Under review / Not accepted? NSA EL to provide the required

National rules	Agency evaluation	Agency evaluation status
	(interoperable) network or it is specific to certain parts of the network. The TSI requires "The minimum curve radius to be negotiated shall be 150 m for all units". If the situation on your network requires you may need to apply for a specific case - to be confirmed by NSA EL. If no need for a specific case, please revise the rule and remove the rule/the applicability for vehicles covered by TSIs.	addition information and state its position for the ERA assessment

5.10.2.4 Analysis of rules related to compatibility with Train Detection System

No requirements.

5.10.3 CCS onboard Subsystem

5.10.3.1 Requirements covering open points for Baselines 2 and 3

No requirements.

5.10.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature: Excel table, based on the rules published in RDD RDD: ready for upload in RDD		
	LoP version: New list as in Decision 2015/2299/EU		
	-		
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -		
Amount of remaining NRs in addition to latest TSIs	1		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	1 parameter: 12.1.1-Non-GSM-R radio system	
ETCS and GSM-R	Parameters listed in section 3.2.1	0 parameters	

5.10.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.1-Non-GSM-R radio system</u> Greek railways radio system described in Annex B of TSI CCS Decision 2006-679 & 2006-860</p>	<p>Agency: valid rule as it refers to class B radio system</p>	<p>Accepted</p>

5.10.3.2.2 Analysis of rules for ETCS and GSM-R

No requirements.

5.11 Member state FI

5.11.1 Summary of actions

Action	Responsible
NSA FI to take into account the actions identified below as “Action NSA FI” : - “TRAFI/14975/03.04.02.00 /2016” to be revised - Parameter 12.2.1 to be amended	NSA FI

5.11.2 Rolling Stock Subsystem

5.11.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD RDD : published
	LoP version : New
	-
Assessment status	Taken into account by MS : Yes
Amount of remaining NRs in addition to latest TSIs	20

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	2 parameters : 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 14.1-Design, operation and maintenance constraints for the transport of dangerous goods	
Rules related to documentation	Parameters listed in section 3.2.4	1 parameter : 1.1-General documentation 1.4-National requirement for testing	1.1-General documentation: Railway act 304/2011 46 § cover documentation to be submitted for Vehicle authorisation 1.4-National requirement for testing : Railway Act 2011/304 47 a § address rules for authorisation for testing
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	-
Other rules related to compatibility with network / legacy system	See subsection 2 below	0 parameters	-

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameters	-
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	7 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.3-Interference current under the vehicle. 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 8.4.2.3-Vehicle entrance impedance 12.2.4.1-Minimum axle distance 12.2.4.2-Minimum wheel diameter 12.2.4.3-Metal and inductive components-free space between wheels	Detailed analysis per parameter provided in section 4 below Action NSA FI : National rule : “TRAFI/14975/03.04.02.00 /2016” to be updated in summer 2017.
Existence of non mandatory rules	-	0 parameters	-

5.11.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.11.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.2.1-Running safety and dynamics</u> TRAFI/15083/03.04.02.00/2013, III part, clause 1.1.1	The national rule refers to open point 6.2.2.3 (4.2.3.5.2) - Test conditions for on-track tests as set out in the EN 14363 are not always fully achievable - Track geometric quality and combinations of speed, curvature, cant deficiency (point 5.4.2 of EN 14363), in CR WAG TSI 321/2013.	Accepted
<u>4.7.4-Eddy current track brake</u> TRAFI/4599/03.04.02.00/2015 (LOC&PAS TSI) (IM doesn't allow currently the use of eddy current brakes)	The national rule refers to open point 4.2.4.8.3 - Braking system independent of adhesion conditions: eddy current track brake in Loc&Pas TSI 1302/2014.	Accepted
<u>6.1.2.1-Crosswind effects</u> TRAFI/4690/03.04.02.00/2014 clause 2.1.1.1.4	The national rule refers to open point 4.2.6.2.4 - Aerodynamic effects for 1520 mm,1524 mm or 1600 mm and 1668 mm track gauge systems: cross wind in Loc&Pas TSI 1302/2014.	Accepted
<u>6.1.2.2-Maximum pressure variation in tunnels</u> TRAFI/4690/03.04.02.00/2014 clause 2.1.1.1.3	The national rule refers to open point 4.2.6.2.3 - Aerodynamic effects for 1520 mm,1524 mm or 1600 mm and 1668 mm track gauge systems: maximum pressure variations in tunnels in Loc&Pas TSI 1302/2014.	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
<u>6.2.3.1-Head pressure pulses</u> TRAFI/4690/03.04.02.00/2014 clause 2.1.1.1.2	The national rule refers to open point 4.2.6.2.2 - Aerodynamic effects for 1520 mm,1524 mm and 1668 mm track gauge systems: head pressure pulse in Loc&Pas TSI 1302/2014.	Accepted
<u>6.2.3.3-Aerodynamic impact on track workers</u> TRAFI/4690/03.04.02.00/2014 clause 2.1.1.1.1	The national rule refers to open point 4.2.6.2.1 - Aerodynamic effects for 1520 mm,1524 mm or 1600 mm and 1668 mm track gauge systems: slipstream on workers trackside in Loc&Pas TSI 1302/2014.	
<u>8.4.2.1.1-Rail return current</u> <u>8.4.2.1.3-Interference current under the vehicle</u> <u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> <u>8.4.2.3-Vehicle entrance impedance</u> <u>12.2.4.1-Minimum axle distance</u> <u>12.2.4.2-Minimum wheel diameter</u> <u>12.2.4.3-Metal and inductive components-free space between wheels</u>	The national rule refers to open points: - 4.2.3.3.1.1 - Compatibility with track circuits- EMC- EMC interference - 4.2.3.3.1.2 - Compatibility with axle counters – EMC - Electromagnetic fields (frequency management for 1520 and 1524 mm system) - 4.2.3.3.1.1 - Compatibility with track circuits – Vehicle design: minimum impedance between pantograph and wheels of the train - 4.2.3.3.1.2 - Compatibility with axle counters – Minimum axle distance for speed greater than 350 km/h - 4.2.3.3.1.2 - Compatibility with axle counters – Wheel geometry, minimum wheel diameter for speed greater than 350 km/h - 4.2.3.3.1.2 - Compatibility with axle counters – Vehicle design : metal free space In Loc&Pas TSI 1302/2014	See section : Analysis of rules related to compatibility with TDS

5.11.2.2.2 Requirements covering specific cases not described in TSIs

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.3.2-Wheelset (complete)</u> TRAFI/4690/03.04.02.00/2014 clause 2.2.2 cover Specific case 7.3.2.26 LOC & PAS TSI 1302/2014 Genral rule for 3rd country vehicles.	The national rule refers to specific case 7.3.2.26 - Rolling stock or iginated from third countr y (general) in Loc&Pas TSI 1302/2014.	Accepted
<u>3.3.3-Wheel</u> TRAFI/4690/03.04.02.00/2014 clause 2.2.1 cover Specific case 7.3.2.6 LOC & PAS TSI 1302/2014	The national rule refers to specific case 7.3.2.6 - Mechanical and geometric characteristics of wheel (4.2.3.5.2.2) in Loc&Pas TSI 1302/2014.	Accepted
<u>6.2.2.3-Pass-by noise impact</u> NOISE YTE (NOISE YTE 2011/229/EU)	The national rule refers to specific case .3.2.2 - Limits for stationary noise (point 4.2.1) in NOI TSI 1304/2014.	Accepted

5.11.2.2.3 Other rules related to compatibility with existing network/legacy system

No requirements.

5.11.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements.

5.11.2.4 Analysis of rules related to compatibility with TDS

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.1-Rail return current, 8.4.2.1.3-Interference current under the vehicle</u> CCS TSI 2016/919: Appendix A, table A 2.1 --> ERA/ERTMS/033281, version 3.0: kohta 3.2.1: Open point for 1524 mm network TRAFI/14975/03.04.02.00/2016. OHM osajärjestelmä. Part II, clause 1.2.9 Description : 1.2.9 DC and low frequency components of traction current, IM has to analyse based on the information provided by the RU the electromagnetic interference limit values for the DC generators in the unit. Analysis has to be done according to CSM and risks have to be Notified to NSA FI.</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : ok</p>	<p>Accepted National rule : "TRAFI/14975/03.04.02.00/2016" to be updated</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> OHM YTE 2016/919: Appendix A, table A 2.1 --> ERA/ERTMS/033281, version 3.0: kohta 3.2.1: Open point for 1524 mm network TRAFI/14975/03.04.02.00/2016. OHM osajärjestelmä. Part II, clause 1.2.8 Description : 1.2.8.1Electromagnetic interferences (traction current) IM has to analyse based on the information provided by the RU the electromagnetic interference limit values for the DC generators in the unit. Analysis has to be done according to CSM and risks have to be Notified to NSA FI. 1.2.8.2Electromagnetic interferences (electromagnetic fields) IM has to analyse based on the information provided by the RU the electromagnetic compability requirements. Analysis has to be done according to CSM and risks have to be Notified to NSA FI.</p>	<p>The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency : ok</p>	<p>Accepted National rule : "TRAFI/14975/03.04.02.00/2016" to be updated</p>
<p><u>8.4.2.3-Vehicle entrance impedance</u> OHM YTE 2016/919: Appendix A, table A 2.1 --> ERA/ERTMS/033281, version 3.0: kohta 3.2.1: Open point for 1524 mm network TRAFI/14975/03.04.02.00/2016. OHM osajärjestelmä. Part II, clause 1.2.7" <u>Description :</u> 1.2.7.1 The minimum impedance between the pantograph and wheel of the unit RU has to analyse the minimum impedance between the pantograph and each wheel of the unit. Analysis has to be done according to CSM and risks have to be Notified to NSA FI. 1.2.7.2 Unit's dynamic impedance</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : ok</p>	<p>Accepted National rule : "TRAFI/14975/03.04.02.00/2016" to be updated</p>

RU has to analyse unit's dynamic impedance. Analysis has to be done according to CSM and risks have to be Notified to NSA FI.		
<u>12.2.4.1-Minimum axle distance</u> V<=350kmh: CCS TSI 2016/919: Annex A, Table A 2.1 --> ERA/ERTMS/033281, version 3.0: clause 3.1.2.2 V>350 kmh: TRAFI/14975/03.04.02.00/2016. CCS subsystem Part II, clause 1.2.4 Description: V<=350kmh: The distance ai (Fig.1) is $a_i = v \times 7,2$ (where v is in km/h and distance ai is in mm) and ai = 500 mm; this value applies jointly with the minimum wheels size (see 3.1.3.2). V>350 kmh: Shall be analysed in accordance with CSM.	The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency : ok	Accepted National rule : "TRAFI/14975/03.04.02.00/2016" to be updated
<u>12.2.4.2-Minimum wheel diameter</u> CCS TSI 2016/919: Annex A, Table A 2.1 --> ERA/ERTMS/033281, version 3.0: clause 3.1.3.2 (V<=350kmh) V>350 kmh: TRAFI/14975/03.04.02.00/2016. CCS subsystem. Osa II, luku 1.2.3 Description: V<=350kmh: Table in clause 3.1.3.2. V>350 kmh: Shall be analysed in accordance with CSM.	The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency : ok	Accepted
<u>12.2.4.3-Metal and inductive components-free space between wheels</u> CCS TSI Annex A Appendix 1 ERA/ERTMS/033281, version 2.0, points 3.1.3.5 Other rolling stock: TRAFI/14975/03.04.02.00/2016. CCS subsystem. Osa II, luku 1.2.5. Description: Freight wagons: Figure in clause 3.1.3.5 Other rolling stock: Figure in clause 1.2.5	The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency : ok	Accepted

5.11.3 CCS onboard Subsystem

5.11.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover open points:

None

The parameters below do not contain national rules to cover open points:

- 12.2.5.3 B2 and B3 "Availability"
- 12.2.5.2 B2 "braking aspects"
- 12.2.5.4; 12.2.5.5 B2 "ETCS DMI"

5.11.3.2 Summary table

Availability and status of remaining national rules	
Availability of data	Yes

Availability and status of remaining national rules			
	Nature : RDD RDD : published		
	LoP version : New		
	If no, forecast		
Assessment status	Taken into account by MS : Yes		
Amount of remaining NRs in addition to latest TSIs	4		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	12.1.2.1-Use of hand portables as cab mobile radio 12.2.2-STM requirements	
Existence of non mandatory rules	-	1 parameter: 12.1.2.1-Use of hand portables as cab mobile radio	

5.11.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> TRAFI/14975/03.04.02.00/2016.CCS subsystem. I part, clause 3. II part, clause 2.1.1.4 TRAFI/26490/03.04.02.00/2014Railway communications system	The national rules refers to clauses 4.2.5.1 (Radio communication with the train) of CCS TSI. TETRA Network - On-board radio system (Functional and System requirements specifications) (Derogation accepted by EC regarding GSM-R application) Agency : They are related to the class B radio communication system.	Accepted
<u>12.2.1-National on-board signalling systems</u> TRAFI/14975/03.04.02.00/2016. CCS subsystem Part I, clause 3 CCS YTE 2006/679/EY Annex B point 4: ATP-VR/RHK	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. - Ebicab 900 with JGA balises - ATSS technology with Mini-transponder balises Agency : They are related to on-board class B system.	Accepted

5.11.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<u>12.1.2.1-Use of hand portables as cab mobile radio</u>	Agency:	Accepted

National rules	Agency evaluation	Agency evaluation status
<p>TRAFI/14975/03.04.02.00/2016. CCS subsystem, I part clause 3.</p> <ul style="list-style-type: none"> - 2W GSM-R device for Class B radio communication can be used in shunting - 2W GSM-R device for Class B radio communication can be used in train operation until 31 December 2019 	<p>The requirement is not mandatory. Finland allows the use of GSM-R handhelds which have a lower than the cab radios.</p>	
<p><u>12.2.2-STM requirements</u> TRAFI/14975/03.04.02.00/2016. CCS subsystem Part II, clause 2.1 Automatic train protection system Class B, ATP-VR/RHK</p> <p><u>Description :</u> Finnish Transport Agency decision 544/068/2011 ATP-VR/RHK STM-N FRS & GRS & RAMS requirement specification approval</p>	<p>Agency: Valid requirement</p>	<p>Accepted</p>

5.12 Member state FR

The national rules (binding rules) for vehicle autorisation in France are defined in the article 49 of arrêté du 19 mars 2012 (Arrêté du 19 mars 2012 fixant les objectifs, les méthodes, les indicateurs de sécurité et la réglementation technique de sécurité et d'interopérabilité applicables sur le réseau ferré national).

Article 4 of arrêté du 19 mars 2012 indicates that compliance to « acceptable means of compliance » published by EPSF provides a presumption of conformity to the arrêté :

« Sans préjudice du respect de la documentation d'exploitation, les exigences prévues par le présent arrêté sont présumées satisfaites dès lors que sont respectées les dispositions prévues par les documents techniques, les règles de l'art ou les recommandations définis par l'EPSF comme ayant valeur de moyen acceptable de conformité.. »

The Agency remind that “acceptable national means of compliance “ (named Specification d’Autorisation du Matériel (SAM)) should be in line with the definition in article 2(34) of directive (EU) 2016/797 where ‘acceptable national means of compliance’ means non-binding opinions issued by Member States to define ways of establishing compliance with national rules. The majority of the documents SAM mentioned in the parameters of RDD contains technical requirements to which a vehicle should comply with.

5.12.1 Summary of actions

Action	Responsible
France to state its position regarding the ERA assessment	FR MS
Agency to take into account the actions identified below as “Action ERA”	ERA
France to take into account the actions identified below as “Action FR”	NSA FR / FR MS
Acceptable national means of compliance named “Specification d’Autorisation du Matériel (SAMs)” provides not only ways of establishing compliance with national rules (as defined in article 2(34) of directive (EU) 2016/797) but also technical requirements/rules. They should be revised and aligned with the definition in article 2(34) of directive 2016/797.	FR MS
Some SAMs should become national rules (e.g SAMs related to class B) .	FR MS
RDD should be revised to indicates for each requirements a reference to the article 49 of arête du 19 mars 2012.	NSA FR / FR MS

5.12.2 Rolling Stock Subsystem

5.12.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD
	RDD : published
	LoP version : New
	-
Assessment status	Taken into account by MS : Yes/No
Amount of remaining NRs or Acceptable National means of compliance in addition to latest TSIs	71

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	8 parameters : 8.4.1-EMC within the vehicle 8.4.2.4-Psophometric current 8.4.3.1- Maximum Electro-Magnetic fields 8.4.3.3-Psophometric current 8.5-Protection against electrical hazards 8.7.2-Pressure vessel systems/pressure equipment 8.7.3-Steam boiler installations 8.7.4-Technical systems in potentially explosive atmospheres	Other directives covering : <ul style="list-style-type: none"> • EMC directive • Pressure vessel
Rules related to documentation	Parameters listed in section 3.2.4	2 parameters : 1.1. General documentation 1.4-National requirement for testing	<u>Parameter 1.1</u> covers the autorisation file, will need to be revised with transposition of the directive (EU) 2016/797 <u>Parameter 1.4</u> address rules for tests laboratories selection.
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter	-
Other rules related to compatibility with network / legacy system	See subsection 2 below	23 parameters : 2.1.2.1-Load conditions and weighed mass 3.2.1-Running safety and dynamics 3.3.4-Wheel/rail interaction influencing systems 3.3.8-Axle bearing condition monitoring 4.7.3-Magnetic track brake 8.2.1.1-Specific requirements for power supply 8.2.1.3-Regenerative braking 8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line 8.2.2.1-Pantograph overall design 8.2.2.2-Pantograph head geometry 8.2.2.3-Pantograph contact force (including static contact force, dynamic behaviour and aerodynamic effects) 8.2.2.4-Working range of pantographs 8.2.2.6-Arrangement of pantographs 8.2.2.8-Pantograph lowering 8.2.2.9-Running through phase or system separation sections 8.2.3.1-Contact strip geometry 8.2.3.2-Contact strip material 8.2.3.3-Contact strip assessment 8.2.3.4-Detection of contact strip breakage	Detailed analysis per parameter provided in section 2 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
		8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 9.3.1-Speed indication 9.3.4-Driver supervision 9.6-Recording device	
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	21 parameters : 2.1.5-Fixing of devices to car body structure 3.1-Vehicle gauge 3.3.1-Bogies 4.5.1-Emergency braking performance 4.5.2-Service braking performance 4.5.3-Calculations related to thermal capacity 4.5.4-Parking brake performance 4.5.5-Brake performance calculation 4.7.2-Dynamic brake linked to traction 4.7.1.1-Brake blocks 4.7.2-Dynamic brake linked to traction 4.7.5-Parking brake 6.2.2.1-Stationary noise impact 6.2.2.2-Starting noise impact 6.2.2.3-Pass-by noise impact 7.2.2.4-Lamp controls 9.5.1.2-External steps and handrails for shunting staff 9.5.3-On-board tools and portable equipment 10.2.3-Passenger alarm 10.2.4-Emergency lighting : 13.2-Ferry transport	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	6 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 8.4.2.3-Vehicle entrance impedance 12.2.4.3-Metal and inductive components-free space between wheels 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	Yes, the majority of parameters refers to acceptable national means of compliance named "Specification d'Admission du Matériel (SAM)".	

5.12.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.12.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.3.5-Sanding system</u> SAM S 901	The national rule refers to open point 4.2.3.3.1.1 - Compatibility with train detection systems – Isolating emissions: sand characteristics in Loc&Pas TSI 1302/2014	Accepted
<u>3.3.8-Axle bearing condition monitoring</u> SAMI D 001	The national rule refers to open point 4.2.3.4 - Axle bearing condition monitoring - Option on board equipment in TSI WAG	Accepted
<u>4.7.3-Magnetic track brake</u> Les freins à patins magnétiques doivent respecter les exigences de la SAM F 102.	The national rule refers to open point 4.2.3.3.1.2 - Rolling stock characteristics for compatibility with train detection system based on axle counters in Loc&Pas TSI 1302/2014.	Accepted
<u>4.7.4-Eddy current track brake</u> Les freins à courants de Foucault doivent respecter les exigences de la SAM F 101	The national rule refers to open point 4.2.4.8.3 - Braking system independent of adhesion conditions: eddy current track brake in Loc&Pas TSI 1302/2014.	Accepted
<u>6.2.3.4-Ballast pick-up and projection onto neighbouring property</u> SAM X 012 Cet item ne concerne pas le matériel circulant à moins de 250 km/h. Les essais doivent être effectués à vitesse maximale de circulation du matériel. L'attestation de conformité doit mentionner ces conditions. La vitesse maximale de circulation de chaque état membre est définie dans son document de référence.	The national rule refers to open point 4.2.6.2.5, Aerodynamic effect on ballasted track for RST of design speed in Loc&Pas TSI 1302/2014 and apply to vehicle operating with a design speed above 250km/h.	Accepted
<u>8.4.2.1.1-Rail return current</u> <u>8.4.2.1.2-Heating cable interference current</u> <u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> <u>8.4.2.3-Vehicle entrance impedance</u> <u>12.2.4.3-Metal and inductive components-free space between wheels</u> <u>12.2.4.5-Compatibility with fixed installations of CCS</u>	The national rule refers to open points: - 4.2.3.3.1.1 - Compatibility with track circuits- EMC- EMC interference - 4.2.3.3.1.2 - Compatibility with axle counters – EMC - Electromagnetic fields (frequency management for 1520 and 1524 mm system) - 4.2.3.3.1.1 - Compatibility with track circuits – Vehicle design: minimum impedance between pantograph and wheels of the train - 4.2.3.3.1.2 - Compatibility with axle counters – Minimum axle distance for speed greater than 350 km/h - 4.2.3.3.1.2 - Compatibility with axle counters – Wheel geometry, minimum wheel diameter for speed greater than 350 km/h - 4.2.3.3.1.2 - Compatibility with axle counters – Vehicle design : metal free space In Loc&Pas TSI 1302/2014	See section : Analysis of rules related to compatibility with TDS

5.12.2.2.2 Requirements covering specific cases not described in TSIs

No requirements

5.12.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>2.1.2.1-Load conditions and weighed mass</u> L'application du § 7.7.1 de la norme NF F 58-001-1 : 2018 est possible.</p>	<p>The requirement apply to OTM, and refers to clause 4.2.2.10 of Loc&Pas TSI 1302/2014. Agency : France to justify the requirement and provide access to the clause 7.7.1 of NF F 58-001. The Agency remind that there is no open point, no specific case declared in the TSI for the parameter 4.2.2.10 of Loc&Pas TSI</p>	<p>Not accepted National rule should be repealed</p>
<p><u>3.2.1-Running safety and dynamics</u> Vérification des ELC (efforts longitudinaux de compression) selon EN 14033-1 § 7.8.</p>	<p>The requirement apply to OTM, and refers to clause 4.2.3.4.2 of Loc&Pas TSI 1302/2014. Agency : The NR is related to conditions on the safety against derailment in S-shaped curves. For this aspect, both TSI LOC&PAS and TSI WAG have their requirements included in the EN 14363. The development of this thematic within the EN is quite low. <i>"It is recognized that longitudinal forces within trains have the potential to increase the risk of derailment when negotiating S-shaped curves. This risk is regarded as low for conventional trains but for certain freight wagons and train operation methods the risk can be higher."</i> Because of the risk being potentially mostly for wagons a specific standard was developed for this situation EN 15839. As OTMs are usually included in non-conventional train configurations, and normally they are part of trains, "acting" as freight wagons, this risk needs to be taken into account. If the applicant follows the interpretation shown above, the EN 15839 needs to be applied for the OTM, subject of a TSI application. The NR can be accepted until a revision of the TSIs LOC&PAS and WAG, or a revision of the EN 14363, clarifies completely the application of the requirements on longitudinal compressive forces in S-shaped curves, to OTMs, i.e., EN 15839 is mandatory to OTMs and the conditions of dispensation of EN 15839 to OTMs are in EN 14033-1.</p>	<p>Accepted pending discussion at TSI working party</p>
<p><u>3.3.3-Wheel</u> Les roues moulées ne sont pas acceptées sur le RFN (en référence aux paragraphes 6.1.3.1 alinéa 3) de la STI Loc&Pas 1302/2014 et 6.1.2.3 b) de la STI Wagons 321/2013 modifiée).</p>	<p>The requirement related to clause 6.1.3.1(3) of of Loc&Pas TSI 1302/2014 and 6.1.2.3(b) of WAG TSI Agency : the rule cover other types of wheels not defined by TSI.</p>	<p>Accepted</p>
<p><u>3.3.4-Wheel/rail interaction influencing systems</u> Article 49 (b) of the "arrêté 19 march 2012" SAM S 801: Lubrification du contact rail-roue par le matériel roulant</p>	<p>SAM S801 refers to clause 7.5.3.1 of Loc&Pas TSI 1302/2014. It provides recommendation for the lubrication of the wheel-rail contact by rolling stock.</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
	<p>Agency: The rule remains as it covers an aspect relevant for the EU railway system but out of the scope of TSI. (see clause 7.5.3.1 of Loc&Pas TSI).</p>	
<p><u>3.3.8-Axle bearing condition monitoring</u> Article 32 g) 49 f) et 86 of the “arrêté 19 march 2012” SAMID001:Dispositif de surveillance des essieux</p>	<p>SAMI D001 refers to clauses 4.2.3.3.2.2 and 4.2.3.5.2.1 of Loc&Pas TSI 1302/2014 and clause 4.2.3.4 of WAG TSI. SAMID001 covers trackside hot axle box detection. France indicates that : <ul style="list-style-type: none"> - neither the TSIs nor the EN15437-1 standard cover all the temperature limits and targets area of France trackside hot axle box detection. - A new specific case will be requested. Agency : The specific case should take into account the EN15437-1, the clause 7.1.2 of WAG TSI and may be written as the Sweden specific case defined in clause 7.3.2.3 of Loc&Pas TSI. Regarding the temperature limits, the clause 4.2.3.5.2.1 of Loc&Pas TSI indicates that the applicant shall record them in the technical documentation described in clause 4.2.12 of Loc&Pas TSI .</p>	<p>Accepted Action FR : will request a justified specific case</p>
<p><u>4.7.3-Magnetic track brake</u> Article 49 a) c) f) & 62 a) b) of the “arrêté 19 march 2012” and SAM F102</p>	<p>SAM F102 refers to clauses 4.2.3.3.1 and 4.2.4.8.2 of Loc&Pas TSI 1302/2014. SAM F 102 provides requirements for magnetic brake pads operated on rolling stock. It refers also to the EN 16207 regarding geometrical characteristics . Agency : The next revision of TSI Loc&Pas will refer to EN16207. NSA FR will have to amend the SAM F102 when new TSI Loc&Pas will be voted.</p>	<p>Accepted</p>
<p><u>8.2.1.1-Specific requirements for power supply</u> Article 49 d) of the “arrêté 19 march 2012” Pour avoir accès sans restriction à l’ensemble du réseau 25 kV, le matériel doit être conforme à la SAM T 004.</p>	<p>SAM T004 clause 3.6 refers to clause 4.2.8.2.2 of Loc&Pas France indicates the need of revision of specific cases 7.3.2.14 of Loc&Pas and 7.4.2.2.1 of TSI EN taking into account the return of experience. Agency: France to confirm whether there is a need to extend this specific case to other lines (25kV and 1,5kV) through a measuring campaign.</p>	<p>Accepted Action FR: will request a justified specific case</p>
<p><u>8.2.1.3-Regenerative braking</u> Article 49 d) of the “arrêté 19 march 2012” and SAM T004</p>	<p>SAM T004 clauses 4.2.1 et 4.3 refers to clause 4.2.8.2.3 of Loc&Pas TSI 1302/2014. France indicates the need of new specific cases for Regeneration brake : « <i>clause 4.2.1 of SAM T004, la disparition de la tension doit être effective dans les 10 secondes suivant la coupure de l’alimentation</i> » requis supplémentaire à l’EN 50388 § 12.1 » Agency:</p>	<p>Not accepted National rule should be repealed</p>

National rules	Agency evaluation	Agency evaluation status
	<p>Loc&Pas TSI refers to EN 50388:2012 clause 12.1.1. Unit shall not continue to use their regenerative brake if:</p> <ul style="list-style-type: none"> - there is a loss of supply voltage or a contact line-rail/earth short-circuit on the same section fed by the substation, - the contact line fails to absorb the energy, - the line voltage is higher than $U_{max 2}$ (see EN 50163 clause 4.1), - If feedback energy absorption by other consumers is not available, rolling stock shall revert to other brake systems. <p>France refers to « <i>matériel moteur disposant d'un facteur de puissance différent en traction et en freinage par récupération.</i> »</p> <p>ERA understand that this issue refers to:</p> <ul style="list-style-type: none"> - the quality of the energy returned to the HV Network. The values of table 1 referred in EN 50388 are more demanding than those proposed by France. - the extra requirement of 10 secondes. (coordination arrangement) <p>ERA does not see therefore any need for a specific case or national rule on this issue, since the EN and TSI already cover sufficiently this aspect.</p>	
<p><u>8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line</u> Article 49 d) of the “arrêté 19 march 2012” and SAM T004 § 3 Et SAM E 903 (§ 4.6 dans la version de 2018) L'intensité à l'arrêt peut être soumise à restriction en 1,5 kV notamment en cas d'utilisation d'archets à bandes carbone.</p>	<p>SAM T004 clause 3 refers to clauses 4.2.8.2.4 of Loc&Pas TSI 1302/2014.</p> <p>France indicates the need of new specific case related to power limitation.</p> <p>Agency: TSI Loc&Pas indicates that Electric units with power higher than 2 MW (including the declared fixed and predefined formations) shall be equipped with power or current limitation function. France proposal states « <i>est supérieure strictement à 6 MW</i> ». ERA underlines that SNCF Reseaux expressed his disagreement concerning the 6MW (meeting hold on 07/11), and suggests to reach a common proposal of this parameter.</p>	<p>Not accepted NR should ne repealed</p>
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> Article 49 d) of the “arrêté 19 march 2012” and SAM T004</p>	<p>SAM T004 clause 5 refers to the clause 4.2.8.2.10 of Loc&Pas TSI 1302/2014</p> <p>France indicates the need of new specific cases the switch on of the unit: « <i>clause 5 of SAM T004, afin de ne pas perturber le système de protection des IFTE, le courant appelé à la fermeture du disjoncteur du train doit respecter :</i></p> <ul style="list-style-type: none"> - <i>En 25 kV, $i < 800A$ à $t > 40ms$ après fermeture du ou des disjoncteurs du train</i> - <i>En 1500V voir le § 11.4 de l'EN 50388-2012</i> » <p>Agency : Loc&Pas TSI refers to EN 50388 clause 11 - Coordination of protection (see table 8). ERA considers this aspect relates the transient current,</p>	<p>Accepted Action FR : will request a justified specific case</p>

National rules	Agency evaluation	Agency evaluation status
	<p>and it is basically a coordinating aspect and not purely rolling stock related. Anyway, if there is a need to ensure this coordination for di/dt on 25kV (EN 50388 only covers DC), France could keep it as a National rule.</p> <p>Note. EN50388 is under revision , a new version should be published with 2019, 2020.</p>	
<p><u>8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line</u> Article 49 d) of the “arrêté 19 march 2012”and SAM E903 (§ 4.6 dans la version de 2018) L'intensité à l'arrêt peut être soumise à restriction en 1,5 kV notamment en cas d'utilisation d'archets à bandes carbone.</p>	<p>There is no clause 4.6 in the SAM E903 published in EPSF website (link), the Agency understand that the right clause is 5 .6.</p> <p>SAM E903 clause 5.6 refers to clause 4.2.8.2.5 of Loc&Pas TSI 1302/2014.</p> <p>France indicates the need of new specific cases and requires additional verifications to be performed for maximum current at standstill for 1,5kV.</p> <p>Agency : This parameter is sufficiently covered by TSIs and EN. NSA FR should integrate the additional requirements in the revision of the EN if really needed. The TSI refers to EN 50367, and both, the TSI and the standard, have been accepted by France. The contact strip are interoperable constituents covered by EC certificates (assessed by NoBo).</p> <p>Note. EN50367 is under revision to harmonise tests conditions.</p>	<p>Accepted pending revision of EN 50367 Action FR : will request a justified specific case</p>
<p><u>8.2.2.1-Pantograph overall design</u> SAM E 903 (§ 4.2.2 dans la version de 2018)</p>	<p>There is no clause 4.2.2 in the SAM E903 published in EPSF website (link), the Agency understand that the right clause is 5.2.2.</p> <p>Agency : The rule was already discussed during the bilateral meetings with France and was attached to parameter 8.2.2.4, it was agreed that the rule does not apply to TSI conform vehicle and confirmed by the extract of clause 5.2.2 of SAM E903</p> <p>« <i>Les pantographes 25 kV des engins à grande vitesse dont l'effort moyen de contact dépasse celui défini dans la STI ENE 1301/2014 au § 4.2.11, qui renvoie au tableau 6 de la norme EN 50367 (ligne Fm ,max (N) et colonne v > 200 km/h courant alternatif) »</i></p>	<p>Not accepted NR should ne repealed</p>
<p><u>8.2.2.2-Pantograph head geometry</u> Article 49 d) of the “arrêté 19 march 2012”and SAM E903(§ 4.10 dans la version de 2018)</p>	<p>There is no clause 4.10 in the SAM E903 published in EPSF website (link), the Agency understand that the right clause is 5.10.</p> <p>SAM E903 clause 5.10 refers to clause 4.2.8.2.9.2 of Loc&Pas TSI 1302/2014</p> <p>France indicates that :</p> <ul style="list-style-type: none"> - A new specific case will be declared and 	<p>Accepted pending specific case discussed at WP TSI. Action FR : will request a justified specific case</p>

National rules	Agency evaluation	Agency evaluation status												
	<p>- Specific case 7.3.2.14 should be corrected with:</p> <p>« Pour une exploitation sur le réseau existant alimenté en 25 kV alternatif, en particulier sur les lignes à caténaires uniquement compatibles avec des pantographes étroits, et pour une exploitation en France et en Suisse ou en Italie, il est permis d'équiper les unités électriques d'un pantographe ayant une géométrie d'archet d'une longueur de 1 450 mm comme décrit dans l'annexe B.2, illustration B.1, de la norme EN 50367:2012 (comme alternative à l'exigence de la clause 4.2.8.2.9.2). »</p> <p>Agency : LOC& PAS TSI refers to EN 50367:2012 5.3.2.2 where the position of transition point and the angle between the fixed and independent parts at the transition point are defined (figure 2). Also the tests needed to ensure the transition between independent parts of the pantograph head are defined: when the pantograph head is fitted with two contact strips having independent suspensions, the test value of nominal static contact force is applied to the center of the head according to the values defined in the table 4:</p> <p style="text-align: center;">Table 4 – Static contact forces</p> <table border="1"> <thead> <tr> <th></th> <th>Range for application [N]</th> <th>Test value</th> </tr> </thead> <tbody> <tr> <td>AC</td> <td>60 to 90</td> <td>70</td> </tr> <tr> <td>DC 3 kV</td> <td>90 to 120</td> <td>90</td> </tr> <tr> <td>DC 1,5 kV</td> <td>70 to 140</td> <td>90</td> </tr> </tbody> </table> <p>For multi-voltage pantographs the lowest value shall be used. The Agency considers that the EN 50367 covers the needs defined in the SAM E 903.</p>		Range for application [N]	Test value	AC	60 to 90	70	DC 3 kV	90 to 120	90	DC 1,5 kV	70 to 140	90	
	Range for application [N]	Test value												
AC	60 to 90	70												
DC 3 kV	90 to 120	90												
DC 1,5 kV	70 to 140	90												
<p><u>8.2.2.3-Pantograph contact force (including static contact force, dynamic behaviour and aerodynamic effects)</u> Article 49 d) of the “arrêté 19 march 2012”and En statique : SAM E 903 (§ 5.3 dans la version de 2018) En dynamique : SAM E 903 (§ 4.2.1, 4.3.1, 4.4.4, 4.7.1, 4.8, 5.2, 5.3, 5.4, 5.5 dans la version 3 de 2018)</p>	<p>The clauses mentioned are not in the SAM E903 published in EPSF website (link), the Agency understand that the right clauses are 5.2.1, 5.3.1 5.4.4., 5.7.1, 5.8, 6.2, 6.3 ,6.4, 6.5.</p> <ul style="list-style-type: none"> • <u>Clauses related to "soulevement" (5.2.1, 5.3.1, 5.4.4)</u> were already discussed during bilateral meetings with France. See the conclusion that was shared and discussed with FR. The Agency considers that: <ul style="list-style-type: none"> • Amplitude of pantograph displacement corresponds to the parameter 4.2.17 Vertical movement of the contact point of the HS ENE TSI (Dec.2008/284/EC). This requirement is now deleted in the current TSI . • Uplift of the contact wire at the support corresponds to the requirement 	<p>Other clauses: not accepted</p> <p>Clause 6.3 Accepted pending revision of specific case</p> <p>Action FR : will request a justified specific case</p>												

National rules	Agency evaluation	Agency evaluation status
	<p>referring space for the steady arm uplift in the parameter: Dynamic behavior and quality of current collection (valid for HS, CR and current ENE TSIs)</p> <p>In the framework of drafting the TSIs, it was agreed that only the parameter Dynamic behaviour and quality of current collection is sufficient to define the phenomena related to the proper interaction between the pantograph and the OCL. Therefore, we see no reason to keep these parameter in the SAM. The TSI refers to EN 50367, and both, the TSI and the standard, have been accepted by France.</p> <ul style="list-style-type: none"> • Clause 5.7.1 was notified in parameter 8.2.2.8 : see assessment below <ul style="list-style-type: none"> • Clause 5.8: • EN50317 is already required by TSI, • The assessment demanded is contradicting the clause 6.2.3.20 (5) “The measured results shall be in accordance with the clause 4.2.8.2.9.6 for either mean contact force and standard deviation or percentage of arcing. • Clauses 6.4, 6.5: The Agency considers that the EN norms + TSI (chapter 6) + French specific cases are sufficient to define the tests. <p>SAM E903 clause 6.3 to clause 4.2.8.2.9.6 of Loc&Pas TSI 1302/2014</p> <p>France indicates that the existing specific case 7.3.2.16 should be corrected with :</p> <p><i>« Pour la compatibilité technique avec le réseau existant, les unités électriques destinées à être exploitées sur des lignes en 1,5 kV courant continu doivent être validées en tenant compte d'un effort de contact moyen compris dans la fourchette suivante:</i></p> <ul style="list-style-type: none"> - $V \leq 200 \text{ km/h}: 70 \text{ N} < F_m \leq 0,00178 * V^2 + 110 \text{ N};$ - $V > 200 \text{ km/h}: 70 \text{ N} < F_m \leq 0,00228 * V^2 + 90 \text{ N}.$ <p><i>Avec des bandes de frottement en carbone, une force de contact statique de 140 N peut être admise à l'arrêt, mais celle-ci ne devra pas excéder 110 N pour une vitesse > 8 km/h.</i></p> <ul style="list-style-type: none"> - <i>Avec des bandes de frottement métalliques, la force de contact statique n'excédera pas 90 N »</i> <p>Agency: National rules maintained pending the revision of specific case.</p>	

National rules	Agency evaluation	Agency evaluation status
<p><u>8.2.2.4-Working range of pantographs</u> Article 49 d) of the “arrêté 19 march 2012” and SAME903 (§ 4.2.3, 4.3.2, 4.4.5 dans la version 3 de 2018)</p> <p><u>8.2.2.5-Current capacity of pantograph including contact strip</u> SAM E 903 (§ 4.2.4, 4.2.5, 4.3.3, 4.3.4, 4.4.6, 4.4.7 dans la version 3 de 2018)</p>	<p>The clauses mentioned are not in the SAM E903 published in EPSF website (link), the Agency understand that the right clauses are 5.2.3 , 5.3.2 and 5.4.5</p> <p>The clauses mentioned are not in the SAM E903 published in EPSF website (link), the Agency understand that the right clauses are 5.2.4 , 5.2.5 et 5.3.3, 5.3.4, 5.4.6, 5.4.7 SAM E903 clauses 5.2 refers to clauses 4.2.8.2.9.1 and of Loc&Pas TSI 1302/2014 France indicates that new specific cases will be required to cover: « <i>catenaire du midi, Soulèvements du fil de contact au droit des supports, butée LGV, amplitudes de débattement pantographe</i> ». Agency : In the framework of drafting the TSIs, it was agreed that only the parameter Dynamic behaviour and quality of current collection is sufficient to define the phenomena related to the proper interaction between the pantograph and the OCL. Therefore, requirements in paragraphs: « <i>Amplitudes du débattement du pantographe, Soulèvements du fil de contact au droit des supports</i> » should not apply on top of TSI. The TSI refers to EN 50367, and both the TSI and the standard, have been accepted by France.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>8.2.2.6-Arrangement of pantographs</u> Article 49 d) of the “arrêté 19 march 2012” and SAME903 (§ 4.11 dans la version de 2018)</p>	<p>The clause 4.11 mentioned is not in the SAM E903 published in EPSF website (link), the Agency understand that the right clauses are 5.11. SAM E 903 clause 5.11 refers to clause 4.2.8.2.9.7 of Loc&Pas TSI 1302/2014. France indicates that the specific case below will be required in the revision of Loc&Pas TSI: « <i>Pour les locomotives polycourants, la distance entre les pantographes 25 kV et 1 500 V susceptibles d’être utilisés simultanément (décollage du train, circulation par temps de givre, …) doit être supérieure à huit mètres. Conformément à la norme EN 50367 (chapitre 8.2), la liaison équipotentielle entre deux pantographes en service simultanés, sous 25 kV, est interdite.</i> » Agency: Loc&Pas TSI clause 4.2.8.2.9.7 does not specify the distance between pantographs with different voltages. National rule maintained pending discussion at TSI WP.</p>	<p>Accepted pending discussion at TSI WP Action FR : will request a justified specific case</p>
<p><u>8.2.2.8-Pantograph lowering</u> SAM E 903 (§ 4.7.2 dans la version de 2018)</p>	<p>The clause 4.7.2 mentioned is not in the SAM E903 published in EPSF website (link), the Agency understand that the right clauses are 5.7.2.</p>	<p>Not accepted National rule should be repealed</p>

National rules	Agency evaluation	Agency evaluation status
	<p>The requirement relates to clause 4.2.8.2.9.10 of Loc&Pas TSI 1302/2014.</p> <p>Agency : The rule duplicates the TSI requirement and ask the application of TSI clause 4.2.8.2.9.10 and EN 50206-1 already called by TSI.</p>	
<p><u>8.2.2.9-Running through phase or system separation sections</u> Article 49 e) of the “arrêté 19 march 2012” and SAM S 706 (par la TVM), SAM S 707 (par le KVB)</p>	<p>SAM S706, SAM S707 refers to clause 4.2.8.2.9.8 of Loc&Pas TSI 1302/2014.</p> <p>SAMS706, SAM S707 covers running through separation section via class B systems.</p> <p>Agency : National rule maintained as it covers class B system.</p>	Accepted
<p><u>8.2.3.1-Contact strip geometry</u> <u>8.2.3.2-Contact strip material</u> <u>8.2.3.3-Contact strip assessment</u> Article 49 d) of the “arrêté 19 march 2012” and SAM E 903 (§ 4.9.1 dans la version de 2018) (§ 4.9.2 dans la version de 2018) (§ 4.9.8 dans la version de 2018)</p>	<p>The clauses 4.9.1, 4.9.2 and 4.9.8 mentioned are not in the SAM E903 published in EPSF website (link), the Agency understand that the right clauses are 5.9.1, 5.9.2 and 4.9.8</p> <p>SAM E 903 clause 5.9 refers to clauses 4.2.8.2.9.4.1 , 4.2.8.2.9.4.2 of Loc&Pas TSI 1302/2014</p> <p>France will introduce the following specific case : “Bandes de frottement En 1500 V et 750 V la bande de frottement doit avoir une largeur minimale de 50 mm. En 25 kV la bande de frottement doit avoir une largeur minimale de 35 mm pour un archet muni de 2 bandes ou 50 mm pour un archet monobande. La raison de cette largeur minimale est la réduction du risque de casse des bandes carbonées dans les isolateurs de section du réseau non STI. »</p> <p>Agency : The TSI and the EN 50206 define the contact strips requirements. ERA considers that these requirements are sufficient. Selection of contact strip material is already covered by TSI 4.2.8.2.9.4.3 (3) (if permitted in the RINF)</p>	Not accepted National rule should be repealed
<p><u>8.2.2.8-Pantograph lowering</u> <u>8.2.3.4-Detection of contact strip breakage</u> Pour les vitesses supérieures à 250 km/h, les pantographes utilisés doivent être munis d'un dispositif de détection d'avaries d'archet provoquant l'abaissement automatique du pantographe.</p>	<p>The requirement clause 4.2.8.2.9.10 of Loc&Pas TSI 1302/2014/</p> <p>Agency: Not accepted as it is already covered by TSI 4.2.8.2.9.10 (4) : “Electric units of maximum design speed higher than 160 km/h shall be equipped with an ADD”</p>	Not accepted National rule should be repealed
<p><u>9.3.1-Speed indication</u> Article 49 g) of the “arrêté 19 march 2012” and SAMS702</p>	<p>SAM S702 refers to clause 4.2.9.3.2 of Loc&Pas TSI 1302/2014.</p> <p>Rule relates to speed indication managed via class B.</p> <p>Agency : National rule maintained as it covers class B system.</p>	Accepted
<p><u>9.3.4-Driver supervision</u> Article 49 h) et 66 of the “arrêté 19 march 2012”and SAM S301 (§ 5.3 et 5.4 dans la version</p>	<p>The national rule refers to clause 4.2.9.3.1 of Loc&Pas TSI 1302/2014.</p>	Accepted

National rules	Agency evaluation	Agency evaluation status
de 2013). Le système SiFa selon la norme DIN VDE 0119 207 5 est également accepté.	Agency : The rule complements the clause 4.2.9.3.1 (2) of Loc&Pas TSI, by providing the value of “X seconds”.	
<u>9.6-Recording device</u> Article 19) et 49 i) of the “arrêté 19 march 2012” and SAM S704 Rule for OTM : SAM S 704 + enregistrement des deux événements suivants : - la commande de mise en position travail ou circulation du commutateur ; - le changement de position de la brosse (dans le cas d'une brosse escamotable)	The national rule refers to clause 4.2.9.6 of Loc&Pas TSI 1302/2014. France indicates that SAM S704 has additional requirements covering operation. The rule is maintained pending its transfer to operational document. Agency : The informations to be registered by the recording device are covered by the TSI OPE. The information that is recorded must be for investigation purposes in the event of an accident. Requirements related to operation are not part of vehicle authorisation.	Not accepted National rule should be repealed

5.12.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<u>2.1.5-Fixing of devices to car body structure</u> Recommandation de moyen de maîtrise des risques pour tous les matériels : en complément des fixations des organes et équipements extérieurs sur la caisse et sur le bogie respectant les référentiels du paramètre 2.1.5 et susceptibles de tomber sur la voie, des dispositifs de sécurité ou dispositions sont à prévoir en cas de défaillance de ces fixations (appuis positifs, pare chutes, ...). Ces dispositifs de sécurité ou dispositions doivent être dimensionnés suivant les critères accélérométriques de la norme EN 12663 (dépendant de la catégorie des véhicules).	The requirement refers to clause 4.2.2.7 of Loc&Pas TSI 1302/2014. France indicates that the need to provide recommendations for the means to be used for all the equipment, in addition to the fixing of the external equipment that could fall on the track, in order to completely control the risk. Ex: safety devices or constructive provisions to avoid falling in case of failure of these fixings (e.g positive supports). France proposes that the requirement will be withdrawn when it will be considered in an Agency document such as TSI application guide. Agency : TSI Loc&Pas defines functional requirements that cover mechanical fixation of equipments and refer to the EN 12663. In addition, rules related to fixation of equipment had been already discussed in the TSI working party. The application guide can not introduce new elements on top of TSI.	Not accepted National rule should be repealed
<u>3.1-Vehicle gauge</u> EN 14033-1 : 2017 § 5.2.1, 5.2.2, 5.2.4, 5.2.5 et NF F 58-001-1 : 2018 § 5.2.1	The requirement applies to On track machine and relates to stowing of moveable machine parts in running position. Agency : the requirement is not covered by TSI.	Accepted
<u>3.3.1-Bogies</u> Recommandation de moyen de maîtrise des risques pour tous les matériels : en complément des fixations des organes et équipements extérieurs sur le bogie respectant les référentiels du paramètre 3.3.1 et susceptibles de tomber sur la voie, des dispositifs de sécurité ou dispositions sont à prévoir en cas de défaillance de ces fixations (appuis positifs, pare chutes, ...).	Agency : see parameter 2.1.5 above	Not accepted National rule should be repealed

National rules	Agency evaluation	Agency evaluation status
Ces dispositifs de sécurité ou dispositions doivent être dimensionnés suivant les critères accélérométriques de la norme EN 13749.		
<p><u>Rules related to braking parameters : 4.5.1, 4.5.2, 4.5.3, 4.5.4, 4.5.5, 4.7.2, 4.7.5</u></p> <p>Article 49 g) of the “arrêté 19 march 2012” and SAM F 018, SAM F005</p>	<p>SAM F005, SAM F018 refer to the following TSI Loc&Pas clauses :</p> <ul style="list-style-type: none"> - 4.2.4.5.2 Emergency braking, - 4.2.4.5.3. Service braking, - 4.2.4.5.4 Calculations related to thermal capacity, - 4.2.4.5.5 Parking brake, - 4.2.4.7. Dynamic brake - Braking system linked to traction system, <p>France indicates that SAM F005 and SAM F018 covers the TSI OPE and are today used for vehicle autorisation. The requirements provides among other aspects stopping distances for different type of vehicles, train composition (e.g MA 100).</p> <p>Agency :</p> <p>The braking distances necessary to operate on a line are not subject to vehicle authorisation but are covered by the clause 4.2.2.6 of OPE TSI such as information that Infrastructure manager shall provide to Railway undertakings.</p> <p>At vehicle authorisation stage, the braking distances are verified according to harmonized procedures defined in the TSI and are reported in the vehicle technical file.</p> <p>SAM F005 and F0018 should be revised to be aligned with Loc&Pas TSI:</p> <ul style="list-style-type: none"> - Aspects related to operation that are not part of vehicle authorisation should be transferred to operational. - Complements to parking brake and thermal capacity are to be justified. 	<p>Not accepted National rule should be repealed</p>
<p><u>4.7.1.1-Brake blocks</u></p> <p>Application de la clause C14 de la STI wagons</p>	<p>The requirement refer to clause C14 of WAG TSI.</p> <p>Agency :</p> <p>The rule is already covered by TSI WAG (see clause 4.2.4.2, 7.2.2.2) and is to be removed for TSI conform Wagon.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>4.7.5-Parking brake</u></p> <p>SAM F 005 ou EN 14033-1 : 2017 § 9.2.6.2 et NF F 58-001-1 : 2018 § 9.2.6.2.</p>	<p>The requirements apply to On track Machine and relates to clause 4.2.4.5.5 of Loc&Pas TSI 1302/2014.</p> <p>Agency :</p> <p>The clause 4.2.4.5.5 cover the requirements related to parking brake. France should justify why they maintain the rule in addition to TSI.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>6.2.2.1-Stationary noise impact, 6.2.2.2-Starting noise impact, 6.2.2.3-Pass-by noise impact</u></p> <p>Pour les engins de travaux, le niveau de bruit à considérer est uniquement lié au mode "circulation".</p>	<p>The requirements apply to On track Machine and relates to application of NOISE TSI 1304/2014 and section 2.3.1 (D) of Loc&Pas TSI 1302/2014</p> <p>Agency :</p>	<p>Not accepted National rule should be repealed</p>

National rules	Agency evaluation	Agency evaluation status
	<p>The requirement duplicates the section 2.3.1(D) of Loc&Pas 1302/2014 that already indicate that OTM is in the scope of the TSI only when:</p> <ul style="list-style-type: none"> — It is running on its own rail wheels, (..) <p>In addition the TSI NOISE 1304/2014 in its article 2 that the TSI NOISE shall apply to the rolling stock which falls within the scope of Commission Regulation (EU) No 1302/2014(..).</p>	
<p><u>7.2.2.4-Lamp controls</u> Matériel STI Loc&Pas 2011/291 (pas d'exigence sur le signal d'alerte lumineux). Recommandation pour le signal d'alerte lumineux feux clignotants : utilisation d'une fréquence de 120 cycles par minute, avec un temps d'allumage moyen, dans chaque cycle, égal au tiers de la durée totale du cycle (valeurs issues de la norme NF F 14-402 § 5.2 5.1 à 5.4). La STI Loc&Pas 1302/2014 (§ 4.2.7.1.4) laisse la possibilité d'utiliser d'autres systèmes, qui devront alors être documentés.</p> <p>Rule for OTM : EN 14033-1 : 2017 § 13.3.4</p>	<p>The requirements refer to clause 4.2.7.1.4 of Loc&Pas TSI 1302/2014.</p> <p>Agency : The rule "Blinking mode" and the recommendation related to the frequency is not a rule for vehicle authorisation, this is dealt with under the SMS of Railway undertaking. There could be many ways that does not require a technical change of a vehicle.</p> <p>Regarding the rule for OTM, EN provide technical solution where TSI define functional requirements. An applicant may use the EN standard as an harmonised standard but it cannot be mandated by a rule.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>9.5.1.2-External steps and handrails for shunting staff</u> Lorsque les marchepieds d'accès ne permettent pas à un agent de s'y tenir sans engager le gabarit, une inscription interdisant de s'y tenir pendant les déplacements est à apposer au droit de chaque marchepied concerné.</p>	<p>The requirement apply to On Track Machine and refers to clause 4.2.9.1.2.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency : The rule is not related to vehicle authorisation but more related to SMS of Railway Undertaking</p>	<p>Not accepted National rule should be repealed</p>
<p><u>9.5.3-On-board tools and portable equipment</u> Hors AMEC/AMM : il est rappelé que le conducteur doit avoir à sa disposition un certain nombre d'agrès, dont l'utilisation est prescrite dans la documentation d'exploitation.</p>	<p>Agency : As mentioned in the rule, it does not apply to vehicle authorisation.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>10.2.3-Passenger alarm</u> Engins de travaux possédant des cabines multiples occupées par du personnel : EN 14033-1 : 2017 § 14.3.2</p>	<p>The requirement apply to On Track Machine and relate to clause 4.2.9.1.2.2 of Loc&Pas TSI 1302/2014</p> <p>Agency : The clause 14.3.2 of EN 14033-1 deal with emergency exits of an OTM. The rule is not to be placed in the parameter 10.2.3 passenger alarm and is already fully covered by clause 4.2.9.1.2.2 of Loc&Pas TSI</p>	<p>Not accepted National rule should be repealed</p>
<p><u>10.2.4-Emergency lighting</u> Les cabines de conduite et les cabines occupées par du personnel en mode circulation sont équipées d'un éclairage de secours.</p>	<p>The requirement apply to On Track Machine and relate to clause 4.2.10.4.1 of Loc&Pas TSI 1302/2014</p> <p>Agency :</p>	<p>Not accepted National rule should be repealed</p>

National rules	Agency evaluation	Agency evaluation status
	The requirement is already fully covered by clause 4.2.10.4.1 of Loc&Pas TSI 1302/2014: "To provide protection and safety on board in the event of emergency the trains shall be equipped with an emergency lighting system."	
<u>13.2-Ferry transport</u> Voitures : fiches UIC 567 et 569 Wagons : fiche UIC 507 Engins de travaux : norme EN 14033-1 : 2017 § 6.3 Autres types de matériels : s'adresser à l'EPSF	This parameter is not covered by TSI, not on the authorisation scope and therefore not in the scope of ERA assessment. It will be decided at later stage with the Commission how to deal with these rules.	Not reviewed

5.12.2.4 Analysis of rules related to compatibility with TDS

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> SAM S 003	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : Relevant clauses(s) of SAM S003 are to be identified by France.	Accepted pending identification of relevant clause of SAM S003 Action FR : to indicate relevant clause of SAM S003
<u>8.4.2.1.2-Heating cable interference current</u> UIC 550	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : valid requirement	Accepted
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> SAM S 005, EN 50238 et CLC/TS 50238-3	The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency: Relevant clauses(s) of SAM S005 are to be identified by France	Accepted pending identification of relevant clause of SAM S005 Action FR : to indicate relevant clause of SAM S005
<u>8.4.2.3-Vehicule entrance impedance</u> <u>Véhicules à traction électrique</u> pour réseau à courant continu : SAM S 003 pour réseau à courant alternatif 25 kV : pas de règle	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Relevant clauses(s) of SAM S003 are to be identified by France.	Accepted pending identification of relevant clause of SAM S003 Action FR : to indicate relevant clause of SAM S003
<u>12.2.4.3-Metal and inductive components-free space between wheels</u> Détecteurs de passage (pédales électromécaniques, électroniques) : le matériel roulant ne doit pas comporter de pièces métalliques (autres que les boudins des roues) dans la zone de sensibilité des pédales électroniques définie dans la SAM S 005. La démonstration de conformité se fera selon la norme EN 50238.	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : Relevant clauses(s) of SAM S005 are to be identified by France	Accepted pending identification of relevant clause of SAM S005 Action FR : to indicate relevant clause of SAM S005
<u>12.2.4.5-Compatibility with fixed installations of CCS</u> SAM S 004, SAM S 801, SAM S 901, SAM F 101, SAM F 102, SAMI D 001	The requirement refers to clauses 4.2.3.3.1.1 and 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency : Relevant clauses(s) of SAM SXXX are to be identified by France	Accepted pending identification of

National rules	Agency evaluation	Agency evaluation status
Le demandeur pourra considérer le § 11.1 des conditions nationales particulières (annexe B) de l'EN 14033-1 en alternative à la SAM S 004. Les draisines ou engins assimilés des catégories 1, 2, 4 et 6 selon la norme EN 14033-1 : 2017 § 4.1 sont considérés comme n'assurant pas de façon régulière le fonctionnement des circuits de voie ("mauvais shunteurs"). Selon leur masse et le mode de freinage des essieux, ils pourront devoir être munis de systèmes d'aide au shuntage.		relevant clauses of SAM Action FR : to indicate relevant clause of SAMs

5.12.3 CCS onboard Subsystem

5.12.3.1 Requirements covering open points for Baselines 2 and 3

5.12.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature : RDD RDD : published		
	LoP version : New		
	If no, forecast		
Assessment status	Taken into account by MS : Yes		
Amount of remaining NRs in addition to latest TSIs	5		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	12.1.2.2-Other GSM-R requirements 12.2.3-Transitions 12.2.5.5-Ergonomic aspects of DMI	

5.12.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)


National rules	Agency evaluation	Agency evaluation status
<u>12.2.1-National on-board signalling systems</u> Rule for OTM Il est rappelé que les SAM E 901, S 702, S703, S 704, S706, S707 sont appelées dans l'annexe B de la norme EN 14033-1 : 2017.	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency: The requirements are in line with parameter 12.2.1.	Accepted

National rules	Agency evaluation	Agency evaluation status
<p>Pour l'application pour les engins de travaux de la SAM E 901, les deux précisions suivantes sont apportées :</p> <ul style="list-style-type: none"> - la brosse peut être escamotable (en mode travail uniquement) en cas d'interférence avec les outils de travail; - la brosse peut être installée à moins de 3,10 mètres du front de tamponnement. 		
<p><u>12.2.1-National on-board signalling systems</u> SAM S 702 , SAM S 706 , SAM S 707, SAM S 703, SAM E 901,SAM S 704</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency: The requirements are in line with parameter 12.2.1.</p>	Accepted

5.12.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.2.2-Other GSM-R requirements</u> "L'attestation de conformité devra spécifier la version des normes EIRENE. Sur LGV, pour les véhicules à grande vitesse, la commutation du canal radio est automatique. L'autonomie nominale de la radio est d'au moins trois heures, dont trente minutes en émission. La radio GSM-R est équipée de la fonction de déclenchement de l'alarme VACMA et de la fonction d'alerte radio (SAR), conformément à l'alinéa 2) du § 4.2.9.3.1 de la STI Loc&Pas 1302/2014. Les radios équipant les cabines de conduite doivent avoir une carte SIM fournie ou acceptée par le GI, opérateur national GSM-R. L'implantation de l'antenne et son raccordement au toroïr radio doivent garantir les performances réglementaires en émission et en réception. Voir le champ ""Description"" pour les événements redoutés à prendre en compte et leur probabilité d'occurrence. Description : "Enfin, les événements redoutés suivants sont à prendre en compte, avec la probabilité d'occurrence indiquée :</p> <ul style="list-style-type: none"> • en cas d'activation de l'alerte radio par le conducteurs, l'alerte radio n'est pas émise à l'antenne (taux : 10E-5/h) • en cas de réception d'une alerte radio, l'information ""alerte radio n'est pas transmise au conducteur (taux : 10E-5/h) 	<p>The clause contains a mixture of topics.</p> <p>“12.1.2.2-Other GSM-R requirements:The attestation of conformity shall specify the version of the EIRENE standards.” The NoBo certificate has to refer to the set of specifications, so this is an information but not a requirement. “On LGV, for high-speed vehicles, the switching of the radio channel is automatic.” It is not clear to what this is referring to. If this is related to the radio channels used for enhanced Railway Emergency Calls (eREC), which is an OPTIONAL feature available in France, indeed, this is for information. There is no requirement in the CCS TSI to support the optional function eREC. In fact, the trackside SHALL BE CONFIGURED to ensure that trains not supporting eREC will receive a regular REC when running in the area. If this sentence refers to eREC, only for information. If this refers to something else, please ask FR to clarify.</p> <p>“The nominal range of the radio is at least three hours, of which thirty minutes in emission.” Agency do not understand, Cab radios are installed in the dashboard of the cabin, and are plugged to the electric supply of the vehicle’s elements. If there is no power, the cab radio will not work, it is not a requirement in CCS TSI to have specific batteries for the cab radio. The sentence seems to refer to handhelds, which are not</p>	<p>Not accepted National rule should be modified</p> <p>Not accepted</p> <p>To be clarified by FR</p> <p>To be clarified by FR</p>

National rules	Agency evaluation	Agency evaluation status
	<p>mandated in the TSI, therefore, this sentence would be only for information, no requirement.</p> <p>“The GSM-R radio is equipped with the VACMA alarm function and the radio warning function (SAR) in accordance with § 4.2.9.3.1 (2) of the Loc & Pas 1302/2014 TSI.”</p> <p>The “VACMA” alarm function is not mandatory in the CCS TSI. In the Loc&Pas TSI, there is a requirement for the DSD:</p> <p><i>“The system shall have the information ‘lack of driver’s activity triggered’ available for being interfaced to other systems (i.e. the radio system)”</i></p> <p>But there is NO REQUIREMENT for the cab-radio to implement the interface. In case it is not implemented, and no connection to the DSD is available, an operational procedure could be put in place, to be covered under the RU SMS, to manage the manual establishment of the emergency call in case any event occurs to the driver. <u>This exported constraint cannot be accepted.</u></p> <p>“The radios on the driving cabs must have a SIM card provided or accepted by the IM, national operator GSM-R. “</p> <p>This is <u>not an NTR</u>. This will be checked in the route compatibility: in RINF, the IM will include the list of accepted SIMs. In principle, in case a SIM card has been issued by a GSM-R network that is not in this list, the RU shall ask the IM to include it. The IM shall, then, include in the GSM-R roaming agreements the GSM-R network as requested, and update RINF when this is done. This whole process is long (may take 1 year). In practice, if the SIM card on-board is not in the list, a solution has to be found between the RU and the IM. But this is not an NTR.</p> <p>“The installation of the antenna and its connection to the radio burner must guarantee the regulatory performance in transmission and reception.”</p> <p>Track – train – track communication topics should be covered by the RSC testing. In case the regulatory performance include the protection against interference (B1 mandatory) this is only acceptable for first authorisation and upgrade of the communication parts of the CCS on-board SS.</p>	<p>Not accepted</p> <p>Not accepted</p> <p>To be clarified by FR</p>

National rules	Agency evaluation	Agency evaluation status
	<p>“See the "" Description "" field for the dreaded events to take into account and their probability of occurrence.</p> <p>Description: "Finally, the following dreaded events are to be taken into account, with the probability of occurrence indicated:</p> <ul style="list-style-type: none"> • if the radio alert is activated by the driver, the radio alert is not transmitted on the air (rate: 10E-5 / h) • In case of reception of a radio alert, the information "" radio alert is not transmitted to the driver (rate: 10E-5 / h)” <p>Agency : there are no performance requirements in EIRENE for this. <u>These can be framed as RAM requirements, which in an open point in the CCS TSI, therefore, can be accepted.</u></p>	Accepted
<p><u>12.2.3-Transitions</u> SAM S 703, SAM E 901, SAM S 707, SAM S 706 Les principes de la transition aux frontières des Etats membres doivent être validés par les deux ANS. Le système de commutation utilisé lors de la transition aux frontières ne devra pas modifier les niveaux de sécurité, disponibilité, fiabilité exigés sur le réseau ferré national</p>	<p>Agency : Not so clear what are the real requirements for on-board (on top of the ESC tests). In case the requirement applies for ECS too: MS are obliged to implement the transition ETCS-ETCS (MS or level) and ETCS – Class B - ETCS TSI conform.</p>	Not accepted FR to further explain.
<p><u>12.2.5.5-Ergonomic aspects of DMI</u> La redondance des DMIs est recommandée. Voir la fiche UIC 612-01 ou la série de normes EN 16186.</p>	<p><i>“DMI redundancy is recommended. See UIC Leaflet 612-01 or the EN 16186 series of standard”</i></p> <p>The DMI is part of the black box, UIC leaflet opts. to switch the DMIs. Exported constraint. In addition, it is indicated “is recommended”. If it is a recommendation, it is not an NTR, it is for information and should go somewhere else (maybe Network Statement?).</p>	Not accepted National rule should be repealed
<p><u>12.2.5.xxxx</u> Draft SAM S711</p>	<p>Discussion ongoing with France: Meetings hold between the Agency and NSA FR were the content of SAM S711 version 1 was discussed. Following that meeting NSA FR sent to Agency version 2 of SAM S 711. The version 2 was reviewed by the Agency, the comments were sent to NSA FR.</p>  <p>SAM S 711 projet 20190222 (002)-HB.docx</p> <p><u>Action NSA FR :</u> To provide an updated SAM S711 To update RDD with SAM S711 revised</p>	Not accepted Discussion ongoing with FR

5.13 Member state HU

5.13.1 Summary of actions

Action	Responsible
HU to state its position regarding the ERA assessment	NSA HU
HU to publish the cleaned NRs in RDD	NSA HU
NSA HU and ERA to take into account the list of actions referred in the detailed assessment	NSA HU/ ERA

5.13.2 Rolling Stock Subsystem

5.13.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table, based on the rules published in RDD RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -
Amount of remaining NRs in addition to latest TSIs	34

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	2 parameters: 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.2.4- Psophometric current	Other directives covering : • EMC directive
Rules related to documentation	Parameters listed in section 3.2.4	1 parameter: 1.1-General documentation	Rule accepted with condition to be revised by adding a validity date 15/06/2020. Rule is not anymore acceptable after the transposition of directive 2016/797 and application of regulation 2018/545 that define the structure of the authorisation file.
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Other rules related to compatibility with network / legacy system	See subsection 2 below	5 parameters: 6.1.2.1-Crosswind effects 6.2.3.1-Head pressure pulses 6.2.3.2-Aerodynamic impact on passengers/materials on the platform 6.2.3.3-Aerodynamic impact on track workers 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameters	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	9 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.3-Interference current under the vehicle 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 8.4.2.3-Vehicle entrance impedance 12.2.4-Compatibility of rolling stock with CCS 12.2.4.1-Minimum axle distance 12.2.4.2-Minimum wheel diameter 12.2.4.3-Metal and inductive components-free space between wheels 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.13.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.13.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>2.1.2.2-Axle load and wheel load</u> OVSZ I.	The national rules refers to clause 4.2.3.3.1.1, Compatibility with train detection systems - axle load for 1520 mm of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. The document OVSZ.I covers all railway system, please precise the relevant chapter (5.2.1?) that cover the open point "minimal axle load" in related to train detection	Not accepted National Rule should be modified
<u>2.3-Passive safety</u> UIC 505-1 UIC 566 UIC 564-1 UIC 567	The national rules refers to clause 4.2.2.5, Passive Safety of Loc&Pas TSI 1302/2014. Agency: The open point 4.2.2.5 6) is dedicated to specific type of locomotive.	Not accepted National Rule should be modified

National rules	Agency evaluation / related open points	Agency evaluation status
UIC 625-7 UIC 617-5 UIC 651 EN 15273 EN 15227 EN 12663	The referenced standards do not cover the open point in TSI Only EN 15227 deals with passive safety. EN 15273 has 3 parts and are applicable to gauge: should be removed: does not cover OP. EN 12663 has two parts (Loc&Pas and wagons) and is not really dedicated to passive safety: does not cover OP. The applicable chapters of standards should be indicated to cover an OP. References to the different UIC does not cover the OP. Please clarify us the specific requirements to cover the OP.	
<u>3.2.1-Running safety and dynamics</u> UIC 510 UIC 518 UIC 518 UIC 530 MSZ EN 14363 MSZ EN 15686 MSZ EN 50215	The national rule refers to clauses 6.2.2.3 (4.2.3.5.2), Test conditions for on-track tests as set out in the EN 14363 are not always fully achievable - Track geometric quality and combinations of speed, curvature, cant deficiency (point 5.4.2 of EN 14363of WAG TSI 321/2013. Agency: The dedicated and applicable chapters of the referred EN standards and UIC leaflets should be precise and should cover only the OP. EN 50215 is not relevant as it cover generic list of tests to be performed. Please indicate what provisions/additional requirements are used to cover the OP. Please note that the open point in TSI WAG was closed in last revision voted in RISC of January and will enter into force in June 2019	Not accepted National Rule should be modified
<u>3.2.1-Running safety and dynamics</u> UIC 510-2 UIC 518 UIC 518-1 UIC 530-2 MSZ EN 12299 MSZ EN 14363 MSZ EN 15686 MSZ EN 50215	The national rule refers to clause The national rules refers to clauses 4.2.3.4.2, Running dynamic behaviour for 1520 mm track gauge system, Running dynamic behaviour for 1520 mm track gauge system of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. Rule is related to Loc&Pas Open point on 1520 mm lines in HU. EN 12299 is not relevant for running safety as it is related to ride comfort EN 50215 is not relevant as it cover generic list of tests to be performed. Please precise the requirements, and the related part(s) of the referred EN's and UIC's which cover exactly the OP.	Not accepted National Rule should be modified
<u>3.2.2-Equivalent conicity</u> UIC 518 UIC 519 MSZ EN 13715	The national rules refers to clauses 4.2.3.4.3, Running dynamic behaviour for 1520 mm track gauge system: equivalent conicity of Loc&Pas TSI 1302/2014. Agency:	Not accepted National Rule should be modified

National rules	Agency evaluation / related open points	Agency evaluation status
MSZ EN 14363 MSZ EN 15302	The set of standards mentioned do not really cover the open point Please precise the requirements, and the related part(s) of the referred EN's and UIC's which cover exactly the OP.	
<u>3.3.2-Wheelset (complete)</u> EN 13260 EN 15663 UIC 512 UIC 813 UIC 510 TSI CCS Axle shaft: EN 13103 EN 13261 UIC 515-3	The national rule refers to clauses 4.2.3.6.6, Variable gauge wheelsets - Assessment concerning the following requirement: The changeover mechanism of the variable gauge wheelset shall ensure the safe locking in the correct intended axial position of the wheel and any brake equipment attached of WAG TSI 321/2013. Agency: Please precise the requirements to cover exactly the OP in the EN and UIC. CCS TSI Reference can be removed as it does not cover this OP. When justified, the requirements for the axle shaft shall be moved to parameter 3.3.7-Axle shaft. Please note that the open point was closed in voted WAG TSI in January 2019 (4.2.3.6.6), TSI will enter into force un June 2019	Not accepted National Rule should be modified
<u>3.3.2-Wheelset (complete)</u> EN 13260 EN 15663 UIC 512 UIC 813 TSI CCS UIC 510-2 Axle shaft: EN 13103 EN 13104 EN 13261 UIC 515-3	The national rules refers to clause 4.2.3.5.2.3, Variable gauge wheelsets of Loc&Pas TSI 1302/2014. Agency: Precise the requirements to cover exactly the OP in the EN and UIC. CCS TSI Reference can be removed as it does not cover this OP. When justified, the requirements for the axle shaft shall be moved to parameter 3.3.7-Axle shaft. Please note that the open point was closed in voted Loc&Pas TSI in January 2019 TSI will enter into force un June 2019	Not accepted National Rule should be modified
<u>3.3.5-Sanding system</u> MSZ EN 15427 UIC 737-2	The national rule refers to clause 4.2.3.3.1.1, Compatibility with train detection systems – Isolating emissions: sand characteristics of Loc&Pas TSI 1302/2014. Agency: EN 15427 deals with flange lubrication and does not cover the OP and UIC 737-2 deals with "Measures to be taken to improve track circuits shunting sensitivity " and also does not cover the OP. Please provide the possible applicable requirements covering the identified open point	Not accepted National Rule should be modified

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>3.3.5-Sanding system</u> MSZ EN 15427 UIC 737-2</p>	<p>The national rule refers to clause 4.2.3.3.1.1, Compatibility with track circuits – Isolating emission: maximum amount of sand (for 1520 mm system of Loc&Pas TSI 1302/2014. Agency: EN 15427 deals with flange lubrication and does not cover the OP and UIC 737-2 deals with "Measures to be taken to improve track circuits shunting sensitivity " and also does not cover the OP. Please provide the possible applicable requirements covering the identified open point</p>	<p>Not accepted National Rule should be modified</p>
<p><u>4.7.3-Magnetic track brake</u> UIC 541-06</p>	<p>The national rules refers to clause 4.2.3.3.1.2, Rolling stock characteristics for compatibility with train detection system based on axle counters –EMC of Loc&Pas TSI 1302/2014. Agency: The identified OP concerns the use of the MTB and not the design. OP is in § 3.2.3 of ERA_ERTMS_033281 "The use of magnetic and/or eddy current brakes is: [open point]". The reference to the UIC does not cover the OP and should be removed. Otherwise reference to EN 16207 may be done.</p>	<p>Not accepted National Rule should be modified</p>
<p><u>4.7.4-Eddy current track brake</u> No requirements Compatibility with track side instalations must be checked</p>	<p>The national rules refers to clauses 4.2.3.3.1.2 - Rolling stock characteristics for compatibility with train detection system based on axle counters - EMC of Loc&Pas TSI 1302/2014. Agency: When no requirements exist for this topic, the line shall be removed Parameters to be checked and admissible thresholds/ranges are expected. Also the acceptable test methodology may be provided.</p>	<p>Not accepted National Rule should be repealed</p>
<p><u>4.7.4-Eddy current track brake</u> No requirements Compatibility with track side instalations must be checked</p>	<p>The national rules refers to clauses 4.2.4.8.3, Braking system independent of adhesion conditions: eddy current track brake of Loc&Pas TSI 1302/2014. Agency: When no requirements exist for this topic, the line shall be removed. Is Eddy current brake authorised on the HU network? When a vehicle is equipped with eddy current brakes it is required to have the possibility to be switched off? Other specific conditions are applicable?</p>	<p>Not accepted National Rule should be repealed</p>
<p><u>10.1-Fire protection concept and protection measures</u> UIC 642 UIC 564-2</p>	<p>The national rule refers to clause 4.2.10.3.4, Fire Containment and Control Systems, Assessment procedure of efficiency for controlling fire and smoke developed by CEN according to a request</p>	<p>Not accepted National Rule should be modified</p>

National rules	Agency evaluation / related open points	Agency evaluation status
EN 45545 EN 54-7 EN 50155 OVSZ I.	for standard issued by ERA of Loc&Pas TSI 1302/2014. Agency: The Loc&Pas TSI covers this point in § 4.2.10.3.4. The EN 45545-2:2013 is referenced in the requirements of LOC PAS TSI 1302 2014 related to this parameter. The EN 45545-4:2013, EN 45545-6:2013 is referenced in the application guide of LOC PAS TSI 1302 2014 for clauses related to this parameter and therefore its application is not mandatory. The identified open point is limited to: Conformity assessment of FCCS other than full partitions Please refer to the application guide clause 4.2.10.3.4 for more information. Please revise the rule and provide the requirements to be applied in the scope of the open point. Otherwise, please revise the rule and remove the rule/the applicability for vehicles covered by TSIs.	

5.13.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.13.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>6.1.2.1-Crosswind effects</u> MSZ EN 14067	The national rules refers to clauses 4.2.6.2.4 of Loc&Pas TSI 1302/2014. Agency: The EN 14067-6:2010 is referenced in the requirements of LOC PAS TSI 1302 2014 related to this parameter.	Not accepted National Rule should be modified
<u>6.2.3.1-Head pressure pulses</u> EN 14067 series	The national rules refers to clauses 4.2.6.2.2 of Loc&Pas TSI 1302/2014. Agency: The EN 14067-4:2005 +A1:2009 is referenced in the requirements of LOC PAS TSI 1302 2014 related to this parameter.	Not accepted National Rule should be modified
<u>6.2.3.2-Aerodynamic impact on passengers/materials on the platform</u> MSZ EN 14067	The national rules refers to clause 4.2.6.2.1 Loc&Pas TSI 1302/2014. Agency: The EN 14067-4:2005 +A1:2009 is referenced in the requirements of LOC PAS TSI 1302 2014	Not accepted National Rule should be modified

National rules	Agency evaluation	Agency evaluation status
	related to this parameter.	
<u>6.2.3.3-Aerodynamic impact on track workers</u> MSZ EN 14067	The national rules refers to clause 4.2.6.2.1 of Loc&Pas TSI 1302/2014. Agency: The Loc&Pas TSI covers this topic in clause 4.2.6.2.1. The EN 14067-4:2005 +A1:2009 is referenced in the requirements of LOC PAS TSI 1302 2014 related to this parameter.	Not accepted National Rule should be modified
<u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> OVSZ I.	The requirement relates to clause 4.2.8.2.7 of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. The document OVSZ.I covers all railway system, please provide the applicable references (chapter, article, etc.).	Not accepted National Rule should be modified

5.13.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements.

5.13.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> OVSZ I.	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. P-6876/2004 is relevant. Please provide the applicable references in the OVSSZ I (chapter, article, etc.).	Not accepted National Rule should be modified
<u>8.4.2.1.3-Interference current under the vehicle</u> OVSZ I.	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. Please provide the applicable references in the OVSSZ I (chapter, article, etc.).	Not accepted National Rule should be modified
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> OVSZ I.	The national rule refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. P-6876/2004 is relevant. The document OVSZ.I covers all railway system, please provide the applicable references (chapter, article, etc.). No open point in the CCS TSI interface document anymore - Rule is possible if installed axle	Not accepted National Rule should be modified

National rules	Agency evaluation	Agency evaluation status
	counters are not mentioned in Annex A of EN 50238-3	
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> OVSZ I.	<p>The national rule refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency: National Rule should be modified. P-6876/2004 is relevant. The document OVSZ.I covers all railway system, please provide the applicable references (chapter, article, etc.). No open point in the CCS TSI interface document anymore - Rule is possible if installed axle counters are not mentioned in Annex A of EN 50238-3</p>	<p>Not accepted</p> <p>National Rule should be modified</p>
<u>8.4.2.3-Vehicle entrance impedance</u> OVSZ I.	<p>The national rules refers to clauses 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: National Rule should be modified. The document OVSZ.I covers all railway system, please provide the applicable references (chapter, article, etc.).</p>	<p>Not accepted</p> <p>National Rule should be modified</p>
<u>12.2.4-Compatibility of rolling stock with CCS</u> <u>Trackside</u> OVSZ I.	<p>Agency: National Rule should be modified. Please provide the applicable references in the OVSSZ I (chapter, article, etc.).</p>	<p>Not accepted</p> <p>National Rule should be modified</p>
<u>12.2.4.1-Minimum axle distance</u> OVSZ I.	<p>The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency: National Rule should be removed. The parameter is related to the functioning of axle counters, for $v > 350$ km/h - see basic parameter description. Please provide the applicable references in the OVSSZ I (chapter, article, etc.).</p>	<p>Not accepted</p> <p>National Rule should be modified</p>
<u>12.2.4.2-Minimum wheel diameter</u> OVSZ I.	<p>The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency: National Rule should be removed. The parameter is related to the functioning of axle counters, for $v > 350$ km/h - see basic parameter description. Please explain the relevance of the rule considering also the identified OP. Do you have operating speeds train > 350 km/h in Hungary? Please note that OP closed in version 4 of the interface document.</p>	<p>Not accepted</p> <p>National Rule should be modified</p>

National rules	Agency evaluation	Agency evaluation status
	Please provide the applicable references in the OVSSZ I (chapter, article, etc.).	
<p><u>12.2.4.3-Metal and inductive components-free space between wheels</u> MSZ EN 50238 TSI CCS Compatibility must be checked.</p>	<p>The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. Please provide the applicable references in the OVSSZ I (chapter, article, etc.). Please specify if EN 50238-3 is applicable for all vehicles (see/adjust also indication in columns BK-BO), and reference the applicable section(s).</p>	<p>Not accepted National Rule should be modified</p>
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> OVSZ I.</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. Please define precisely your requirement and/or provide the applicable references in the OVSSZ I (chapter, article, etc.) for the identified OP.</p>	<p>Not accepted National Rule should be modified</p>
<p>12.2.4.5-Compatibility with fixed installations of CCS OVSZ I.</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. Please define precisely your requirement and/or provide the applicable references in the OVSSZ I (chapter, article, etc.) for the identified OP.</p>	<p>Not accepted National Rule should be modified</p>
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> OVSZ I.</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. Please define precisely your requirement and/or provide the applicable references in the OVSSZ I (chapter, article, etc.) for the identified OP.</p>	<p>Not accepted National Rule should be modified</p>
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> OVSZ I.</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: National Rule should be modified. Please define precisely your requirement and/or provide the applicable references in the OVSSZ I (chapter, article, etc.) for the identified OP.</p>	<p>Not accepted National Rule should be modified</p>

5.13.3 CCS onboard Subsystem

5.13.3.1 Requirements covering open points for Baselines 2 and 3

No requirements.

5.13.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature: Excel table, based on the rules published in RDD RDD: ready for upload in RDD		
	LoP version: New list as in Decision 2015/2299/EU		
	-		
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -		
Amount of remaining NRs in addition to latest TSIs	2		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1		
ETCS and GSM-R	Parameters listed in section 3.2.1		

5.13.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.2.1-National on-board signalling systems</u> OVSZ I. EN 50126 EN 50128 EN 50129	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI.</p> <p>Agency: National Rule should be modified.</p> <p>The identification of class B signalling systems in use are missing (only listed in the non TSI rule) Hungary has officially notified only EVM see ERA_TD_2011-11 Please indicate the document(s) containing the EVM specifications P-7013/2002-I., modified by Gy.1582-1687/2006. (EVM 120) and Gy.1582-2277/2008. (EVM 160) are relevant - please confirm and revise the rule accordingly.</p>	Not accepted National Rule should be modified

5.13.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<u>12.2.2-STM requirements</u> OVSZ I. EN 50126 EN 50128 EN 50129	<p>The national rules refers to clauses 6.2.4.2, The Specific Transmission Module (STM) of CCS TSI.</p> <p>Agency: National Rule should be modified.</p>	Not accepted National Rule should be modified

National rules	Agency evaluation	Agency evaluation status
	<p>This parameter is for notification of requirements when using the class B system as STM(s) - we were not able to identify those in the referenced documents.</p> <p>Please confirm the relevance of P-5600/2008 and revise the rule accordingly.</p>	

5.14 Member state HR

5.14.1 Summary of actions

Action	Responsible
HR to publish the cleaned NRS in RDD	HR
HR and ERA to take into account the list of actions referred in the detailed assessment	HR/ ERA
HR to notify the existing rules related to compatibility with TDS or to confirm that there are no such rules applicable.	HR
HR to notify the existing rules related to CCS and Radio class B systems (legacy systems) or to confirm that there are no such rules applicable.	HR
HR to notify the existing rules related to ETCS and GSM-R or to confirm that there are no such rules applicable.	HR

5.14.2 Rolling Stock Subsystem

5.14.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table RDD: ready for upload in RDD
	LoP version : New list as in Decision 2015/2299/EU
	-
Assessment status	On going, NSA HR to state its position on the ERA assessment Taken into account by MS : see assessment below
Amount of remaining NRs in addition to latest TSIs	1

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	0 parameters	
Rules related to documentation	Parameters listed in section 3.2.4	0 parameters	
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	
Other rules related to compatibility with network / legacy system	See subsection 2 below	0 parameters	

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	1 parameter: 3.3.5-Sanding system	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	0 parameters	NSA HR to notify the existing rules or to confirm there are no such rules applicable.
Existence of non mandatory rules	-	0 parameters	

5.14.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.14.2.2.1 Requirements covering open points

No requirements

5.14.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.14.2.2.3 Other rules related to compatibility with existing network/legacy system

No requirements

5.14.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<p><u>3.3.5-Sanding system</u> Ordinance on railway vehicles (Official Gazette of the Republic of Croatia nr. 121/15) art. 20.: par. 1. g)</p>	<p>The requirement refers to clause 7.4 of Loc&Pas TSI 1302/2014.</p> <p>Agency: According to the quoted reference it is mandatory for towing vehicles and vehicles with a driving cab to be equipped with sanding system. The rule can be maintained until chapter 7.4 is reviewed to include this specific condition for Croatia. NSA HR will have to present a request for specific conditions.</p> <p>NSA HR: NSA HR considers the rule important because of big rail track slope near port of Rijeka (26‰). Obligation to have the sanding system on traction vehicle/train means better braking efficiency.</p>	<p>Accepted</p> <p>NSA HR will have to present a request for specific conditions.</p> <p>The rule can be maintained until chapter 7.4 is reviewed to include this specific condition for Croatia.</p>

5.14.2.4 Analysis of rules related to compatibility with Train Detection System

No requirements

5.14.3 CCS onboard Subsystem

5.14.3.1 Requirements covering open points for Baselines 2 and 3

No requirements

5.14.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	No requirement		
	Nature: -		
	RDD: -		
	LoP version: -		
-			
Assessment status	No rules available for this aspects		
Amount of remaining NRs in addition to latest TSIs	0		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	0 parameters	NSA HR to notify the existing rules or to confirm there are no such rules applicable.
ETCS and GSM-R	Parameters listed in section 3.2.1	0 parameters	NSA HR to notify the existing rules or to confirm there are no such rules applicable.

5.14.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

No requirements

5.14.3.2.2 Analysis of rules for ETCS and GSM-R

No requirements

5.15 Member state IE

5.15.1 Summary of actions

N°	Action	Responsible
	IE to provide the national rules on top of TSIs	NSA IE

5.16 Member state IT

5.16.1 Summary of actions

Action	Responsible
IT to state its position regarding the ERA assessment. According to the information received from NSA IT, their position may be available mid of September 2019	NSA IT
IT to publish the cleaned NRs in RDD	NSA IT
NSA IT and ERA to take into account the list of actions referred in the detailed assessment	NSA IT/ ERA

5.16.2 Rolling Stock Subsystem

5.16.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table, based on the rules published in RDD RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -
Amount of remaining NRs in addition to latest TSIs	89

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	6 parameters: 6.2.1.3-Chemical and particulate emission 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.2.4-Psophometric current 8.4.3.2-Induced interference current/voltage 8.4.3.3-Psophometric current	Other directives covering : <ul style="list-style-type: none"> • Environment impact, • EMC directive
Rules related to documentation	Parameters listed in section 3.2.4	4 parameters: 1.1-General documentation 1.2.1-Maintenance instructions 1.2.2-The maintenance design justification file 1.4-National requirement for testing	

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules not retained in TSIs	Parameters listed in section 3.2.5	2 parameters: 4.7.1.2-Brake discs 4.7.1.3-Brake pads	
Other rules related to compatibility with network / legacy system	See subsection 2 below	37 parameters: 2.1.3-Joining technology 2.2.2-Characteristics of rescue coupling 3.1-Vehicle gauge 3.2.1-Running safety and dynamics 3.3.2-Wheelset (complete) 3.3.8-Axle bearing condition monitoring 3.4-Limit of maximum longitudinal positive and negative acceleration 4.1-Functional requirements for braking at train level 4.2.2-Reliability of traction/braking interlocking 4.3-Brake system - Recognised architecture and associated standards 4.4.1-Emergency braking command 4.5.1-Emergency braking performance 4.7.1.1-Brake blocks 4.7.2-Dynamic brake linked to traction 4.7.3-Magnetic track brake 4.7.4-Eddy current track brake 6.2.3.4-Ballast pick-up and projection onto neighbouring property 7.2.1-Vehicle marking 7.2.4-Brackets 8.2.1.1-Specific requirements for power supply 8.2.1.3-Regenerative braking 8.2.2.1-Pantograph overall design 8.2.2.8-Pantograph lowering 8.3.3-High voltage components 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 9.1.4-Desk ergonomics 9.2.2-Other health and safety requirements 9.3.1-Speed indication 9.3.2-Driver display unit and screens 9.3.4-Driver supervision 9.5.3-On-board tools and portable equipment 9.6-Recording device 10.1-Fire protection concept and protection measures 10.2.2-Rescue services' information, equipment and access 10.3-Emergency running capabilities 13.1-Specific items to place on-board 13.2-Ferry transport	Detailed analysis per parameter provided in section 2 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameters	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	6 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.1.3-Interference current under the vehicle 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 8.4.2.3-Vehicle entrance impedance 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.16.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.16.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.3.4-Wheel/rail interaction influencing systems</u> I dispositivi di lubrificazione di bordini devono essere conformi alla norma EN 15427 (vedi anche requisito di cui al parametro 6.2.1.3)	The national rules refers to clause 7.5.3.1, Track interaction (clause 4.2.3) - Flange or track lubrication of Loc&Pas TSI 1302/2014. Agency: Rule is acceptable if modified. Please clarify if is mandatory to have such a device for authorisation. Please confirm the identified Open Point: LOC PAS TSI 1302 2014 - 7.5.3.1, Track interaction (clause 4.2.3) - Flange or track lubrication. See column AK and marking in column BE. Rule possible acceptable after clarification discussion.	Accepted
<u>3.3.5-Sanding system</u> Le caratteristiche della sabbia sono riportate nell'Allegato A del Decreto ANSF n. 1/2016, allegato 1a/1c (punto in sospenso della specifica della STI CCS - documento tecnico ERA/ERTMS/033281 Rev.3.0 – Punto 3.1.4.2) - vedere il campo "Description" Description: Le caratteristiche della sabbia sono riportate nell'allegato A del NRD, ovvero: 1. Composizione La composizione della sabbia deve essere tale che la proporzione dei grani di diametro fra 0,6 e	The national rule refers to open point 4.2.3.3.1.1, Compatibility with train detection systems – Isolating emissions: sand characteristics of Loc&Pas TSI 1302/2014.	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
<p>0,1 mm deve essere superiore o uguale all'85%. Le percentuali dei limiti ammissibili per categorie della dimensione dei grani è fissata nel modo seguente: Diametro dei grani (mm) Percentuali dei limiti ammissibili 1,5 ÷ 0,6 ≤ 4% 0,6 ÷ 0,4 ≤ 65% 0,4 ÷ 0,3 Fino al 100% 0,3 ÷ 0,2 Fino al 100% 0,2 ÷ 0,15 ≤ 25% 0,15 ÷ 0,1 ≤ 5% 0,1 ÷ 0,07 ≤ 3% La percentuale di argilla contenuta nella composizione suddetta non deve superare il 2% ed il grado di umidità non deve essere superiore allo 0,5%. 2. Imballaggio L'imballaggio della sabbia deve garantire la protezione del contenuto dall'umidità durante la fase del trasporto e dello stoccaggio.</p>		

5.16.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.16.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>2.1.3-Joining technology</u> Linee guida ANSF per il riconoscimento degli Organismi di Certificazione delle Aziende che operano nel settore della saldatura dei rotabili ferroviari o parti di essi in conformità alle norme della serie UNI EN 15085 – Revisione del 6/5/2009 e s.m.i.</p>	<p>The national rule refers to clauses :</p> <ul style="list-style-type: none"> - 4.2.2.2 of WAG TSI 321/2013 and - 4.2.3.5.1, 4.2.2.4 of Loc&Pas TSI 1302/2014. <p>Agency: The presented requirement seems to regulate process of recognition/accreditation of certification bodies. This is not part of the authorisation process.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>2.2.2-Characteristics of rescue coupling</u> L'utilizzo delle interfacce deve comunque consentire (eventualmente con velocità ridotta) sia il traino che la spinta del veicolo e non deve comportare limitazione di circolazione nelle curve di raggio ≥ 110 m</p>	<p>The national rules refers to clauses 5.3.3 and 4.2.2.2.4 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The characteristics of the rescue couplers are covered in the TSI Loc&Pas clauses 5.3.3 and 4.2.2.2.4. Please clarify your requirement. It is a condition applicable for the complete network or is limited to some parts of it. Is the rule related to siding?</p>	<p>Under review</p>
<p><u>3.1-Vehicle gauge</u> Il calcolo della sagoma deve essere svolto con</p>	<p>The national rule refers to clauses 4.2.3.1 and 4.2.8.2.9.2 of Loc&Pas TSI 1302/2014.</p>	<p>Not accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>riferimento alla configurazione "Italia" del veicolo, che tiene conto degli equipaggiamenti STB installati (antenne sopra e sotto cassa)</p> <p>In merito alla geometria del pantografo sono ammessi esclusivamente i seguenti tipi:</p> <ul style="list-style-type: none"> - 1450 (compatibilità con l'intera rete 3kV e 25 kV); - 1600 (compatibilità con l'intera rete 25 kV); - 1600 con corni isolati (compatibilità parziale con la rete 3 kV). 	<p>Agency: Rules should be modified. The TSI Loc&Pas covers the topic - clauses 4.2.3.1, Gauging, 4.2.8.2.9.2, Pantograph head geometry (IC level). There are no identified OPs TSI requires that the compliance of rolling stock with reference profile is checked in accordance to the choosen profile(s) by the applicant. This value (s) are registred in the vehicle technical file. TSI refers to EN 15273-2. Information related to the type of pantograph should be addressed to the relevant parameters below, 1450 mm already covered by Specific case 7.3.2.14 Italy. ERA to confirm its position regarding the 1600 mm pantograph</p>	<p>National rule should be modified</p>
<p><u>3.2.1-Running safety and dynamics</u></p> <ul style="list-style-type: none"> • Sulla IFN sono definiti i seguenti ranghi di velocità in funzione del valore di accelerazione non compensata (anc): - Rango A anc=0,6 m/s² - Rango B anc=0,8 m/s² - Rango C anc=1 m/s² - Rango P anc=1,8 m/s² <p>In relazione alle sue caratteristiche dinamiche un veicolo può essere autorizzato a circolare esclusivamente ad uno dei citati ranghi di velocità.</p> <ul style="list-style-type: none"> • I veicoli autorizzati a circolare a rango P devono essere dotati di un dispositivo di assetto cassa che limiti l'accelerazione in cassa a valori non superiori a 1m/s², al netto dell'effetto dovuto alla souplesse. 	<p>The national rule refers to clause 4.2.3.4.2 of Loc&Pas TSI 1302/2014</p> <p>Agency: The TSI clause 4.2.3.4.2 refer to EN 143636 covers rules related to running dynamic behaviour, applicant defines the combination of speed and cant definciency. and test the vehicle for that operationnal enveloppe, the EN 14363 does not deal with the operational enveloppe expressed by combination of speed ranges and uncompensated lateral acceleration.</p>	<p>Not accepted</p> <p>National rule should be modified</p>
<p><u>3.2.1-Running safety and dynamics</u></p> <p>Sulla IFN sono definiti i seguenti ranghi di velocità in funzione del valore di accelerazione non compensata (anc):</p> <ul style="list-style-type: none"> - Rango A anc=0,6 m/s² - Rango B anc=0,8 m/s² - Rango C anc=1 m/s² <p>In relazione alle sue caratteristiche dinamiche un veicolo può essere autorizzato a circolare esclusivamente ad uno dei citati ranghi di velocità</p>	<p>The national rule refers to clause 4.2.3.4.2 of Lo&Pas TSI 1302/2014.</p> <p>Agency: The TSI clause 4.2.3.4.2 refer to EN 143636 covers rules related to running dynamic behaviour, applicant defines the combination of speed and cant definciency. and test the vehicle for that operationnal enveloppe, the EN 14363 does not deal with the operational enveloppe expressed by combination of speed ranges and uncompensated lateral acceleration.</p>	<p>Not accepted</p> <p>National rule should be modified</p>
<p><u>3.3.2-Wheelset (complete)</u></p> <p>Devono essere forniti tutti i dati previsti dalla norma EN 15313 per garantire la tracciabilità della manutenzione delle sale montate</p>	<p>The national rule refers to clause 4.2.3.5.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Wheelset requirements are covered in the Loc&Pas TSI clause 4.2.3.5.2 and associated clauses. The EN15313 is refered in TSi loc&Pas application</p>	<p>Not accepted</p> <p>National rule should be repealed</p>

National rules	Agency evaluation	Agency evaluation status
	as voluntary standard for TSI clause 4.2.3.5.2.1, voluntary standard in TSI cannot made mandatory in NRs. Aspect related to maintenance please see comments on parameters 1.2	
<p><u>3.3.8-Axle bearing condition monitoring</u> All'atto della richiesta di autorizzazione di messa in servizio il richiedente dovrà dichiarare la conformità o meno del corpo boccola al seguente requisito, al fine di riportarla nel provvedimento autorizzativo, per verificarne la compatibilità con i rilevatori di vecchia generazione presenti ancora nella rete Ferroviaria Italiana:</p> <ul style="list-style-type: none"> - parte del corpo boccola posizionato nella zona compresa tra i valori di scartamento di 2060 mm e 2210 mm; - un'altezza dal piano del ferro compresa tra 250 e 500 mm che garantisca la lettura del lato inferiore del corpo boccola, compreso fra i suddetti valori di scartamento, dal basso verso l'alto da un dispositivo fissato lateralmente alla rotaia; - assenza in detta parte di elementi che possono ostacolare la rilevazione; - zona libera in senso longitudinale di ± 50 mm rispetto all'asse del corpo boccola. 	<p>The national rule refers to clause 4.2.3.3.2.2, of Loc&Pas TSI 1302/2014.</p> <p>Agency: Rule relates to compatibility with track side HABD 4.2.3.3.2.2 of Loc&Pas TSI. IT to confirm if EN 15437-1 is covering the case mentioned here or not? Specific case might be needed - to be confirmed by IT</p>	Under review
<p><u>3.4-Limit of maximum longitudinal positive and negative acceleration</u></p> <ul style="list-style-type: none"> • L'accelerazione massima deve essere indicata nel technical file e nell'attestazione di conformità. • Il richiedente dell'AMIS deve consultarsi con GI interessato per eventuali restrizioni così come indicato nel Registro dell'Infrastruttura (RINF). 	<p>The national rules refers to clause 4.2.4.5.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: This parameter is covered by clause 4.2.4.5.1 of Loc&Pas TSI ==> the maximum deceleration is registered in ERATV (parameter 4.7.1 Maximum average deceleration) ==> the rule related to RINF, is more related to route compatibility check (see annex D1 TSI voted)</p>	Not accepted National rule should be repealed
<p><u>4.1-Functional requirements for braking at train level</u> In tutti gli ambiti di "Sicurezza (safety)" relativi alla frenatura si applicano prioritariamente la norma EN 50126 e, per quanto riguarda le funzionalità realizzate via software, la norma EN 50128. È consentita anche l'applicazione di altre norme, comparabili con le norme EN 50126 e EN 50128</p>	<p>The national rule refers to clauses 4.2.4.2.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency: TSI Loc&Pas clauses 4.2.4.2.2. and 6.2.3.5 cover such aspect. EN50126 is called in application guide of TSI as a voluntary standard and provides a methodology for safety studies</p>	Not accepted National rule should be repealed
<p><u>4.1-Functional requirements for braking at train level</u></p> <ul style="list-style-type: none"> • Dispositivi che realizzano la modifica automatica degli sforzi di frenatura in funzione della velocità devono potere essere testati per 	<p>The national rule refers to clauses 4.2.4.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency:</p>	Not accepted National rule should be modified

National rules	Agency evaluation	Agency evaluation status
<p>verificarne l'efficienza ai fini della prestazione di frenatura.</p> <ul style="list-style-type: none"> • In riferimento alla Condotta Generale, Condotta Principale e Cilindri del Freno, la classe di precisione dei manometri deve essere conforme a quanto previsto dalla fiche UIC 612-0. • ESTB_001: il veicolo deve rendere disponibile per il sistema di protezione della marcia, un sistema che consenta la diminuzione della velocità del treno prima dell'eventuale intervento della frenatura d'urgenza. Tale sistema, atto a ridurre la velocità, non deve necessariamente agire sulla frenatura pneumatica: per i veicoli elettrici può essere sufficiente la frenatura di natura elettrica mentre per i veicoli non elettrici può essere adottata anche una soluzione tipo "freno motore". 	<p>NSA IT to justify the rule; rules related to braking are fully covered by TSI clauses 4.2.4</p>	
<p><u>4.2.2-Reliability of traction/braking interlocking</u> I mezzi di trazione con sistemi di frenatura del tipo UIC devono essere dotati di un dispositivo di taglio della trazione in caso di riduzione della pressione in condotta generale a valori inferiori a 3,5 bar (per mezzi di trazione si intendono le unità valutate in composizione bloccata o predefinita e le locomotive valutate per l'esercizio generale, così come previsto dalla STI Loc&Pas)</p>	<p>The national rules refers to clauses 6.2.3.5 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. It seems redundant with the TSI requirements - please clarify the requirements in addition to the TSI.</p>	<p>Not accepted National rule should be modified</p>
<p><u>4.3-Brake system - Recognised architecture and associated standards</u> Per le locomotive (unità progettate per trainare carri merci o vetture passeggeri) valutate per l'esercizio generale, con un sistema frenante tipo UIC provvisto di un solo distributore, la prestazione del freno diretto deve essere almeno equivalente a quella del freno continuo</p>	<p>The national rule refers to clauses : - Annex C of WAG TSI 321/2013 and - 4.2.4.3 of Loc&Pas TSI 1302/2014. Agency: TSI Loc&Pas clause 4.2.4.3 and 4.2.4.5 covers the NR mentioned</p>	<p>Not accepted National rule should be repealed</p>
<p><u>4.4.1-Emergency braking command</u> Requisiti E_002, E_003, E_004, E_005, E_006: per il dettaglio vedi il campo 'Description'. Description: • E_002 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il richiedente l'AMIS deve svolgere l'analisi del rischio ed individuare le eventuali mitigazioni a fronte dell'hazard "spezzamento treno" considerando anche il caso di guasto safety critical che si presenti in modalità SL. • E_003 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il comando di frenatura inviato dal CCS al sistema frenante deve essere attuato mediante un dispositivo di</p>	<p>The national rules refers to clauses 4.2.4.4.1 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. Too many requirements in the parameter. For each of the requirements a rule should be created and associated to the appropriate parameter. There is no OP or specific case in the Loc&pas TSI § 4.2.4 for the braking system. Please provide (upload in RDD) the detailed content of the referenced requirements. Please confirm/clarify if the requirements are limited to the vehicles equipped only with the indicated CCS on boards Provisional translation added in the Description EN</p>	<p>Not accepted National rule should be modified</p>

National rules	Agency evaluation	Agency evaluation status
<p>interfaccia con caratteristiche di ridondanza, ad esempio mediante due elettrovalvole in modo che la disalimentazione di almeno una delle due provochi la scarica della condotta generale.</p> <ul style="list-style-type: none"> • E_004 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Qualsiasi avaria al dispositivo di interfaccia con il sistema frenante deve provocare lo scarico della condotta generale. • E_005 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il dispositivo di interfaccia con il sistema frenante deve garantire che il tempo necessario per ridurre la pressione in condotta generale (misurata in corrispondenza del dispositivo di interfaccia stesso) da 5 a 3,5 bar, non superi i 450 ms. • E_006 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): all'atto dell'accensione, deve essere verificato che la frenatura comandata dal sistema di protezione della marcia, sia attuata dall'impianto frenante in accordo alle prestazioni richieste dal requisito E_005. 	<p>E_002 - not clear if it is in the scope of authorisation or is related to operation (SMS of the RU) - please clarify</p> <p>E_003, E_004 - is a reliability requirement? please confirm. What is the justification of such requirement in addition to the TSI?</p> <p>E_005 What is the justification of such requirement in addition to the TSI?</p> <p>E_006 - seems a requirement for preparation of the train - SMS not authorisation please confirm.</p>	
<p>4.5.1-Emergency braking performance È necessario dare evidenza degli spazi di arresto in caso di frenatura di emergenza, per intervento del sistema di protezione della marcia dei treni, nelle seguenti condizioni:</p> <ul style="list-style-type: none"> - velocità iniziale pari a 30 km/h; - pendenza pari a 0‰ ed a 35‰; - aderenza degradata e non; - degni ammessi del sistema frenante (isolamenti carrelli, avaria sistemi di pesatura, avaria stadi pressione, etc.). <p>È possibile dimostrare quanto sopra con specifiche prove in linea, nel rispetto di quanto previsto dalla Fiche UIC 544-1 e la EN 15734-2 (aderenza non degradata) e dalla Fiche UIC 541-05 e EN 15595 (aderenza degradata) per quanto applicabili, e/o mediante opportuni calcoli validati.</p>	<p>The national rules refers to clause 6.2.3.8 Loc&Pas TSI 1302/2014.</p> <p>Agency: The rule mentioned here is covered by TSI Loc&Pas clauses : 4.2.4.5.2 and 6.2.3.8 that refers to EN 14531-1:2005 5.3.3,5.12, 5.3.1.4, 5.11.3</p>	<p>Not accepted</p> <p>National rule should be repealed</p>
<p>4.7.1.1-Brake blocks</p> <ul style="list-style-type: none"> • I portasuole / portaceppi devono essere dotati di appositi dispositivi per evitare la perdita in linea delle guarnizioni e/o ceppi del freno. • UIC 542. 	<p>Agency: Rule should be modified. The provided requirements are not for the brake blocks. Please provide the justification for the requirement.</p>	<p>Not accepted</p> <p>National rule should be modified</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>4.7.2-Dynamic brake linked to traction</u> Vedi anche requisito corrispondente al parametro 8.4.2.1.4 Description: Per i mezzi d'opera, nel caso di applicazione del §4.2.4.7 della STI Loc&Pas</p>	<p>The national rules refers to clauses 4.2.4.7 of Loc&Pas TSI 1302/2014. Agency: No rule mentioned, reference to 8.4.2.1.4 is not relevant here as 8.4.2.1.4 refers to Harmonic characteristics and related overvoltages on the overhead contact line</p>	<p>Not accepted National rule should be modified</p>
<p><u>4.7.3-Magnetic track brake</u> • Sull'IFN è consentito l'uso del freno magnetico di binario per le frenate di emergenza, ferma restando l'opportuna valutazione circa la compatibilità itinerario-treno, anche con riferimento alle caratteristiche infrastrutturali evidenziate nel Registro Infrastruttura (RINF). Pertanto l'adozione di questo sistema sarà autorizzato solo nel caso in cui sia dimostrato che non influisca sui sottosistemi Controllo, Comando e segnalamento a terra utilizzati sulla Rete Ferroviaria Italiana (Norma nazionale per il punto in sospeso di cui al punto 3.2.3 della Specifica della STI CCS). • Deve essere dimostrata la conformità al profilo G1 (figure B3 e B4 EN 15273-1).</p>	<p>The national rules refers to clause 4.2.11.a, Use of magnetic/eddy current brakes of CCS TSI. Agency: Please confirm that the rule is covering the open point: ERA ERTMS 033281 version 2 0 - 3.2.3, Use of magnetic / eddy current brakes, Use of magnetic / eddy current brakes</p>	<p>Under review National rule should be modified</p>
<p><u>4.7.4-Eddy current track brake</u> L'uso del freno a corrente di Foucault non è consentito sull'IFN. Se il mezzo è dotato di tale dispositivo è necessario documentare che il sistema è disinnestato</p>	<p>The national rules refers to clause 4.2.11.a, Use of magnetic/eddy current brakes of CCS TSI. Agency: Please confirm that the rule is covering the open point: ERA ERTMS 033281 version 2 0 - 3.2.3, Use of magnetic / eddy current brakes, Use of magnetic / eddy current brakes.</p>	<p>Under review National rule should be modified</p>
<p><u>6.2.3.4-Ballast pick-up and projection onto neighbouring property</u> Per i veicoli con velocità > 190 km/h e ≤ 300 km/h la verifica che non siano presenti danni permanenti sarà condotta sul sottocassa, sul rodiggio, sui carrelli e sui motori di trazione completi di organi per la trasmissione del movimento a seguito di eventuali sollevamenti del pietrisco costituente la massicciata durante le "prove dinamiche di validazione" secondo la Norma EN 14363. Per velocità massime di 300 km/h (Vadm) il veicolo deve essere coerente con il profilo del ballast per tratte AV/AC (la configurazione della massicciata) stabilito nella Circolare del Gestore dell'infrastruttura RFI S.p.A. Nota Prot. RFI-DTC\A0011\P\2005\0001251 del 30/08/2005. Per velocità massime maggiori di 300 km/h (Vadm), qualora si verifichi il fenomeno, dovrà essere effettuata una indagine congiunta da parte del Gestore dell'infrastruttura ed il</p>	<p>The national rules refers to clauses 4.2.6.2.5 of Loc&Pas TSI 1302/2014. Agency: Please confirm the proposed open point</p>	<p>Under review National rule should be modified</p>

National rules	Agency evaluation	Agency evaluation status
richiedente l'autorizzazione di messa in servizio al fine di individuare i necessari provvedimenti.		
<u>7.2.1-Vehicle marking</u> EN 15877-2	<p>The national rule refers to clauses Annex C 1, C5, 4.2.4.3.2.2 and 4.2.2.2 of WAG TSI 321/2013. The national rules refers to clauses 4.2.2.6 of Loc&Pas TSI 1302/2014.</p> <p>Agency: EN 15877-2 is already referenced in TSI Loc&Pas. Please specify the possible requirements in addition to the TSI along with the justification.</p>	<p>Not accepted</p> <p>National rule should be modified</p>
<u>7.2.1-Vehicle marking</u> EN 15877-1	<p>The national rule refers to clauses:</p> <ul style="list-style-type: none"> - Annex C 1, C5, 4.2.4.3.2.2, 4.2.2.2 of WAG TSI 321/2013 and - 4.2.2.6 of Loc&Pas TSI 1302/2014. <p>Agency: EN 15877-1 is already referenced in TSI WAG. Please specify the possible requirements in addition to the TSI along with the justification.</p>	<p>Not accepted</p> <p>National rule should be modified</p>
<u>7.2.4-Brackets</u> <ul style="list-style-type: none"> • Per i requisiti relativi ai fanali portatili Appendice E STI Carri (Regolamento n. 321/2013/UE del 13 marzo 2013 modificato dal Regolamento n. 1236/2013/UE del 2 dicembre 2013 e dal Regolamento n. 924/2015/UE del 8 giugno 2015). • I mezzi di trazione (si intendono le unità valutate in composizione bloccata o predefinita e le locomotive valutate per l'esercizio generale, così come previsto dalla STI Loc&Pas) devono essere dotati in ciascuna estremità di due porta segnali dove riporre la bandiera di cui al successivo parametro 9.5.3. • I porta segnali devono essere conformi alla fiche UIC 534. 	<p>The national rule refers to clauses :</p> <ul style="list-style-type: none"> - 5.3.5, 4.2.6.3 of WAG TSI 321/2013 and - 4.2.7.1.3 Loc&Pas TSI 1302/2014. <p>Agency: Rule should be modified Requirements to be clarified. TSI is covering the topic - see references in the column BZ (TSI WAG) and in the column CA (TSI Loc&Pas). Requirements are referring to TSI WAG but the rule is deemed as not applicable to TSI WAG.</p>	<p>Not accepted</p> <p>National rule should be modified</p>
<u>8.2.1.1-Specific requirements for power supply</u> L'impedenza di ingresso, vista dal pantografo, dell'insieme del treno funzionante a 3 kVcc, deve essere induttiva per frequenze non inferiori a 32 Hz	<p>The national rules refers to clauses 4.2.8.2 and 4.2.8.2.6 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Rule for entrance impedance parameter 8.4.2.3-Vehicle entrance impedance - already duplicated in rule ID 51053.</p>	<p>Not accepted</p> <p>National rule should be repealed</p>
<u>8.2.1.3-Regenerative braking</u> Disposizione RFI n. 53/2006: maschera correnti armoniche nelle linee alimentate a 25 kV ca Description: In riferimento ai mezzi d'opera, requisito applicabile a mezzi d'opera elettrici	<p>The national rules refers to clauses 4.2.8.2.3 of Loc&Pas TSI 1302/2014.</p> <p>Agency: NSA IT to precise if thie referenced document is related to 8.4.2.1.4. or to 8.4.2.1.1. (Is it related to harmonic traction currents or maximum harmonic voltages on the overhead line)? The NSA IT to provide the referenced documents and to specify the applicable sections.</p>	<p>Not accepted</p> <p>National rule should be modified</p>

National rules	Agency evaluation	Agency evaluation status
	The rule should be moved to the relevant parameter	
<p><u>8.2.1.3-Regenerative braking</u> Specifica FS 371425 "Rapporto segnale/disturbo apparecchiature RSC" EN 50617-1, EN 50617-2 Documento attuativo della Maschera FS 96 - Specifica Tecnica FS 370582 Description: In riferimento ai mezzi d'opera, requisito applicabile a mezzi d'opera elettrici</p>	<p>The national rules refers to clauses 4.2.8.2.3of Loc&Pas TSI 1302/2014. Agency: The EN 50617 series is related to the design characteristics of Track Circuits and axle counters and certainly not relevant here The NSA IT to provide the referenced documents and to specify the applicable sections. The information mentionned here seems not in the parameter scope - should be attached to the relevant parameter below 8.4.2.1.x</p>	<p>Not accepted National rule should be modified</p>
<p><u>8.2.2.1-Pantograph overall design</u></p> <ul style="list-style-type: none"> • Ciascuna unità di trazione e ciascuna composizione bloccata devono avere un pantografo di soccorso per ciascuno dei sistemi di alimentazione per i quali l'unità o la composizione è stata progettata. Il requisito può essere soddisfatto tramite installazione di un pantografo dedicato oppure tramite una configurazione ridondata dei pantografi. È ammesso che il pantografo di soccorso sia costituito da un pantografo normalmente utilizzato in esercizio sotto un differente sistema di alimentazione, purché compatibile con la linea di contatto. In alternativa al pantografo di soccorso le unità di trazione bimodali e le composizioni bloccate possono utilizzare la trazione diesel. • In caso di funzionamento di emergenza, è consentito un funzionamento limitato del veicolo (riduzione di potenza, riduzione di velocità, ecc.). • I mezzi politensione devono essere equipaggiati con un dispositivo automatico di controllo e di protezione della congruenza fra pantografo utilizzato e tensione della catenaria. 	<p>The national rules refers to clauses 4.2.8.2.9, 5.3.10 and 6.1.3.7 of Loc&Pas TSI 1302/2014. Agency: 1. Rules demand more than the requirement in TSI 4.2.8.2.9 and relate to the capacity of the vehicle to continue running when a panto failed. Aspect related to rescue. 2. Last rule already covered by TSI 4.2.8.2.9.8</p>	<p>Not accepted National rule should be repealed</p>
<p><u>8.2.2.8-Pantograph lowering</u> La funzione di abbassamento dei pantografi di tutte le unità di trazione in composizione ad un treno deve essere oggetto di un'analisi di sicurezza finalizzata a garantire la corretta esecuzione del comando, con particolare attenzione alle composizioni multiple</p>	<p>The national rules refers to clauses 4.2.8.2.9.10 of Loc&Pas TSI 1302/2014. Agency: The TSI Loc&Pas clause 4.2.8.2.9.10, Pantograph lowering is covering the topic - no open point. The TSI (4.2.8.2.9.10 Pantograph lowering (RST level)) does not require a safety analysis.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>8.3.3-High voltage components</u> I trasformatori monofase devono essere conformi ai requisiti della norma EN 60310</p>	<p>The national rules refers to clauses 4.2.8.2.10, Loc&Pas TSI 1302/2014. Agency: TSI doesn't enter into this level of detail.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u></p>	<p>The national rules refers to clauses 4.2.8.2.7 of Loc&Pas TSI 1302/2014.</p>	<p>Not accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>L'impedenza di ingresso vista dal pantografo deve essere induttiva per frequenze non inferiori a 32Hz (solo per alimentazione 3kV c.c.)</p> <p>Nelle linee alimentate a 3 kV c.c. le correnti armoniche generate dal veicolo non devono superare i limiti indicati dalla "Maschera FS 96 per il contenuto armonico delle correnti di trazione" nel rispetto di quanto previsto nel "Documento attuativo della Maschera FS 96 - Specifica Tecnica FS 370582"</p> <p>Sui mezzi di trazione elettrici deve essere installato un dispositivo/funzione integrata nel sistema di comando e controllo che, sulle linee alimentate a 3 kVcc, segnali la presenza di armoniche a 50 Hz nella corrente di ritorno, in maniera che quando tale corrente supera i valori di taratura del dispositivo (corrente > 1 A per un tempo > 3 secondi), questo provochi l'apertura dell'interruttore rapido del mezzo di trazione ed attivi una segnalazione al personale di condotta in cabina di guida</p>	<p>Agency: Rule should be modified. Requirements to be moved to the relevant parameters: for ex L'impedenza di ingresso vista dal pantografo deve essere induttiva per frequenze non inferiori a 32Hz (solo per alimentazione 3kV c.c.) should be moved to 8.4.2.3.</p>	<p>National rule should be modified</p>
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> Nelle linee alimentate a 25 kV ca le correnti armoniche generate dal veicolo non devono superare i limiti indicati nella maschera definita nella Disposizione RFI n. 53/2006: maschera contenuto armonico della corrente di trazione dei mezzi circolanti sulle linee alimentate a 25kV</p>	<p>The national rules refers to clauses 4.2.8.2.7 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. Rule should be moved to 8.4.2.1.1</p>	<p>Not accepted National rule should be modified</p>
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> Per quanto riguarda le emissioni di correnti armoniche e le impedenze di ingresso sui veicoli carrozze passeggeri occorre rispettare quanto previsto dalle fiche UIC 550-2 e 550-3</p>	<p>The national rules refers to clauses 4.2.8.2.7 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. Rule should be moved to 8.4.2.1.2</p>	<p>Not accepted National rule should be modified</p>
<p><u>9.1.4-Desk ergonomics</u> Per quanto riguarda Il senso di rotazione dei manipolatori del freno, vale quanto previsto dalla Fiche UIC 541-03 e, in particolare: "Per passare dalla posizione di marcia a quella di frenatura, il movimento del manipolatore: - che ruota sul piano orizzontale deve seguire il senso antiorario; - che ruota sul piano verticale deve seguire il senso che lo avvicina al macchinista".</p>	<p>The national rules refers to clause 4.2.9.1.6 of Loc&Pas TSI 1302/2014. Agency: The topic is covered by clause 4.2.9.1.6 of Loc&Pas TSI. Is there a need for specific case?</p>	<p>Not accepted National rule should be modified</p>
<p><u>9.2.2-Other health and safety requirements</u> Per quanto riguarda l'esposizione umana ai campi magnetici si rimanda agli obblighi di cui al punto 2.1 dell'allegato VI della Direttiva 2008/57/CE (obblighi del soggetto contraente o</p>	<p>The national rules refers to clauses 4.7 of Loc&Pas TSI 1302/2014. Agency:</p>	<p>Not accepted National rule should be repealed</p>

National rules	Agency evaluation	Agency evaluation status
del fabbricante, vale a dire il richiedente ai sensi dell'articolo 18 della direttiva 2008/57/CE).	No clear the requirements related to EM fields. To be removed	
<p><u>9.3.1-Speed indication</u> Requisiti ESTB_002, ESTB_003, ESTB_004, ESTB_005, ESTB_006: per il dettaglio vedi il campo 'Description'. Description:</p> <ul style="list-style-type: none"> • ESTB_002: nei casi in cui il sistema di protezione e controllo della marcia non pilota il tachimetro, la funzione di gestione del tachimetro deve rilevare lo stato di guasto del tachimetro attivo. La condizione di avaria del tachimetro attivo si ha in presenza di uno scostamento superiore al 2% del fondo scala tra la velocità di comando e la velocità riletta. • ESTB_003: nei casi in cui il sistema di protezione e controllo della marcia non pilota il tachimetro, la funzione di gestione del tachimetro deve calcolare la velocità secondo quanto richiesto dai requisiti del ERTMS subset 041 requisito 5.3.1.2. • ESTB_004: lo stato di funzionamento del sistema di misura e visualizzazione della velocità deve essere diagnosticato con continuità. In caso di fallimento di tale controllo diagnostico: <ul style="list-style-type: none"> - il fallimento deve essere segnalato all'agente di condotta; - l'informazione del fallimento deve essere trasmesso al sistema di registrazione eventi; - non deve essere visualizzata alcuna ulteriore indicazione di velocità (ad esempio, in caso di tachimetro meccanico l'indice deve essere portato a 0 km/h). • ESTB_005: in caso di visualizzazione all'agente di condotta della velocità pilotata da un sistema diverso da quello di protezione e controllo: <ul style="list-style-type: none"> - deve essere assicurato l'allineamento tra la velocità visualizzata e quella utilizzata per il sistema di protezione e controllo; - il fallimento del confronto tra le velocità deve essere segnalato all'agente di condotta e deve essere applicato quanto previsto nel requisito ESTB_004 per il fallimento del controllo diagnostico. • ESTB_006: deve essere presente una sola indicazione di velocità attiva in cabina di marcia. 	<p>The national rules refers to clauses :</p> <ul style="list-style-type: none"> - 4.2.9.3.2of Loc&Pas TSI 1302/2014 and - 4.2.2, 4.2.12, 4.2.6.3 of CCS TSI. <p>Agency: Too many requirements in the parameter. For each of the requirements a rule should be created and associated to the appropriate parameter. Please provide (upload in RDD) the detailed content of the referenced requirements. Provisional translation (see EN Version of Description - red colour). Preliminary based on the titles provided in Description: ESTB_002, ESTB_003 refers to train protection not controlling the speed, so there is no active train protection available. ESTB_003 seems pure RST requirements ESTB_004 when running under a train protection system but the speed is displayed by another device. ESTB_005: Seems requirement for safe integration and/or SMS In case there are requirements specific to train protection systems they should be moved to the system concerned. For ETCS as there is no issue (also when the DMI is an open point) as ETCS needs the safe speed information.</p>	<p>Under review</p> <p>National rule should be modified</p>
<p><u>9.3.2-Driver display unit and screens</u> ESTB_007: se è presente in cabina di guida più di un sistema di visualizzazione dell'orario, deve essere visualizzato lo stesso orario e questo deve essere quello utilizzato dal sistema di protezione</p>	<p>The national rules refers to clauses 4.2.9.3.3 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The topic is covered in LOC PAS TSI 1302 2014 - 4.2.9.3.2, Speed indication - no OP identified.</p>	<p>Under review</p>

National rules	Agency evaluation	Agency evaluation status
<p>di classe B, se presente, altrimenti utilizzato dal sistema di protezione di classe A.</p>	<p>Please provide the details of the ESTB_007 and the justification for the requirements in addition to the TSI.</p>	
<p><u>9.3.4-Driver supervision</u> Requisiti ESTB_008, ESTB_009, ESTB_010, ESTB_011, ESTB_012, ESTB_013, ESTB_014, ESTB_015, ESTB_016, ESTB_017, ESTB_018, ESTB_019, ESTB_020, ESTB_021, ESTB_022, ESTB_023, ESTB_024: per il dettaglio vedi il campo 'Description'. Description: <ul style="list-style-type: none"> • ESTB_008: deve essere assicurata al momento della perdita di condizione di treno fermo la funzionalità “Controllo Atto Partenza”. A tal fine si precisa che: <ul style="list-style-type: none"> - gli organi utilizzabili per tale funzione sono esclusivamente pulsante di vigilanza e pedale; - il termine “assenza di attività del macchinista” in fase di perdita della condizione di treno fermo deve essere inteso come assenza di variazioni sugli organi deputati al controllo atto partenza; - quando è persa la condizione di treno fermo e nessuna azione di vigilanza è svolta dall’agente di condotta, scaduti 5s il sistema deve rilevare l’“assenza di attività del macchinista”; - prima di rilevare l’“assenza di attività del macchinista”, deve essere fornito un avviso all’agente di condotta. • ESTB_009: in caso di mancato riconoscimento da parte dell’agente di condotta il dispositivo Vigilante deve comandare la “disinserzione della trazione” (oltre all’applicazione della frenatura di urgenza). • ESTB_010: la mancanza dell’alimentazione al dispositivo vigilante deve determinare la frenatura d’urgenza. • ESTB_011: il dispositivo vigilante deve essere progettato in modo da comandare la disinserzione della trazione e la frenatura di urgenza se cessa di essere operativo a causa di guasti tecnici. • ESTB_012: la segnalazione acustica di richiesta operatività all’agente di condotta da parte del dispositivo Vigilante deve essere differenziata rispetto alle altre segnalazioni in cabina. • ESTB_013: l’intervento della frenatura d’urgenza ad opera del dispositivo Vigilante deve essere segnalato all’agente di condotta in cabina in modo dedicato. • ESTB_014: il riarmo a seguito di intervento del dispositivo vigilante deve avvenire a treno fermo, </p>	<p>The national rules refers to clauses 4.2.9.3.1 of Loc&Pas TSI 1302/2014. Agency: The § 4.2.9.3.1 of the Loc&Pas TSI covers the parameter. Only the note 5) allows to specify the value of "X" in the s[pecified range - can be also managed with operational rules. Other references not in the parameter scope should be removed.</p>	<p>Not accepted National rule should be modified</p>

National rules	Agency evaluation	Agency evaluation status
<p>oppure in alternativa anche in corsa purché si garantisca che il riconoscimento non sia dovuto a manovra accidentale.</p> <ul style="list-style-type: none"> • ESTB_015: il vigilante deve inserirsi in automatico all’attivazione delle apparecchiature del veicolo necessarie per poter circolare oppure al completamento delle operazioni propedeutiche alla partenza. • ESTB_016: la trazione dal veicolo con cabina di guida abilitata alla condotta presenziata da agente di condotta deve essere condizionata al funzionamento del vigilante. • ESTB_017: le temporizzazioni del vigilante devono poter essere “resettate” solo utilizzando gli organi di interfaccia del banco di manovra abilitato. • ESTB_018: Per consentire la trazione del veicolo in caso di guasto del dispositivo vigilante, deve essere possibile escludere il dispositivo vigilante tramite un dispositivo di esclusione; il dispositivo di esclusione deve essere posizionato in modo tale che non possa essere manovrato dalla posizione di guida. • ESTB_019: il dispositivo vigilante, quando attivo e funzionante, deve essere interfacciato con l’impianto frenante (deve cioè poter essere attuato l’eventuale comando di frenatura di urgenza determinato dal dispositivo vigilante). • ESTB_020: quando il dispositivo vigilante non è attivo e funzionante (per guasto) la frenatura d’urgenza deve essere applicata. • ESTB_021: l’interfaccia con il freno del dispositivo vigilante deve essere realizzata mediante un dispositivo avente caratteristiche di ridondanza, ad esempio dotato di due elettrovalvole “indipendenti” in modo che la disalimentazione di almeno una delle due provochi la scarica della condotta generale. Qualora la funzione controllo atto partenza sia svolta da altro sistema presente a bordo, per l’interfaccia con il freno del dispositivo vigilante è ammessa anche la soluzione senza caratteristiche di ridondanza (ossia con una sola elettrovalvola). • ESTB_022: qualsiasi avaria al dispositivo di interfaccia con il sistema frenante deve provocare lo scarico della condotta generale. • ESTB_023: l’interfaccia con il sistema frenante del sistema che svolge la funzione di cui al requisito ESTB_008, deve garantire che il tempo necessario per ridurre la pressione in condotta generale (misurata in corrispondenza del dispositivo di interfaccia stesso) da 5 a 3,5 bar 		

National rules	Agency evaluation	Agency evaluation status
<p>non superiori i 450 ms.</p> <ul style="list-style-type: none"> • ESTB_024: il soddisfacimento del requisito ESTB_023 deve essere verificato ad ogni accensione del sistema che svolge la funzione di cui al requisito ESTB_008. 		
<p><u>9.3.4-Driver supervision</u> Dispositivo E-VIG: vedi il campo 'Description'. Description: Sulla rete gestita da RFI S.p.A., nei casi nei quali le autorità competenti in materia di salute e sicurezza sul lavoro abbiano evidenziato problematiche connesse all'utilizzo del sistema di sicurezza automatico di vigilanza a bordo dei veicoli, è ammessa l'installazione di un dispositivo chiamato "E-VIG" che consente di disattivare la funzione vigilante mantenendo attiva la funzione del controllo automatico della presenza dell'agente di condotta all'atto della partenza, in conformità a quanto previsto dalla Direttiva del Ministero dei Trasporti DG 4/Div5 0044725 del 20 ottobre 2006. Ai sensi della medesima Direttiva, tale requisito si applica al periodo di tempo strettamente necessario alle Imprese ferroviarie ad individuare soluzioni tecnologiche atte a risolvere le suddette problematiche. Venuta meno tale necessità, gli standard internazionali dovranno essere integralmente rispettati. Quando utilizzato il dispositivo E-VIG l'attivazione deve essere registrata nel dispositivo di registrazione di cui al punto 9.6.</p>	<p>The national rules refers to clauses 4.2.9.3.1 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. The § 4.2.9.3.1 of the Loc&Pas TSI covers the parameter. Only the note 5) allows to specify the value of "X" in the specified range - can be also managed with operational rules. Other references not in the parameter scope should be removed.</p>	<p>Not accepted National rule should be modified</p>
<p><u>9.5.3-On-board tools and portable equipment</u> Per le altre dotazioni specifiche per la protezione al fuoco, previste dal DM 28.10.2005 e Norma UNI CEI 11170-2 si rimanda al parametro 10.</p>	<p>The national rules refers to clauses 4.2.9.4 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. NSA IT to indicate clearly which clause of DM 28.10.2015 that apply in addition to TSI. Please also provide justification for what should apply in addition to TSI.</p>	<p>Not accepted National rule should be modified</p>
<p><u>9.5.3-On-board tools and portable equipment</u> STI Loc&Pas (1302/2014) §4.2.9.4 Ad integrazione di quanto previsto nel paragrafo 4.2.9.4 della STI Loc&Pas, il vano che deve essere presente in cabina di guida o nelle sue prossimità deve essere tale da poter alloggiare anche le seguenti attrezzature previste dal Decreto ANSF n. 4/2012 (Allegato B Punto 4.31): - Torcia di segnalamento a fiamma rossa; - Bandiera rossa con asta.</p>	<p>The national rules refers to clauses 4.2.9.4 of Loc&Pas TSI 1302/2014. Agency: Hand-lamp with red and white light is already mentioned in the TSI Loc&Pas clause 4.2.9.4 Element " - Bandiera rossa con asta. " relates to operation</p>	<p>Not accepted National rule should be repealed</p>
<p><u>9.6-Recording device</u> • ESTB_025: Il "Sistema Tecnologico di Bordo -</p>	<p>The national rules refers to clauses 4.2.9.6 Loc&Pas TSI 1302/2014.</p>	<p>Not accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>Registratore Cronologico di Eventi di Condotta su supporto informatico" deve rispettare i requisiti di cui al documento cod. RFI DTC CSI SR OR 10 002 B del 11/02/2008.</p> <ul style="list-style-type: none"> • “Architettura Tecnico-Funzionale del Sistema Tecnologico di Bordo (ATF-STB)” (cod. RFI DTE CSI PO OR 10 001 A). • ESTB_026: qualora la registrazione degli eventi sia svolta da più di un apparato, i dati registrati sui diversi dispositivi devono essere correlabili. 	<p>Agency: The TSI Loc&Pas is covering the topic in clause 4.2.9.6, Recording device. NSA IT to confirm if rule relates to Class B systems. Please note that the informations to be regeistered by the recording device are covered by the TSI OPE. The information that is recorded must be for investigation purposes in the event of an accident. Requirements related to operation are not part of vehicle authorisation.</p>	<p>National rule should be modified</p>
<p><u>10.1-Fire protection concept and protection measures</u> Decreto Ministeriale del 28/10/2005</p>	<p>The national rule refers to clause 4.2.10.3.4 of Loc&Pas TSI 1302/2014</p> <p>Agency: Rule should be modified. TSI Loc&Pas 7.3.2.20 is containing a specific case for Italy. Please specify the identified topic in the TSI Loc&Pas: "Fire Containment and Control Systems shall be assessed according to the notified National Rules about fire automatic extinguishing systems." Requirements can be also notified for the 4.2.10.3.4, Fire Containment and Control Systems, Assessment procedure of efficiency for controlling fire and smoke developed by CEN according to a request for standard issued by ERA***-, Open Point</p> <p>The referenced Decree applies to Safety in railway tunnels and applies to railway tunnels longer than 1000m. It covers Infrastructure and Rolling Stock, some parts duplicate the TSI SRT. Rule to be revised to indicate which article(s) of the Decree apply for RST, relevant articles are to be justified (e.g to cover open point 4.2.10.3.4)</p>	<p>Not accepted National rule should be modified</p>
<p><u>10.1-Fire protection concept and protection measures</u> UNI 11565</p>	<p>The national rule refers to clause 4.2.10.3.4 of Loc&Pas TSI 1302/2014</p> <p>Agency: TSI Loc&Pas 7.3.2.20 is containing a specific case for Italy. Please specify the identified topic in the TSI Loc&Pas: "Fire Containment and Control Systems shall be assessed according to the notified National Rules about fire automatic extinguishing systems." Requirements can be also notified for the 4.2.10.3.4, Fire Containment and Control Systems, Assessment procedure of efficiency for</p>	<p>Not accepted National rule should be modified</p>

National rules	Agency evaluation	Agency evaluation status
	controlling fire and smoke developed by CEN according to a request for standard issued by ERA***-, Open Point Please justify what is in addition to TSI. What UNI11565 covers?	
<u>10.2.2-Rescue services' information, equipment and access</u> Decreto Ministeriale del 28/10/2005	The national rules refers to clauses 4.2.12.6 Loc&Pas TSI 1302/2014. Agency: The TSI Loc&Pas is covering the topic in clause 4.2.12.6, Rescue related descriptions. Please identify the requirements in addition to the TSI and provide the justification.	Not accepted National rule should be modified
<u>10.3-Emergency running capabilities</u> Decreto Ministeriale del 28/10/2005	The national rules refers to clauses 4.2.10.4.4 of Loc&Pas TSI 1302/2014. Agency: The TSI Loc&Pas is covering the topic in clause 4.2.10.4.4, Running capability. Please identify the requirements in addition to the TSI and provide the justification.	Not accepted National rule should be modified
<u>13.1-Specific items to place on-board</u> <ul style="list-style-type: none"> • I seguenti elementi specifici dovranno essere a bordo: - dispositivo per il recupero di emergenza. Tale dispositivo, qualora non trovi locazione nella testata del veicolo e venga posizionato in una carena vicina alla testata, deve essere prelevabile da ambo i lati del veicolo; - megafono previsto dal decreto gallerie DM 28/10/2005; - maschera di protezione per accoppiatori; - eventuali attrezzi speciali previsti dal Costruttore (incluso chiavi per serrature porte esterne ed apertura armadi interni). • Deve essere previsto un alloggiamento per la cassetta di primo soccorso contenente la dotazione minima prevista dal decreto 24/01/2011 n. 19 applicazione decreto 15/07/2003 n. 388 "pronto soccorso". 	The national rules refers to clauses 4.2.2.2.4 and 4.2.9.4 of Loc&Pas TSI 1302/2014. Agency: Onboard equipment are covered by clause 4.2.9.4 of Loc&Pas TSI demand additional onboard equipments. Aspects not related to vehicle autorisation but is operational	Not accepted National rule should be repealed
<u>13.1-Specific items to place on-board</u> Nel vano di cui al parametro 9.5.3, appositamente indicato nella cabina di guida o nelle sue prossimità, dovranno essere contenute le apposite staffe per l'immobilizzazione del convoglio (se necessarie). Tali dispositivi, qualora non trovino locazione nel vano di cui sopra e vengano posizionati in una carena, devono essere tutti prelevabili da ambo i lati del veicolo.	The national rules refers to clauses 4.2.2.2.4 and 4.2.9.4 of Loc&Pas TSI 1302/2014. Agency: See comment on parameter 9.5.3	Not accepted
<u>13.2-Ferry transport</u> Nel caso di veicoli destinati anche al trasporto	Agency: The topic is not covered by TSI and is not on the	Not reviewed

National rules	Agency evaluation	Agency evaluation status
con traghetto, questi devono essere progettati per poter circolare su rampe di traghetto con angolo di inclinazione di 1°30' con raggio di curvatura di 120 m.	authorisation scope. This parameter is not covered by TSI, not on the authorisation scope and therefore not in the scope of ERA assessment. It will be decided at later stage with the Commission how to deal with these rules.	
<u>13.2-Ferry transport</u> • UIC 507. • I carri devono essere progettati per poter circolare, in ogni situazione di carico, su rampe di traghetto con angolo di inclinazione di 1°30' con raggio di curvatura di 120 m.	Agency: The topic is not covered by TSI and is not on the authorisation scope. This parameter is not covered by TSI, not on the authorisation scope and therefore not in the scope of ERA assessment. It will be decided at later stage with the Commission how to deal with these rules.	Not reviewed
<u>13.2-Ferry transport</u> • FprEN 14033-1, §6.3 • I mezzi d'opera devono essere progettati per poter circolare, in ogni situazione di carico, su rampe di traghetto con angolo di inclinazione di 1°30' con raggio di curvatura di 120 m.	Agency: The topic is not covered by TSI and is not on the authorisation scope. This parameter is not covered by TSI, not on the authorisation scope and therefore not in the scope of ERA assessment. It will be decided at later stage with the Commission how to deal with these rules.	Not reviewed

5.16.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements.

5.16.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> Nelle linee alimentate a 3 kV c.c. le correnti armoniche generate dal veicolo non devono superare i limiti indicati dalla "Maschera FS 96 per il contenuto armonico delle correnti di trazione" nel rispetto di quanto previsto nel "Documento attuativo della Maschera FS 96 - Specifica Tecnica FS 370582" Description: In riferimento ai mezzi d'opera, requisito applicabile a mezzi d'opera elettrici	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Acceptable requirement	Accepted
<u>8.4.2.1.1-Rail return current</u> Nelle linee alimentate a 25 kV ca le correnti armoniche generate dal veicolo non devono superare i limiti indicati nella maschera definita nella Disposizione RFI n. 53/2006: maschera contenuto armonico della corrente di trazione dei mezzi circolanti sulle linee alimentate a 25kV Description: In riferimento ai mezzi d'opera, requisito applicabile a mezzi d'opera elettrici	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Acceptable requirement	Accepted

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.1-Rail return current</u> Specifica FS 371425 "Rapporto segnale/disturbo apparecchiature RSC" (solo per quanto riguarda la modalità di misura del rapporto segnale/disturbo dell'apparecchiatura RSC – vedi parametro 8.4.2.1.3) Description: In riferimento ai mezzi d'opera, requisito applicabile a mezzi d'opera elettrici</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Acceptable requirement</p>	<p>Accepted</p>
<p><u>8.4.2.1.2-Heating cable interference current</u> Per i veicoli carrozze viaggiatori si applica quanto previsto al parametro 8.4.2.1.4</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. Requirement not clear.</p>	<p>Not accepted National rule should be modified</p>
<p><u>8.4.2.1.2-Heating cable interference current</u> A seconda del sistema di messa terra del veicolo (ritorno di corrente a bordo oppure a terra) dovrà essere valutata la necessità o meno di effettuare specifiche prove di armoniche secondo modalità da definire</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. Requirement not clear.</p>	<p>Not accepted National rule should be modified</p>
<p><u>8.4.2.1.3-Interference current under the vehicle</u> Il funzionamento elettrico dei veicoli deve essere compatibile con le caratteristiche delle apparecchiature di rilevazione delle installazioni fisse Description: In riferimento ai mezzi d'opera, requisito applicabile a mezzi d'opera elettrici</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Acceptable requirement</p>	<p>Accepted</p>
<p><u>8.4.2.1.3-Interference current under the vehicle</u> Il valore limite del rapporto segnale/disturbo dell'apparecchiatura Ripetizione Segnale Continuo (RSC) è quello specificato nel Safety Case di applicazione generica del sistema Controllo-comando e Segnalamento di bordo; le modalità di misura del rapporto segnale / disturbo dell'apparecchiatura RSC sono riportate nella Specifica FS 371425 "Rapporto segnale / disturbo apparecchiature RSC" Description: In riferimento ai mezzi d'opera, requisito applicabile a mezzi d'opera elettrici</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Acceptable requirement</p>	<p>Accepted</p>
<p><u>8.4.2.1.3-Interference current under the vehicle</u> Documento attuativo della Maschera FS 96 - Specifica Tecnica FS 370582 Description: In riferimento ai mezzi d'opera, requisito applicabile a mezzi d'opera elettrici</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Acceptable requirement</p>	<p>Accepted</p>
<p><u>8.4.2.1.3-Interference current under the vehicle</u> Disposizione RFI n. 53/2006: maschera correnti armoniche nelle linee alimentate a 25 kV ca Description:</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Acceptable requirement</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
In riferimento ai mezzi d'opera, requisito applicabile a mezzi d'opera elettrici		
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Documento attuativo della Maschera FS 96 - Specifica Tecnica FS 370582</p>	<p>The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. NSA IT to provide (upload in RDD) the document when it is relevant for this parameter. The applicable section of the document. Please note that a rule is expected here only if axle counters which are installed are not listed in Annex A of 50238-3 - please confirm.</p>	<p>Not accepted National rule should be modified</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Disposizione RFI n. 53/2006: maschera correnti armoniche nelle linee alimentate a 25 kV ca</p>	<p>The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. Rule should be moved to parameter 8.4.2.1.1</p>	<p>Not accepted National rule should be modified</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Specifica FS 371425 "Rapporto segnale/disturbo apparecchiature RSC" (solo per quanto riguarda la modalità di misura del rapporto segnale/disturbo dell'apparecchiatura RSC – vedi parametro 8.4.2.1.3)</p>	<p>The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. NSA IT to provide (upload in RDD) the document when it is relevant for this parameter, along with the applicable section of the document. The rule seems to be related to the the antenas of CCS on board unit - please confirm. Not clear the relationship with the rule stated at parameter 8.4.2.1.3</p>	<p>Not accepted National rule should be modified</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Specifica Tecnica RFI DI TCSS ST IS 00 402 A</p>	<p>The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency: Rule should be modified. NSA IT to provide (upload in RDD) the document when it is relevant for this parameter, along with the applicable section of the document. Please note that a rule is expected here only if axle counters which are installed are not listed in Annex A of 50238-3 - please confirm.</p>	<p>Not accepted National rule should be modified</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Per il punto in sospeso della specifica della STI CCS (Punto 3.2.3) in merito all'uso del freno magnetico a pattino e/o freno a corrente parassita sul binario vedi parametri 4.7.3 e 4.7.4</p>	<p>The requirement refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency: Not relevant. Please remove/waste the rule or prove the relevant requirements for this parameter.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>8.4.2.3-Vehicle entrance impedance</u> L'impedenza di ingresso vista dal pantografo deve essere induttiva per frequenze non inferiori a 32Hz (solo per alimentazione 3kV c.c.)</p>	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Rule acceptable</p>	<p>Accepted</p>
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> Per il punto in sospeso della specifica di cui al Rif. 77 delle Tabelle A 2.1, A 2.2 e A 2.3 della STI CCS</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency:</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>(punto 3.1.4.2 “Caratteristiche della sabbia”) vedere requisiti allegato A del Decreto ANSF n. 1/2016, allegato 1a/1c - vedere il campo “Description” Description: Le caratteristiche della sabbia sono riportate nell’allegato A del NRD, ovvero: 1. Composizione La composizione della sabbia deve essere tale che la proporzione dei grani di diametro fra 0,6 e 0,1 mm deve essere superiore o uguale all’85%. Le percentuali dei limiti ammissibili per categorie della dimensione dei grani è fissata nel modo seguente: Diametro dei grani (mm) Percentuali dei limiti ammissibili 1,5 ÷ 0,6 ≤ 4% 0,6 ÷ 0,4 ≤ 65% 0,4 ÷ 0,3 Fino al 100% 0,3 ÷ 0,2 Fino al 100% 0,2 ÷ 0,15 ≤ 25% 0,15 ÷ 0,1 ≤ 5% 0,1 ÷ 0,07 ≤ 3% La percentuale di argilla contenuta nella composizione suddetta non deve superare il 2% ed il grado di umidità non deve essere superiore allo 0,5%. 2. Imballaggio L’imballaggio della sabbia deve garantire la protezione del contenuto dall’umidità durante la fase del trasporto e dello stoccaggio.</p>	<p>Acceptable as the sand characteristics is still an open point in the CCS TSI interface document</p>	

5.16.3 CCS onboard Subsystem

5.16.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover the open points:

- 12.2.5.2 B2 “braking aspects
- 12.2.5.4 DMI safety requirements

The parameters below do not contain national rules to cover the open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.6 B2 “braking aspects”
- 12.2.5.5 B2 “ETCS DMI”

5.16.3.2 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table, based on the rules published in RDD RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-

Availability and status of remaining national rules			
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -		
Amount of remaining NRs in addition to latest TSIs	10		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	7 parameters: 12.1.2.1-Use of hand portables as cab mobile radio 12.1.2.2-Other GSM-R requirements 12.2.2-STM requirements 12.2.5.2-Braking safety margins 12.2.5.4-Safety requirements 12.2.5.7-Other ETCS requirements (related to existing not interoperable networks) 12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances	

5.16.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> N.A. Description: In Italia non sono ammessi sistemi radio non-GSM-R	Agency: Rule should be repealed. The content of this NTR is not clear. There are no documents attached. The only text available is the statement that "Non-GSM-R radio systems are not allowed in Italy", applicable to all types of vehicles (TSI compliant and non-compliant) according to what is indicated in columns BC to BO. The requirement to have GSM-R as Class A radio system is already in the TSI, therefore, it is not understandable why is this an NTR to TSI compliant vehicles. For non-TSI compliant vehicles, it can be understood that it is an NTR in the sense that no Class B radio system will be allowed to run in Italy. HOWEVER, this contradicts the information from MS related to the Class B systems, where they have included "GSM-P on lines not covered by GSM-R", therefore, according to this, a vehicle that can use GSM-P would be able to run in the	Not accepted National rule should be repealed.

National rules	Agency evaluation	Agency evaluation status
	<p>italian network in those lines not covered by GSM-R. Use of GSM-P could be thanks to cab radio with SIM card that can use the italian public network or even thanks to handheld. The NTR in row #847 indicates that it is not allowed to use handhelds instead of cab radios. Please clarify and provide the details behind this rule, possible additional documents.</p>	
<p><u>12.2.1-National on-board signalling systems</u> List of CCS Class B systems, ERA/TD/2011-11, version 3.0 (Vedi Class B system Italia) Requisiti ESCMT_001, EINT_001, EINT_002, EINT_003, EINT_004, EINT_005, EINT_006: per il dettaglio vedi il campo 'Description'. Description: <ul style="list-style-type: none"> • ESCMT_001: Il sistema di protezione e controllo della marcia di classe B denominato SCMT deve implementare: <ul style="list-style-type: none"> - i requisiti “essenziali” identificati con attributo [E]; - una delle scelte alternative presenti nei requisiti identificati con attributo [O], contenuti nelle specifiche di cui al Volume 0 RFI TC.SCC SR CM 01 R01 Versione A del 31/10/2016. Non sussiste obbligo di implementare i requisiti identificati con attributo [F]; tali requisiti, qualora presi in carico, devono essere implementati secondo i vincoli descritti dalle combinazioni riportate nel documento cod. RFI TC.PATC SR CM 03 M 96 F. La definizione di tali attributi è presente all’interno delle specifiche stesse. • EINT_001 (requisito solo per SSB ETCS con STM Classe B Italiano - SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il sottosistema di bordo del sistema di protezione della marcia di Classe A quando interfacciato con il sistema di Classe B, durante l'introduzione dati, deve sempre richiedere la validazione (conferma) all'AdC dell'ora utilizzata da SCMT. • EINT_002 (requisito solo per SSB ETCS con STM Classe B Italiano - SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il sottosistema di bordo del sistema di protezione della marcia di Classe A quando interfacciato con il sistema di Classe B, deve considerare completata la funzione di autotest solo dopo aver ricevuto l'esito dei test iniziali da parte del sottosistema di bordo del sistema di protezione della marcia di Classe B. • EINT_003 (requisito solo per SSB ETCS con STM Classe B Italiano - SCMT o STM SSC BL3, </p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency: ESCMT_001, EINT_003, EINT_004 are deleted during ERA discussion with IT. EINT_001, EINT_002, EINT_005, EINT_006 are agreed, Italy to change partly the wording.</p>	<p>Under review</p>

National rules	Agency evaluation	Agency evaluation status
<p>applicabile alla Baseline BL2_3): L'Unità Odometria del sottosistema di bordo del sistema di protezione della marcia di Classe A (Subset 026 capitolo 2), quando questo è interfacciato con il sistema di classe B, in modo SN, qualora fornisca i dati odometrici al sottosistema di bordo del sistema di Classe B, deve soddisfare i requisiti prestazionali di cui alla colonna "info da 2 assi" della tabella seguente:</p> <p>Precisione nella misura di spazio con confidenza 3σ (99%)</p> <p> Info da 2 assi Info da 1 asse S > 1000 m 6% 7% 500 m < S ≤ 1000 m 60 m 70 m 200 m < S ≤ 500 m 40 m 50 m S ≤ 200 m 20 m 30 m </p> <ul style="list-style-type: none"> • EINT_004 (requisito solo per SSB ETCS con STM Classe B Italiano - SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il sottosistema di bordo del sistema di protezione della marcia di Classe A quando interfacciato con il sistema di Classe B, in modo SN, qualora fornisca i dati odometrici al sottosistema di bordo del sistema di protezione della marcia di Classe B, deve soddisfare i seguenti requisiti prestazionali, inerenti la trasmissione dati, indipendentemente dal canale di trasmissione adottato: Definizioni Valore Massimo ritardo sul bus di comunicazione, caso peggiore (include l'inesattezza della marcatura temporale) 850 ms Tempo massimo, caso peggiore, che intercorre tra la trasmissione di due messaggi odometrici consecutivi dall'ETCS all'STM 500 ms Tempo massimo, caso peggiore, che intercorre tra la trasmissione di due parametri odometrici consecutivi dall'ETCS all'STM 5 s • EINT_005 (requisito solo per SSB ETCS con STM Classe B Italiano - SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il sottosistema di bordo del sistema di protezione della marcia di Classe A quando interfacciato con il sistema di classe B, in modalità SN, deve garantire almeno lo stesso livello di sicurezza nella supervisione del treno offerto dal sistema di classe B. • EINT_006 (requisito solo per SSB ETCS con STM Classe B Italiano - SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Nel caso di sottosistema di bordo del sistema di protezione della marcia di Classe A interfacciato con il sistema di classe B, il documento "DMI – Specifica di ergonomia integrazione 		

National rules	Agency evaluation	Agency evaluation status
visualizzazioni SCMT/SSC su DMI ERTMS" cod. RFI TC.PATC SR AV 03 M02 B del 30/09/2016 deve essere preso a riferimento, tenendo conto degli aggiornamenti dell'ultima versione disponibile della specifica ERA sul DMI, qualora sia scelta la soluzione del DMI che integra le funzioni ETCS e Classe B.		
<p><u>12.2.1-National on-board signalling systems</u> Errata Corrige per le specifiche cod. RFI TC.PATC SR CM 03 M 74 H, RFI TC.PATC SR CM 03 M 96 F, RFI TC.PATC SR CM 03 M 79 H</p> <p>Description: Errata Corrige per le specifiche cod. RFI TC.PATC SR CM 03 M 74 H, RFI TC.PATC SR CM 03 M 96 F, RFI TC.PATC SR CM 03 M 79 H (contenute tra le Specifiche di cui al Volume 0 RFI TC.SCC SR CM 01 R01 Versione A del 31/10/2016), in attesa dell'aggiornamento dei corrispondenti documenti da parte di RFI S.p.A.</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI.</p> <p>Agency: Rule should be modified. NSA Italy to provide the requirements, not part of the NTR discussions which took already place. What is the content of the changes to the RFI specs? Additional functions? Error corrections? To be argued by ANSF.</p>	<p>Not accepted</p> <p>National rule should be modified.</p>

5.16.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.2.1-Use of hand portables as cab mobile radio</u></p> <ul style="list-style-type: none"> Non è ammesso equipaggiare un veicolo con apparecchi portatili in sostituzione del cab radio. Il portatile 2Watt non può essere usato come opzione del cab radio. 	<p>Agency: In principle, this should not be an NTR, what is described is the "baseline" situation: this basic parameter is included in the list in case the MS wants to allow the use of handhelds instead of cab radios, which is not generally the case. In any case, no negative comments to the NTR itself. Please clarify the details behind this rule (document? reference in the Decreto 1/ 2016?). After this, NTR can be acceptable.</p>	<p>Under review</p>
<p><u>12.1.2.2-Other GSM-R requirements</u> Requisiti EGSMR_001, EGSMR_002, EGSMR_003, EGSMR_004, EGSMR_005, EGSMR_006, EGSMR_007, EGSMR_008, EGSMR_009, EGSMR_010, EGSMR_011: per il dettaglio vedi il campo 'Description'. I requisiti da EGSMR_008 a EGSMR_011 sono mandatori solo per apparati radio installati su veicoli che percorrono linee non coperte da GSM-R. Description: • EGSMR_001: Durante la fase di accensione dell'apparato radio di bordo, l'apparato deve verificare in rete lo stato di validità di eventuali numeri funzionali temporanei salvati in SIM card. Tali numeri funzionali devono essere mantenuti e visualizzati sul MMI dell'apparato radio di bordo solo nel caso in cui siano ancora attivi in rete.</p>	<p>Agency: Rule should be modified. The content of this NTR is not fully clear. The information available is the description of each requirement EGSMR_00x in the column AB "Description". If there are additional requirements on top of what is indicated in the TSIs, they have to be clearly indicated. [During the discussion of ERA ERTMS team with the NSA and the IM, further details have been retrieved. Please refer to the specific separate Excel for more information on the agreements with ERA for each requirement in this rule. There is an action on the MS to send a new description for some of the requirements in the rule, clearly indicating what has to be added on top of the TSI requirements and/or what hazard has to be</p>	<p>Not accepted</p> <p>National rule should be modified.</p>

National rules	Agency evaluation	Agency evaluation status
<ul style="list-style-type: none"> • EGSMR_002: Ad integrazione del requisito EIRENE FRS 8.0.0 § 5.2.3.31, in caso di ricezione sull'apparato radio di bordo del messaggio di avvenuta deregistrazione forzata del proprio numero treno, è richiesta una conferma da parte dell'agente di condotta affinché la segnalazione visiva venga rimossa dal MMI dell'apparato radio di bordo. • EGSMR_003: Se l'apparato radio di bordo implementa la funzione di acquisizione del numero treno da altre apparecchiature di bordo, la registrazione e la deregistrazione in rete di tale numero può essere completata solo a seguito di conferma da parte dell'agente di condotta. • EGSMR_004: Deve essere presente un pulsante di colore rosso e protetto contro pressioni accidentali per l'invio della chiamata di emergenza (REC). Se è implementato l'invio della chiamata di emergenza anche tramite opzioni da menù, tale funzionalità deve richiedere preventiva conferma da parte dell'agente di condotta. • EGSMR_005: L'apparato radio di bordo deve essere in grado di fornire le seguenti informazioni al Registratore Cronologico degli Eventi di Condotta: <ul style="list-style-type: none"> - attivazione e termine della chiamata di emergenza, - ricezione e termine chiamata di emergenza, - invio della "chiamata di allarme Driver Safety Device (DSD)" da parte dell'apparato radio di bordo. • EGSMR_006: L'apparato radio di bordo deve: <ul style="list-style-type: none"> - essere dotato di interfaccia in grado di acquisire l'informazione di "mancato riarmo freno" proveniente dal sistema di segnalamento, - essere dotato di interfaccia in grado di acquisire l'informazione di "mancata vigilanza" (compreso il "controllo atto partenza") proveniente dal sistema che realizza la funzione "Vigilante", - inviare, alla ricezione delle informazioni di cui sopra, la "chiamata di allarme Driver Safety Device (DSD)". <p>È ammesso in via alternativa che la funzione di invio "chiamata di allarme Driver Safety Device (DSD)" possa essere effettuata da altro dispositivo presente sul veicolo.</p> • EGSMR_007: L'apparato radio di bordo deve trasferire contestualmente alla "chiamata di allarme DSD" le informazioni di localizzazione del veicolo basate su GPS ed odometria di bordo in conformità alla specifica "Interface Requirements 	<p>mitigated].</p> <p>Is the rule applicable to non-TSI compliant vehicles, those which have a GSM-R cab radio on board according to rule #845?</p> <p>The column BG indicates that the rule is for "Legacy systems" but this is not the case: it is for GSM-R systems. This is inconsistent.</p> <p>During the discussion of ERA ERTMS team with the NSA and IM, a number of items were identified as missing/incorrect in the TSI (CCS and OPE), a number of CRs have been open to the technical documents in Annex A of CCS TSI, however the columns AI to AK have not been filled in (TSI Compliant).</p> <p>Although specific points of the CCS and OPE TSIs are mentioned in the full description of the EGSMR_00x rules, there are no references to them in the columns AI to AK.</p> <p>Please clarify the inconsistencies and provide the exact details behind this rule in the rules database (document? references in Decreto 1/2016?).</p> <p>Please consider splitting the requirements in several rules.</p> <p>Also, the references to the TSIs have to be added in the corresponding fields.</p>	

National rules	Agency evaluation	Agency evaluation status
<p>Specification enhanced Location Dependent Addressing” (rev. 15-12-2002). È ammesso in via alternativa che le informazioni di localizzazione del veicolo siano trasferite con strumenti diversi da quello sopra indicato purché siano garantite prestazioni analoghe allo standard di cui sopra (accuratezza e tempestività).</p> <ul style="list-style-type: none"> • EGSMR_008: L’apparato radio di bordo deve operare anche nella sottobanda E-GSM per le reti pubbliche a 900 MHz come definito al § 4.1.3ii della specifica EIRENE FRS v.8.0.0 e al § 4.2.1 della specifica EIRENE SRS v.16.0.0. • EGSMR_009: L’apparato radio di bordo deve supportare la modalità di ricerca rete automatica conformemente ai seguenti requisiti: <ul style="list-style-type: none"> - EIRENE FRS v. 8.0.0 §§ 5.2.3.25vi, 5.2.3.25vii e 5.2.3.25x, - EIRENE SRS v. 16.0.0 §§ 5.6.5i, 5.6.5ii. • EGSMR_010: Quando l’apparato radio di bordo è localizzato in roaming nella rete di un operatore GSM Pubblico, deve periodicamente ricercare il segnale di rete GSM-R, rifelezionando automaticamente tale rete non appena il relativo segnale radio è individuato. La periodicità con cui l’apparato radio di bordo deve ricercare la rete GSM-R è definita nel campo HPLMNSearchPeriod della SIM card. • EGSMR_011: Quando l’apparato radio è localizzato su una rete non GSM-R, ovvero che non supporta il servizio Chiamate di Gruppo (VGCS) non deve effettuare l’invio in rete di una chiamata di emergenza (REC) e pertanto in tale caso non deve essere implementato quanto previsto dai requisiti EIRENE FRS 8.0.0 §§ 13.2.2.3, 13.2.2.3i, 13.2.2.3ii. 		
<p><u>12.2.2-STM requirements</u> Requisiti ESCMT_002, E_007: per il dettaglio vedi il campo 'Description'. Description: <ul style="list-style-type: none"> • ESCMT_002: Il sistema di protezione e controllo della marcia di classe B denominato SCMT qualora sia configurato come STM deve implementare, in aggiunta al requisito ESCMT_001, i requisiti elencati nella specifica “REQUISITI DEL SOTTOSISTEMA DI BORDO SCMT PER INTEGRAZIONE CON IL SOTTOSISTEMA DI BORDO ETCS” cod. RFI TC.SCC SR CM 03 R01 A del 30/09/2016. • E_007 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): in condizioni di normale funzionamento, non essendo consentita </p>	<p>Agency: E_007 discussed and agreed (some editorial changes to be made), ESCMT_002 not known. Please add in the NTR (RDD): ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2</p>	<p>Under review</p>

National rules	Agency evaluation	Agency evaluation status
<p>la marcia non protetta (impossibilità di usare ETCS in Livello 0, V_NVUNFIT = 0), non è ammessa la configurazione di sistema di Classe B separato da ETCS perché quando la marcia è protetta dal sistema di Classe B, il sistema ETCS deve commutare in modo NP che prevede l'intervento della frenatura da parte di ETCS (SUB026 4.4.4.1.2).</p>		
<p><u>12.2.5.2-Braking safety margins</u> Requisiti E_008, E_009: per il dettaglio vedi il campo 'Description'. Description: <ul style="list-style-type: none"> • E_008 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2): Il sottosistema di bordo del sistema di protezione della marcia di Classe A BL2 deve adottare il profilo dei margini operativi valido per i tetti di velocità previsto dalle SRS ETCS BL3 (subset 026, § 3.13.9.2) o un profilo con margini più conservativi. (Norma nazionale per i punti in sospenso delle specifiche di cui ai punti 4.2.2b e 4.2.3b Rif. n. 15 dell'Allegato A della STI CCS). • E_009 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2): Il sottosistema di bordo del sistema di protezione della marcia di classe A BL2 deve adottare un modello di frenatura conforme o equivalente o più conservativo, in termini di spazi di arresto calcolati, rispetto a quello descritto nel documento RFI TC.SCC SR AV 03 R02 Rev. A del 30/06/2016. (Norma nazionale per i punti in sospenso delle specifiche di cui ai punti 4.2.2b e 4.2.3b Rif. n. 15 dell'Allegato A della STI CCS). </p>	<p>Agency: Agency agreed, B2 only Please add in the NTR (RDD): ETCS Baseline 2</p>	<p>Accepted National rule should be modified.</p>
<p><u>12.2.5.4-Safety requirements</u> Requisiti E_010, E_011: per il dettaglio vedi il campo 'Description'. Description: <ul style="list-style-type: none"> • E_010 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il sottosistema di bordo del sistema di protezione della marcia di Classe A BL2 deve utilizzare nella Actual Order Area l'icona Tunnel (CENELEC DMI cod. SC9XA/Sec0403/CD(PR13460) prEN 50XX6 Parte V - punto 3.8b) quando riceve PK68 "Track Condition" da RBC con la variabile M_TRACKCOND valorizzata a '0000' (*) (**). • E_011 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il sottosistema di </p>	<p>Agency: Exported constraint, ERA do not agree. Valid for all baselines Please add in the NTR (RDD): ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2</p>	<p>Not accepted National rule should be repealed.</p>

National rules	Agency evaluation	Agency evaluation status
<p>bordo del sistema di protezione della marcia di Classe A BL2 deve utilizzare per la Planning Area l'icona Tunnel (CENELEC DMI cod. SC9XA/Sec0403/CD(PR13460) prEN 50XX6 Parte V - punto 3.8b) quando riceve PK68 "Track Condition" da RBC con la variabile M_TRACKCOND valorizzata a '0000' (*) (**). (*) Tale requisito è applicabile alla circolazione sulla sola linea AV/AC Bologna-Firenze. (**) In pendenza dell'implementazione del pacchetto 206 (M_VERSION = 1.1) per gestire la funzione "tunnel stopping area", un veicolo equipaggiato con il sottosistema di bordo del sistema di protezione della marcia di Classe A BL3, non può essere autorizzato a circolare sulla linea AV/AC Bologna-Firenze.</p>		
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> Requisito E_012: per il dettaglio vedi il campo 'Description'. Description: • E_012 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il sottosistema di bordo del sistema di protezione della marcia di Classe A, sulle linee AV di RFI a 25 KV AC 50 Hz deve gestire il valore di M_TRACTION = 2 (che da documento ERA_ERTMS_040001 ha il significato di 25 KV AC 50 Hz conventional line attribuito alla Francia), trasmesso nel pacchetto 39, in modo equivalente al valore di M_TRACTION = 26.</p>	<p>Agency: Exported constraint, ERA do not agree. Valid for all baselines Please add in the NTR (RDD): ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2</p>	<p>Not accepted National rule should be repealed.</p>
<p><u>12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances</u> Requisiti E_013, E_014, E_015, E_016, E_017, E_018, E_019, EINT_007: per il dettaglio vedi il campo 'Description'. Description: • E_013 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Le funzioni di manutenzione e diagnostica (ricerca guasti) del sistema di bordo di protezione della marcia di Classe A non devono interferire con le funzioni di protezione della marcia durante l'esercizio e non deve essere possibile accedervi con treno in movimento (*). • E_014 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il sottosistema di bordo del sistema di protezione della marcia di Classe A deve consentire la definizione del</p>	<p>Agency: E_013, E_015, E_019 does not exist anymore E_014 - exported constraint, Agency does not agree E_016, E_017, E_018, OK EINT_007 - under discussion Please consider creating one rule for each E_xxx requirement</p>	<p>Not accepted National rule should be modified.</p>

National rules	Agency evaluation	Agency evaluation status
<p>"permitted range" dei dati treno introdotti dall'AdC, almeno per la velocità massima e la train category (*).</p> <ul style="list-style-type: none"> • E_015 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2): Il sottosistema di bordo del sistema di protezione della marcia di Classe A BL2 deve richiedere la conferma del "numero treno", se già inserito, altrimenti ne deve richiedere l'inserimento presentando il campo vuoto (*). • E_016 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2): Il sottosistema di bordo del sistema di protezione della marcia di Classe A BL2 non deve accettare la conferma del valore blank (campo vuoto) del numero treno (*). • E_017 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Indipendentemente dal livello, nel momento in cui è rilevata l'indisponibilità di entrambi i moduli radio (sia con treno fermo che in movimento) o almeno ad inizio missione, deve essere visualizzato su DMI il messaggio, di categoria "system status message", "Guasto totale radio" o messaggio equivalente; il messaggio deve scomparire alla rimozione della condizione di guasto (*). • E_018 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): In caso di fallimento della interfaccia di captazione discontinua ERTMS/ETCS (i self test periodici indicati in ETCS_OB07 del Subset 091 decretano un guasto tale da impedire la funzione di balise group detection), il sottosistema di bordo del sistema di protezione della marcia di Classe A deve considerare il guasto con impatto sulla sicurezza e quindi commutare in SF (*). • E_019 (requisito sia per SSB ETCS stand alone che per SSB ETCS con STM SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): In caso di non disponibilità della funzionalità DMI rilevata dal EVC mediante self test periodici, il sottosistema di bordo del sistema di protezione della marcia di Classe A deve considerare il guasto con impatto sulla sicurezza e quindi commutare in SF (*). • EINT_007 (requisito solo per SSB ETCS con STM Classe B Italiano - SCMT o STM SSC BL3, applicabile alla Baseline BL2_3): Il sottosistema di bordo del sistema di protezione della marcia di 		

National rules	Agency evaluation	Agency evaluation status
<p>Classe A quando interfacciato con il sistema di Classe B, deve rendere disponibile al sistema di Classe B il pacchetto 44 anche se proveniente da un sottosistema di terra con M_VERSION maggiore di quello gestibile dal sistema di Classe A (*). (*) Il requisito deve essere preso in carico anche nel caso siano implementate tutte le funzioni, interfacce e prestazioni previsti dalla STI CCS in vigore.</p>		

5.17 Member state LT

5.17.1 Summary of actions

Action	Responsible
Agency to take into account the actions identified below as “Action ERA”	ERA
RDD to be updated for rules related to train detection system	ERA/NSA LT
NSA LT to take into account the actions identified below as “Action NSA LT”	NSA LT

5.17.2 Rolling Stock Subsystem

5.17.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD RDD : published
	LoP version : New
	If no, forecast
Assessment status	Taken into account by MS : Yes
Amount of remaining NRs in addition to latest TSIs	30

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	10 parameters: 6.2-Impact of the vehicle on the environment 6.2.1.2-Exhaust gas emissions 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.3.1-Maximum electro-magnetic fields 8.7.2-Pressure vessel systems/pressure equipment 8.7.3-Steam boiler installations 8.7.5-Hydraulic/pneumatic supply and control systems 9.2.2-Other health and safety requirements 14.1-Design, operation and maintenance constraints for the transport of dangerous goods	Other directives cover: <ul style="list-style-type: none"> Exhaust emission directive Chemical emission EMC directive Pressure vessel Transport of dangerous good
Rules related to documentation	Parameters listed in section 3.2.4	2 parameters: 1.1-General documentation 1.4-National requirement for testing	Rule deal with the set of documents to be delivered for authorisation and for performing on track tests.

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules not retained in TSIs	Parameters listed in section 3.2.5	2 parameters: 4.7.1.2-Brake discs 4.7.1.3-Brake pads	-
Other rules related to compatibility with network / legacy system	See subsection 2 below	1 parameter: 9.6-Recording device	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	2 parameters: 2.2.1-Automatic coupling 2.2.4-Buffering	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	4 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 8.4.2.3-Vehicle entrance impedance	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	2 parameters: 4.7.1.1-Brake blocks 7.1-Integrity of software employed for safety related functions	Reference to EN 50128 remain pending the revision of TSI Loc&Pas application guide. Action ERA: publication of the revised application guide that refer to EN 50128.

5.17.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.17.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>3.2.1-Running safety and dynamics</u> List of the railway subsystem technical rules in use in the Republic of Lithuania, adopted on 25.04.2005 by Order No. 3-146 by The Ministry of Transport and Communications of the Republic of Lithuania EN 14363:2005, UIC 518; Dinaminio atsparumo bandymų metodika</p> <p><u>3.2.4-Track loading compatibility parameters</u> LST EN 14363:2005 Railway applications - Testing for the acceptance of running characteristics of railway vehicles - Testing of running behaviour and stationary tests</p>	<p>The national rule refers to open point 4.2.3.4.2 - Running dynamic behaviour for 1520 mm track gauge system in Loc&Pas TSI 1302/2014.</p> <p>Agency : The EN143636:2016 do not allow to close the open point related to 1520 mm track gage as it does not cover the quality of track of 1520mm.</p>	<p>Accepted</p> <p>Action ERA/1520mm: to take actions to close the open point as revision of EN14363 to cover 1520mm track gage</p>

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.2.3-Wheel profile and limits</u> List of the railway subsystem technical rules in use in the Republic of Lithuania, adopted on 25.04.2005 by Order No. 3-146 by The Ministry of Transport and Communications of the Republic of Lithuania GOST 11018-2000	The national rule refers to open point 4.2.3.4.3.1 Design values for new wheel profiles : 1520mm / 1600mm in Loc&Pas TSI 1302/2014.	Accepted
<u>3.3.5-Sanding system</u> List of the railway subsystem technical rules in use in the Republic of Lithuania, adopted on 25.04.2005 by Order No. 3-146 by The Ministry of Transport and Communications of the Republic of Lithuania	The national rule refers to open points: <ul style="list-style-type: none"> - 4.2.3.3.1.1 - Compatibility with train detection systems – Isolating emissions: sand characteristics - 4.2.3.3.1.1 - Compatibility with track circuits – Isolating emmission: maximum amount of sand (for 1520 mm system) in Loc&Pas TSI 1302/2014 	Accepted
<u>6.1.2.1-Crosswind effects</u> List of the railway subsystem technical rules in use in the Republic of Lithuania, adopted on 25.04.2005 by Order No. 3-146 by The Ministry of Transport and Communications of the Republic of Lithuania	The national rule refers to open point 4.2.6.2.4 Aerodynamic effects for 1520 mm,1524 mm or 1600 mm and 1668 mm track gauge systems: cross wind in Loc&Pas TSI 1302/2014.	Accepted
<u>6.1.2.2-Maximum pressure variation in tunnels</u> List of the railway subsystem technical rules in use in the Republic of Lithuania, adopted on 25.04.2005 by Order No. 3-146 by The Ministry of Transport and Communications of the Republic of Lithuania	The national rule refers to open point 4.2.6.2.3 Aerodynamic effects for 1520 mm,1524 mm or 1600 mm and 1668 mm track gauge systems: maximum pressure variations in tunnels in Loc&Pas TSI 1302/2014.	Accepted
<u>8.4.2.1.1-Rail return current, 8.4.2.1.2-Heating cable interference current,8.4.2.2.1-Electromagnetic fields/Induced voltages in the track/under the vehicle, 8.4.2.3-Vehicle entrance impedance</u>	The national rule refers to open points: <ul style="list-style-type: none"> - 4.2.3.3.1.1 - Compatibility with track circuits- EMC- EMC interference - 4.2.3.3.1.2 - Compatibility with axle counters – EMC - Electromagnetic fields (frequency management for 1520 and 1524 mm system) - 4.2.3.3.1.1 - Compatibility with track circuits – Vehicle design: minimum impedance between pantograph and wheels of the train In Loc&Pas TSI 1302/2014 	See section : Analysis of rules related to compatibility with TDS

5.17.2.2.2 Requirements covering specific cases not described in TSIs

No requirements

5.17.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>9.6-Recording device</u> Clause 11.9 of Regulation on Technical Railways Operation, adopted on 20.09.1996 by Order No.	The national rule refers to clause 4.2.9.6 of Loc&Pas TSI 1302/2014. The rule cover the Lithuanian Class B system.	Accepted

National rules	Agency evaluation	Agency evaluation status
297 by The Ministry of Transport and Communications of the Republic of Lithuania; Clause 24 of Directions of application of relevant clauses of Regulation on Technical Railways Operation, adopted on 19.02.1997 by Order No. 37 by LLC "Lithuanian Railways" general director		

5.17.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<p><u>2.2.1-Automatic coupling</u> Regulation on Technical Railways Operation, adopted on 20.09.1996 by Order No. 297 by The Ministry of Transport and Communications of the Republic of Lithuania, GOST 3475-81 Automatic coupler equipment of railway rolling stock for railway track gauge 1520 (1524) mm. Assembling dimensions, GOST 21447-75 Coupler contour line. Dimensions”</p> <p><u>2.2.4-Buffering</u> GOST 22253-76 Friction draft gears for 1520 mm gauge railway rolling stock. Specifications</p>	<p>The national rule refers to clauses 4.2.2.2.2,4.2.2.2.3 and 4.2.2.2.4 of Loc&Pas TSI 1302/2014.</p> <p>The rule specifies the SA3 coupler type as it is not defined in the TSI Loc&Pas.</p>	<p>Accepted</p> <p>Action ERA : Next revision of Loc&Pas TSI should cover the specification of SA3 coupler.</p>

5.17.2.4 Analysis of rules related to compatibility with TDS

National rules	Agency evaluation	Agency evaluation status															
<p><u>8.4.2.1.1-Rail return current, 8.4.2.1.2-Heating cable interference current</u> <i>Requirements for Diesel Multiple Units:</i> НБ ЖТ ЦТ 01-98 Дизель-поезда. Нормы безопасности (Dyzeliniai traukiniai. Saugos normos/ Diesel Multiple Units. Safety Standard) Table I (2) - § 4.1, Annex A.36 <i>Requirements for Diesel locomotives :</i> НБ ЖТ ЦТ 02-98, Тепловозы. Нормы безопасности (Šilumvežiai. Saugos normos/ Diesel locomotives. Safety Standard) Table I (2) - § 4.1, Annex A.29 <i>Requirements for Electric Multiple Units :</i> НБ ЖТ ЦТ 03-98 Электropоезда. Нормы безопасности (Elektriniai traukiniai. Saugos normos/ Electric Multiple Units. Safety Standard) Table I (2) - § 4.1, Annex A.38 <i>Requirements for Electric locomotives:</i> НБ ЖТ ЦТ 04-98. Электровозы. Нормы безопасности (Elektrovežiai. Saugos normos/ Electric locomotives. Safety Standard) Table I (2) - § 4.1, Annex A.35</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency : Based on the outcome of the bilateral discussions: Proposal to add to the national rule:</p> <table border="1"> <thead> <tr> <th>Track Circuit Info (Manufacturer-Type)</th> <th>Frequency Band</th> <th>Part of the FM Circuits listed in</th> </tr> </thead> <tbody> <tr> <td>25 Hz Track Circuits</td> <td>25 Hz</td> <td></td> </tr> <tr> <td>50 Hz Track Circuits</td> <td>50 Hz</td> <td></td> </tr> <tr> <td>DC Track Circuits</td> <td>0 Hz</td> <td></td> </tr> <tr> <td>TRQ-AT CS7 (AHS-310)</td> <td>420, 480, 580, 720, 780 Hz</td> <td></td> </tr> </tbody> </table>	Track Circuit Info (Manufacturer-Type)	Frequency Band	Part of the FM Circuits listed in	25 Hz Track Circuits	25 Hz		50 Hz Track Circuits	50 Hz		DC Track Circuits	0 Hz		TRQ-AT CS7 (AHS-310)	420, 480, 580, 720, 780 Hz		<p>Accepted</p> <p>Action ERA/ NSA LT : The NR is drafted according to the proposal</p>
Track Circuit Info (Manufacturer-Type)	Frequency Band	Part of the FM Circuits listed in															
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<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u></p>	<p>The national rule refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014.</p>	<p>Accepted</p>															

<p>EN 50238 Compatibility between rolling stock and train detection systems and CLC/TS 50238-3 Compatibility between rolling stock and train detection systems - part 3 compatibility with axle counters - Axle counters only on secondary lines, no national frequency management available and applicable.</p>	<p>Agency : Based on the outcome of the bilateral discussions: Proposed for a national rule</p> <table border="1"> <thead> <tr> <th>Axle counter info (Manufacturer-Type)</th> <th>Frequency Band</th> <th>Part of the FM of ERA/ERTMS/033281 listed in Annex A1 of TS EN 50238-3</th> </tr> </thead> <tbody> <tr> <td>Frauscher RSR100</td> <td>250 kHz +/- 1,0 kHz</td> <td>Yes</td> </tr> <tr> <td>Frauscher RSR123</td> <td>1 000 kHz +/- 1,0 kHz 1 228,8 kHz +/- 1,0 kHz</td> <td>Yes</td> </tr> <tr> <td>Frauscher RSR122</td> <td>1 110 kHz +/- 15 kHz 1 015 kHz +/- 15 kHz</td> <td>No</td> </tr> <tr> <td>Bombardier ELS-95</td> <td>46.81 kHz and 48.19 kHz</td> <td>Yes</td> </tr> </tbody> </table> <p>The susceptibility limits for RSR122 according to the frequency management of ERA/ERTMS/033281 are as follow (Info Frauscher):</p> <table border="1"> <thead> <tr> <th></th> <th>Frequency range [kHz]</th> <th>Filter curve 3 dB / 20 dB bandwidth [kHz]</th> <th>Filter order</th> <th>Emission limit X Axis [dbuA/m] (RMS)</th> <th>Emission limit Y Axis [dbuA/m] (RMS)</th> </tr> </thead> <tbody> <tr> <td>RS R1 22 Sys1</td> <td>1130 +/- 15</td> <td>+/- 3,0 / +/- 10,0</td> <td>4</td> <td>99,7</td> <td>78,6</td> </tr> <tr> <td>RS R1 22 Sys2</td> <td>1035 +/- 15</td> <td>+/- 3,0 / +/- 10,0</td> <td>4</td> <td>99,8</td> <td>78,3</td> </tr> </tbody> </table> <p>Weighting of short duration interference:</p> <table border="1"> <thead> <tr> <th></th> <th>Increasing of magnetic field Maximum time interval of exceedances</th> <th>Increasing of magnetic field Maximum time interval of exceedances</th> </tr> </thead> <tbody> <tr> <td>RSR122 Sys1</td> <td>6 dB / 0,5 x Tint</td> <td>12 dB / 0,25 x Tint</td> </tr> <tr> <td>RSR122 Sys2</td> <td>6 dB / 0,5 x Tint</td> <td>12 dB / 0,25 x Tint</td> </tr> </tbody> </table>	Axle counter info (Manufacturer-Type)	Frequency Band	Part of the FM of ERA/ERTMS/033281 listed in Annex A1 of TS EN 50238-3	Frauscher RSR100	250 kHz +/- 1,0 kHz	Yes	Frauscher RSR123	1 000 kHz +/- 1,0 kHz 1 228,8 kHz +/- 1,0 kHz	Yes	Frauscher RSR122	1 110 kHz +/- 15 kHz 1 015 kHz +/- 15 kHz	No	Bombardier ELS-95	46.81 kHz and 48.19 kHz	Yes		Frequency range [kHz]	Filter curve 3 dB / 20 dB bandwidth [kHz]	Filter order	Emission limit X Axis [dbuA/m] (RMS)	Emission limit Y Axis [dbuA/m] (RMS)	RS R1 22 Sys1	1130 +/- 15	+/- 3,0 / +/- 10,0	4	99,7	78,6	RS R1 22 Sys2	1035 +/- 15	+/- 3,0 / +/- 10,0	4	99,8	78,3		Increasing of magnetic field Maximum time interval of exceedances	Increasing of magnetic field Maximum time interval of exceedances	RSR122 Sys1	6 dB / 0,5 x Tint	12 dB / 0,25 x Tint	RSR122 Sys2	6 dB / 0,5 x Tint	12 dB / 0,25 x Tint	<p>Action ERA/NSA LT : The NR is drafted according to the proposal</p>
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<p><u>8.4.2.3-Vehicle entrance impedance</u> LST EN 13260; 110-K Instruction of the use and maintenance of railcars, motor vehicles, other light and special vehicles, § 7.3.9</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency : The rule is related to vehicle entrance impedance</p>	<p>Accepted Action NSA LT: Needs to check the NR as the order 110-K has changed.</p>																																										

5.17.3CCS onboard Subsystem

1.1.1.1.1 Requirements covering open points for ETCS Baselines 2 and 3

The parameters below contain national rules to cover the open points:

None

The parameters below do not contain national rules to cover the open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.2, 12.2.5.6 B2 “braking aspects”
- 12.2.5.4; 12.2.5.5 B2 “ETCS DMI”

5.17.3.1 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature : RDD RDD : published No rules for ETCS and GSM-R are published, it is planned to implement ETCS in 2020.		
	LoP version : New		
	If no, forecast		
Assessment status	Taken into account by MS : Yes Agency: Rules checked, concerning the requirements related to STM, Lithuania should provide feedback what are the detailed requirements and to which ETCS Baseline they belong.		
Amount of remaining NRs in addition to latest TSIs	3		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	<u>2 parameters:</u> 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	<u>1 parameter:</u> 12.2.2-STM requirements	

5.17.3.1.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.1-Non-GSM-R radio system</u> Network Statement of public railways of Lithuania points 3.3.3.3 Requirements for Diesel Multiple Units: НБ ЖТ ЦТ 01-98 Дизель-поезда. Нормы безопасности (Dyzeliniai traukiniai. Saugos normos/ Diesel Multiple Units. Safety Standard) Table I (2) - § 4.2, Annex A.37 Requirements for Diesel locomotives: НБ ЖТ ЦТ 02-98, Тепловозы. Нормы безопасности (Šilumvežiai. Saugos normos/ Diesel locomotives. Safety Standard) Table I (2) - § 4.2 and § 4.3 Annex A.30 and A.31 Requirements for Electric Multiple Units : НБ ЖТ ЦТ 03-98 Электropоезда. Нормы безопасности (Elektriniai traukiniai. Saugos normos/ Electric Multiple Units. Safety Standard) Table I (2) - § 4.3 and § 4.4 Annex A.40 and A.41 Requirements for Electric locomotives:</p>	<p>The national rules refers to clauses 4.2.5.1 (Radio communication with the train) of CCS TSI. Agency : They are related to the class B radio communication system.</p>	Accepted

National rules	Agency evaluation	Agency evaluation status
<p>НБ ЖТ ЦТ 04-98. Электровозы. Нормы безопасности (Elektrovežiai. Saugos normos/ Electric locomotives. Safety Standard) Table I (2) - § 4.3 and § 4.4 Annex A.37 and A.38</p>		
<p><u>12.2.1-National on-board signalling systems</u> Class B ALSN mandatory on-board -(Network Statement of public railways of Lithuania) Point 3.3.3.1 - Automatic locomotive signalisation.</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency : They are related to class B train protection system.</p>	<p>Accepted</p>

5.17.3.1.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.2-STM requirements</u> Registration, control and management of vehicles. Functional and technical requirements of signalisation equipment, confirmed on 4th of September 2017 by the order of general director of JSC "Lithuanian railways" (document of public IM)</p>	<p>Valid NTR in case the rules are related to an STM</p>	<p>Accepted</p>

5.18 Member state LU

5.18.1 Summary of actions

Action	Responsible
NSA LU to provide the required additional information for some rules	NSA LU
ERA/NSA LU to finalise the dialog on the rules under review	NSA LU/ ERA
NSA LU to state its position regarding the ERA assessment	NSA LU
NSA LU to publish the cleaned NRs in RDD	NSA LU
NSA LU and ERA to take into account the list of actions referred in the detailed assessment	NSA LU/ ERA

5.18.2 Rolling Stock Subsystem

5.18.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table, based on the rules published in RDD
	RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	Assessment sent to the MS, discussion ongoing for some rules Taken into account by MS: see in the detail assessment
Amount of remaining NRs in addition to latest TSIs	39

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	9 parameters: 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.2.4-Psophometric current 8.4.2.5-Transverse voltage limits for compatibility voice/data circuits 8.4.3.1-Maximum electro-magnetic fields 8.4.3.2-Induced interference current/voltage 8.4.3.3-Psophometric current 8.7.4-Technical systems in potentially explosive atmospheres 14.1-Design, operation and maintenance constraints for the transport of dangerous goods	Other directives covering : <ul style="list-style-type: none"> • EMC directive • Dangerous goods •
Rules related to documentation	Parameters listed in section 3.2.4	2 parameters: 1.1-General documentation 1.4-National requirement for testing	Rules refer to documentation for vehicle authorisation, and rules for organisation of tests.

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	
Other rules related to compatibility with network / legacy system	See subsection 2 below	12 parameters: 3.3.5-Sanding system 5.1.1-Exterior doors 7.2.2.4-Lamp controls 8.2.1.3-Regenerative braking 8.2.3.4-Detection of contact strip breakage 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 9.7-Remote control function from the ground 10.1-Fire protection concept and protection measures 12.2.4.4-Metal mass of a vehicle 13.1-Specific items to place on-board 13.2-Ferry transport 14.2-Specific facilities for the transport of freight	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameters	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	6 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.1.3-Interference current under the vehicle 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 12.2.4.3-Metal and inductive components-free space between wheels 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.18.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.18.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>3.3.3-Wheel</u> Cast wheels, non conforming to CEN/TS 13979-2 and CEN/TS 15718, are not accepted. Description: see WAG TSI 1236/2013 pt 6.1.2.3 b) (hidden open point)</p>	The national rules refers to clause 6.1.2.3b of WAG TSI	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>3.3.2-Wheelset (complete)</u> For variable gauges: serie of UIC 430-1 to 430-5; 508-3; 510-4</p>	<p>The national rules refers to open point 4.2.3.5.2.3, Variable gauge wheelsets, Variable gauge wheelsets of Loc&Pas TSI 1302/2014.</p>	<p>Accepted</p>
<p><u>3.3.2-Wheelset (complete)</u> For variable gauges: serie of UIC 430-1 to 430-5; 508-3; 510-4</p>	<p>The national rule refers to open points 4.2.3.6.6, Variable gauge wheelsets - Assessment concerning the following requirement: The changeover mechanism of the variable gauge wheelset shall ensure the safe locking in the correct intended axial position of the wheel and any brake equipment attached of WAG TSI 321/2013</p>	<p>Accepted</p>
<p><u>3.3.4-Wheel/rail interaction influencing systems</u> <u>Wheel-rail interface (wheel flanges lubrication)</u> EN 15427</p> <p>If the vehicle is fitted with flange lubricators, the grease must be biodegradable according to test CEC L-33-A-93; equivalent standard AFNOR NFT 60-198. Description: See also: 7.5.3.1 in HS-CR Loc&Pas TSI:2014 7.5.3.1 in CR Loc&Pas TSI:2011 4.2.3.8 in HS RST TSI:2008</p>	<p>The national rules refers to clauses 7.5.3.1, Track interaction (clause 4.2.3) - Flange or track lubrication of Loc&Pas TSI 1302/2014.</p>	<p>Accepted</p>
<p><u>3.3.8-Axle bearing condition monitoring</u> UIC 501 UIC 615-1 EN 15437-1 EN 15437-2 Description: No HABD installed on Luxembourg network. Temperature limits reached in service shall be defined and recorded in the technical documentation. If an on board detection equipment is installed, it has to be described in the operating and the maintenance documentation.</p>	<p>The national rule refers to open point 4.2.3.4, Axle bearing condition monitoring - Option on board equipment of TSI of WAG TSI 321/2013.</p>	<p>Accepted</p>
<p><u>4.7.3-Magnetic track brake</u> The electromagnetic brake or other brakes which act by friction on the rail must only be used as an emergency brake. UIC 541-06 or EN 16207 Description: See also ERA/ ERTMS/ 033281 in the recent version</p>	<p>The national rules refers to clauses 4.2.11.a, Use of magnetic/eddy current brakes of CCS TSI. Agency: Usage as emergency brake is already covered in the TSI: LOC PAS TSI 1302 2014 - 4.2.4.8.2 Magnetic track brake (2) A magnetic track brake is allowed to be used as an emergency brake, as mentioned in the TSI INF, clause 4.2.6.2.2. Reference to open point is not relevant here as the open point is related to train detection system.</p>	<p>Not accepted ERA/NSA LU to further discuss the rule.</p>

National rules	Agency evaluation / related open points	Agency evaluation status
	<p>NSA LU: The OP refers to TSI CCS:2012, applicable for existing vehicles, being conform to a CCS TSI:2012 which weren't at the same time assessed and conform to a Loc&Pas TSI:2014 version, issued 2 years later than this version of CCS TSI.</p>	
<p><u>4.7.4-Eddy current track brake</u> Use not authorised in Luxembourg. As consequence, it must be possible to de-activate this braking system. GI.II.STC-VF</p>	<p>The national rules refers to clauses 4.2.4.8.3, Braking system independent of adhesion conditions: eddy current track brake of Loc&Pas TSI 1302/2014.</p>	Accepted
<p><u>6.2.3.4-Ballast pick-up and projection onto neighbouring property</u> Elements which guarantee the good performance of the rolling stock in relation to this topic must be presented (a line test may be requested). EN 14067-1 EN 14067-2 EN 14067-4 Description: This item doesn't concern rolling stock running lower than 190 km/h.</p>	<p>The national rules refers to open point 4.2.6.2.5, Aerodynamic effect on ballasted track for RST of design speed ≥ 190 km/h of Loc&Pas 1302/2014</p>	Accepted
<p><u>8.3.1-Energy consumption measurement</u> TSI vehicles: Handled in application of the Luxembourg Railway Network Statement Document Art 6.2.4.1 Description: UIC 930 is a recommended leaflet for the exchange of data for the invoicing of cross frontier railway energy.</p>	<p>The national rules refers to open point 4.2.8.2.8 & Appendix D - On-board energy measurement system of Loc&Pas TSI 1302/2014</p>	Accepted
<p><u>10.1-Fire protection concept and protection measures</u> Series of EN 45545 Description: If the vehicle is fitted with an extinguishing system, this has to be evaluated as fixed in EN 45545-6.</p>	<p>The national rule refers to clause 4.2.10.3.4, Fire Containment and Control Systems, Assessment procedure of efficiency for controlling fire and smoke developed by CEN according to a request for standard issued by ERA of Loc&Pas TSI 1302/2014. Agency: EN from EN 45545 series are already referenced in the TSI requirements. EN 45545-6 doesn't cover the identified open point NTR Title should be replaced by description, to confirm the 45545-6 is covering the OP. NSA LU: OP in the TSI: The assessment of other FCCS is an open point EN 45545-6: 5.4.5 Fixed fire fighting equipment For automatic systems using extinguishing media or discharge mechanisms which may be hazardous to passengers and staff and which are</p>	Not accepted

National rules	Agency evaluation / related open points	Agency evaluation status
	<p>fitted and may be active in areas where passengers and staff may be present, visible and audible local alarms shall be given with a sufficient delay between alarm and discharge for evacuation to be effected.</p> <p>° including all the other specific requirements like cutting-of of energy, closing of doors,.....</p> <p>So the demonstration of conformity to EN covers the OP for LU. At the same time LU is open for all alternative proposal by the Agency to be closed during the review of the TSI.</p>	

5.18.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.18.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>3.3.5-Sanding system</u> Wheel-rail interface (sanding): see the specific case §7.6.2.7 in TSI CCS:2016 for High-speed and Conventional rolling stock.</p> <p>Reference document: GI.II.STC-VF Description: It exists also a leaflet UIC 612-2</p>	<p>The national rules refers to clause 7.2.9.8 of CCS TSI.</p> <p>Agency: Already covered in CCS TSI § 7.6.2.7, shall be removed from RDD.</p> <p>NSA LU: NSA LU can't accept this comment because TSI Loc&Pas:2014 refers in Annex J Table J-2 only to ERTMS/033281 rev 2.0. This document is an old version and there is no reference to TSI CCS itself. In TSI Loc&Pas is written "Appendix J-2, index 1, clause 3.1.4; 'sand characteristics' is part of in this specification" and in 3.1.4.2 ERTMS document mentions "The characteristics of sand applied to the tracks are: [open point]." So there is no clear traceability and clear indication for the applicant what to apply and this NTR is needed by the applicant to have a clear statement.</p>	<p>Not accepted</p>
<p><u>7.2.2.4-Lamp controls</u> See the note in parameter 4.2.7.1.4.in LOC & PAS TSI 1302/2014.</p> <p>Description: Flashing of the marker lights is part of the train protection during an emergency situation (RGE § 34.02).</p>	<p>The national rules refers to clauses 4.2.7.1.4 Loc&Pas TSI 1302/2014.</p> <p>Agency: The rule" Flashing of the marker lights is part of the train protection during an emergency situation (RGE § 34.02).""is not a rule for vehicle authorisation, this is dealt under the SMS of Railway undertaking. There could be many ways that does not require a technical change of a vehicle.</p> <p>NSA LU: TSI Loc&Pas 4.2.7.1.4 Lamp controls mentions: "Note: where it is intended to use lights to</p>	<p>Not accepted</p> <p>NSA LU/ERA to further clarify the rule</p>

National rules	Agency evaluation	Agency evaluation status
	<p>inform of an emergency situation (operating rule, see TSI OPE), this should be done only by means of head lamps in flashing/blinking mode."</p> <p>So the indication of RGE § 34.02 confirms that exactly this intention is given in LU. By this way the vehicles has to dispose about a dedicated lamp control to get an authorisation in LU.</p>	
<p><u>8.2.1.3-Regenerative braking</u> GI.II.STC-VF EN 50388</p>	<p>The national rules refers to clauses 4.2.8.2.3 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The IM specification GI.II.STC-VF does not contain information or restriction on this subject. EN50388 is already mentioned by Loc&Pas TSI (EN 50388:2012 12.1.1) Please clarify the requirement. Allowed? Allowed under conditions? Please provide also the applicable reference in the quoted document.</p> <p>NSA LU: A NTR isn't not necessary a restriction and the document referenced by TSI Loc&Pas EN 50388:2012 is missing the Corrigendum, published on 2013-08-30 for 12.1.1. (Meanwhile DC 3kV is abrogated in LU). At the same time, the values in EN 50388 table F are missing for LU, so the missing indications in the EN are closed with the IM document (transparency for the applicant to find the needed data). LU may delete this NTR on request of the Agency but the applicant will not have the information available.</p>	Under review
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> GI.II.STC-VF</p>	<p>The national rules refers to clauses 4.2.8.2.7 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Please indicate the relevant section of GI.II.STC-VF.</p>	Under review NSA LU to provide the missing information
<p><u>9.7-Remote control function from the ground</u> TSI Loc&Pas:2014 § 4.2.9.3.6 EN 50239 + Automatic Vigilance Device (fr. VA) + swing detection system Description: The conformity certificate shall specify the methods of use and the associated levels of safety.</p> <p>The applicant must consult the national authority concerned for the use of the frequency bands.</p> <p>(see TSI CCS Focus Group List of Actions 55.3 & 55.4)</p>	<p>The national rules refers to clauses 4.2.9.3.6 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The § 4.2.9.3.6 of the Loc&Pas TSI 2014 covers the subject. There's no reference to a specific standard. The TSI AG refers to EN 50239 - it cannot be made mandatory in a NTR. Requirement shall be clarified.</p> <p>NSA LU: Please consider also the description. Meanwhile EN 50239:2018 exists but TSI AG mentions still 50239:1999. At the same time following supplementary requirements and information are still missing in Loc&Pas TSI: - Automatic Vigilance Device (fr. VA) + swing detection system</p>	Under review NSA LU and ERA to further discuss.

National rules	Agency evaluation	Agency evaluation status
	- TSI CCS Focus Group List of Actions 55.3 & 55.4 LU may to delete this NTR on request of the Agency so that the applicant is missing the information.	
<p><u>10.1-Fire protection concept and protection measures</u> The number of portable fire extinguishers is considered as sufficient if each driver's cabin is fitted with at least one appropriate fire extinguisher. Every passenger vehicle, including intermediary vehicles, must be fitted with at least one appropriate fire extinguisher nearby each access platform.</p> <p>The fire detectors have to fulfill EN 54-07 and EN 50155. Description: Supplementary information to the sufficient number of fire extinguisher and for the use of conform fire detectors.</p>	<p>The national rule refers to clause 4.2.10.3.1 of CCS TSI. Agency: The § 4.2.10.3.1 of the Loc&Pas TSI 2014 covers the subject. - Only quantity for each driving cab. The TSI AG already refers to EN 45545-6:2013 cl 6.3, that covers the determination of the quantity of fire extinguisher. The § 4.2.10.3.2 covers the fire detection device. No specific standards. The TSI AG refers to EN 45545-6 § 5.2, 5.3 and 5.4. NSA LU: The EN repeats the not very clear formulation as written also in the TSI: "Railway vehicles shall be equipped with adequate and sufficient fire extinguishers". How can be objectively determined if adequate the number and the location of fire extinguisher? LU can confirm for each safety analysis that more extinguishers are better and safer as with the presented solution. LU defined a minimum requirement for the applicant (Informal in the description). LU accepts also an alternative proposal from the Agency to close this open point or to use also ANMC's like other MSs. The § 4.2.10.3.2 covers the fire detection device BUT doesn't refer to EN 54-07 and EN 50155 to avoid the use of former ionisation detectors</p>	<p>Not accepted NSA LU and ERA to further discuss.</p>
<p><u>12.2.4.4-Metal mass of a vehicle</u> GI.II. STC - VF (see pt 20.1.2) Description: because of hidden open points in TSI CCS:2016 in 7.5 and interactions with other open points in related parameters as p.ex 3.2.3; 3.3.4; 3.3.5; 8.4.2.1; 12.2.4.4;</p>	<p>Agency: No open point anymore, so no NTR expected here. The reference GI.II. STC - VF (voir pt. 20.1.2) should be added to the parameter 12.2.4.5- Compatibility with fixed installations of CCS. NSA LU: Please indicate how the mentioned open points in column AC are closed. There's no new version of the TSI published actually. NSA LU agrees to waste this NTR when the OP is closed in the TSI</p>	<p>Under review NSA LU and ERA to further discuss.</p>
<p><u>13.1-Specific items to place on-board</u> TSI Loc&Pas:2014 § 4.2.2.2.4 and § 4.2.9.4 Description: See also parameter 9.5.3 and 10.2.2 For supplementary items, to place on-board for</p>	<p>The national rules refers to clauses 4.2.9.4, of Loc&Pas TSI 1302/2014. Agency: Not in scope of the vehicle authorisation process but an OPE topic. NSA LU:</p>	<p>Not accepted NSA LU and ERA to further discuss.</p>

National rules	Agency evaluation	Agency evaluation status
national requirements, the applicant has to contact the Infrastructure Manager.	Not correct because it's a combination between the needed items (13.1 informal) and the needed place (see parameter 9.5.3 and 10.2.2) and comes from the mismatches in the LoP 2299. The best solution should be to delete this parameter in the LoP. So it's used as information that the applicant has to inform himself how much place he's needing to place on board all those kinds of equipment and could also be an ANMC.	
<u>13.2-Ferry transport</u> when foreseen: - for freight wagons UIC 507 - for coaches UIC 567 + UIC 569 - for railcars UIC 627-5 Description: see ERATV pt 4.8.8 / not covered by TSIs	Agency: This parameter is not covered by TSI, not on the authorisation scope and therefore not in the scope of ERA assessment. It will be decided at later stage with the Commission how to deal with these rules.	Not reviewed
<u>14.2-Specific facilities for the transport of freight</u> Wagons which are inserted in a passenger train must comply with the appropriate criteria in the current version of Loc&Pas TSI to assure the continuity of all the functional train connections. Description: This point isn't handled in TSI Wagon.	Agency: Operational issue: wagons not being able to be integrated in a specific train composition shall be covered by the SMS of the RU. NSA LU: Not correct because such kind of wagons have to fulfil some requirements of UIC leaflet (list of items to cover) and Loc&Pas TSI (requirements to cover these items) and which have to be assessed by a NoBo. Problem comes from the last review where the remarks from the MSs were not considered and this part of the scope of the vehicles wasn't considered and also not mentioned in the scope of the TSIs. On the Agency request LU may repeal the rule but in opposition to LU position to support all possible kind of railway traffic.	Nnot accepted

5.18.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements

5.18.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> GI.II.STC-VF Serie EN 50238 EN 50592 Description: Open Points in ERA/ERTMS/033281 version 4.0 - 3.2.2.4 - 25kV AC, 50Hz Electromagnetic interference limits for traction current Open Points in LOC & PAS TSI 1302/2014	Agency: The EN 50238 and -2 are relevant. Please indicate the relevant section of GI.II.STC-VF. The EN 50592 is not applicable here, as related to axle counters. The EN 50367 also is not applicable here, NSA LU:	Not accepted NSA LU and ERA to further discuss.

National rules	Agency evaluation	Agency evaluation status
<p>- 4.2.3.3.1.1 - Compatibility with track circuits- EMC- EMC interference - 4.2.3.3.1.2 - Compatibility with axle counters- EMC- EMC interference</p> <p>Open Point in CCS TSI 2012/88/EU, amended by 2012/696/EU - 4.2.11a - DC and low frequency components of traction current</p>	<p>Please recheck 5.1.3 and 5.2.4 in EN 50592</p>	
<p><u>8.4.2.1.2-Heating cable interference current</u> GI.II.STC-VF Series EN 50238 UIC 550</p>	<p>Agency: The EN 50238 and -2 are relevant. UIC 550-3 is applicable here. Please indicate the relevant section of GI.II.STC-VF.</p>	<p>Not accepted</p>
<p><u>8.4.2.1.3-Interference current under the vehicle</u> GI.II.STC-VF Serie EN 50238 EN 50367 EN 50592 Description: Open Points in ERA/ERTMS/033281 version 4.0 - 3.2.2.4 - 25kV AC, 50Hz Electromagnetic interference limits for traction current</p> <p>Open Points in LOC & PAS TSI 1302/2014 - 4.2.3.3.1.1 - Compatibility with track circuits- EMC- EMC interference - 4.2.3.3.1.2 - Compatibility with axle counters- EMC- EMC interference</p> <p>Open Point in CCS TSI 2012/88/EU, amended by 2012/696/EU - 4.2.11a - DC and low frequency components of traction current</p>	<p>Agency: The EN 50238 and -2 are applicable. Please indicate the relevant section of GI.II.STC-VF. The EN 50592 is not applicable here, as related to axle counters. The EN 50367 also is not applicable here NSA LU: NSA LU doesn't agree with the Agency comment because this parameter is also related with the open point in LOC & PAS TSI 1302/2014 - 4.2.3.3.1.1 - Compatibility with track circuits- EMC- EMC interference - 4.2.3.3.1.2 - Compatibility with axle counters- EMC- EMC interference</p>	<p>Not accepted NSA LU and ERA to further discuss.</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> GI.II.STC-VF EN 50238 EN 50592 Description: Open Point in HS RST TSI 2008/232/CE Annex L 4.2.6.6.1 - Interference generated on the signaling system and the telecommunications network: (clause) Open Points in ERA/ERTMS/033281 version 4.0 3.2.3 - Use of magnetic / eddy current brakes Open Points in LOC & PAS TSI 1302/2014 4.2.3.3.1.1 - Compatibility with track circuits – Electromagnetic compatibility - Electromagnetic</p>	<p>Agency: Here it is expected a NR only if on the LU network are installed axle counters not mentioned in Annex A of EN 50238-3, so only EN 50238 and -3, EN 50592 are relevant here. If necessary please indicate the relevant section of GI.II.STC-VF. NSA LU: Agreed with the proposal, but EN 50238-3 still a TS and final draft version as EN not yet published</p>	<p>Not accepted NSA LU and ERA to further discuss.</p>

National rules	Agency evaluation	Agency evaluation status
<p>fields (requirements for electromagnetic fields related to compatibility of rolling stock 4.2.3.3.1.2 - Rolling stock characteristics for compatibility with train detection system based on axle counters -EMC Open Points in CCS TSI 2012/88/EU, amended by 2012/696/EU 4.2.11.a - Electromagnetic interferences (electromagnetic fields) 4.2.11.a - Electromagnetic interferences (traction current)</p>		
<p><u>12.2.4.3-Metal and inductive components-free space between wheels</u> TSI CCS (consolidated version) + ERA/ERTMS 033281 in the recent version EN 50238 series GI.II.STC-VF Description: Open Points in : - LOC & PAS TSI 1302/2014, parameter 4.2.3.3.1.2 -Compatibility with axle counters – Vehicle design - metal free space - CCS TSI 2012/88/EU, amended by 2012/696/EU, parameter 4.2.10.a -Metal and inductive components free space between wheels</p>	<p>Agency: Please indicate if the last version of ERA/ERTMS 033281 is applicable to all vehicles and make reference to the relevant section of the GI.II.STC-VF. NSA LU: ERA/ERTMS 033281 is applicable in the recent version and which is actually version 4.0 of 20/09/2018. The TSIs are actually referring to older versions.</p>	<p>Under review NSA LU and ERA to further discuss.</p>
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> TSI CCS (consolidated version) + ERA/ERTMS 033281 in the recent version EN 50121 series EN 50238 series GI.II.STC-VF Description: see parameter 3.3.5</p>	<p>Agency: No requirements in the CCS TSI or interface document as it is an open point. Here is expected requirements related to for example dynamic shunting. EN 50121 and 50238 are not relevant here. Please specify the applicable reference(s) of GI.II.STC-VF NSA LU: (TSI vehicles) - OP in ERA/ERTMS version 2.0 Still sanding SC case for LU. At the same time the actual ERA/ERTMS links don't reflect to the actual version 4.0 of 20/09/2018. So GI.II.STC-VF is needed when former versions. Comes from a mismatch in the Agency documentation in the TSIs - the updates of the technical documents are not aligned. On the Agency request the EN can be deleted but the applicants are losing the information (see also new prEN 50238 serie, in review but not yet published).</p>	<p>Under review NSA LU and ERA to further discuss.</p>

5.18.3 CCS onboard Subsystem

5.18.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover the open points:

- 12.2.5.2, 12.2.5.6 B2 “braking aspects

The parameters below do not contain national rules to cover the open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.4; 12.2.5.5 B2 “ETCS DMI”

5.18.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature: Excel table, based on the rules published in RDD RDD: ready for upload in RDD		
	LoP version: New list as in Decision 2015/2299/EU		
	-		
Assessment status	Assessment sent to the MS, discussion ongoing for some rules Taken into account by MS: see in the detail assessment		
Amount of remaining NRs in addition to latest TSIs	9		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	1 parameter: 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	7 parameters: 12.1.2.1-Use of hand portables as cab mobile radio 12.1.2.2-Other GSM-R requirements 12.2.3-Transitions 12.2.5.2-Braking safety margins 12.2.5.6-Interface with service brake 12.2.5.7-Other ETCS requirements (related to existing not interoperable networks) 12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances	

5.18.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.2.1-National on-board signalling systems</u> EN 50126 EN 50128 EN 50129 Class B national system: For the system Memor II+, the details are specified in the 'Instruction de Service No 22'. This document is available on the website of ACF (added because of removal from the TSI CCS Annex B)	Agency: Is it mandatory for authorisation? - Please clarify the requirement scope. The rule has to be revised in RDD by adding information if it is mandatory. NSA LU: The rule is valid until 31/12/2019. So the NTR is abrogated from this date. New vehicles aren't allowed to be equipped with a class B system but with ETCS. Existing vehicles, having still a class B	Under review NSA LU and ERA to further discuss.

National rules	Agency evaluation	Agency evaluation status
Description: limited to existing vehicles, having a valid authorisation of placing in service for Luxembourg.	system are allowed until 31/12/2019 when the transition phase comes to its end to change from Class B to ETCS.	
<u>12.2.1-National on-board signalling systems</u> For new authorisations of placing in service or for renewal or upgrades of the existing Class B system, only the installation of ETCS 2.3.0.d is allowed.	Agency: Can you confirm that it is not allowed to make any changes on the existing class B system unless for changes to ETCS 2.3.0. All actual authorisations require ETCS B2. To be clarified if B3 is allowed too in the identified cases. Please clarify if it is possible to renew or upgrade the existing class B system. In case an Class B upgrade is allowed please present the identified safety issues. NSA LU: See also the above rule (ID 47016). Only ETCS systems, compatible to version 2.3.0.d are accepted, supplementary information in IM document. Rule will be revised	Under review NSA LU to provide the revised rule

5.18.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<u>12.1.2.1-Use of hand portables as cab mobile radio</u> Application of TSI CCS 2012/88/EU, including Decisions 2012/696/EU and 2015/14/EU Description: Compatibility with: EIRENE FRS version 7.4.0 EIRENE SRS version 15.4.0	The national rules refers to clauses 4.2.4 of CCS TSI. Agency: Not clear what is the requirement, further more not clear what is the additional requirements to the TSI. The indication of compatibility with the previous version of the TSI (radio baseline 0) is not understandable. This basic parameter relates to the possibility of using handheld instead of a cab radio installed on-board. For TSI compliant vehicles, this does not make sense: the TSI compliant vehicle will have a GSM-R cab radio installed on-board. Please clarify the rule, - LU will add information about allowance of hand portables as cab mobile radio Taking into account the feedback from LU the RDD clause 12.1.2 should be the appropriate one. In case there is a problem with former GSM-R versions (deficiency in former Annex A) this should clearly expressed in the NTR. NTR, when reworded is acceptable. NSA LU: (TSI vehicles) Informal because former and/or new TSI versions	Under review NR acceptable when modified and RDD clause changed

National rules	Agency evaluation	Agency evaluation status
	compliant equipment aren't necessary compliant to the GSM-R versions, in service on LU network. (Backward and Upside compatibility are not necessary given, only because of a conformity to a dedicated version of a CCS TSI.	
<p><u>12.1.2.2-Other GSM-R requirements</u> Application of TSI CCS 2012/88/EU, including Decisions 2012/696/EU and 2015/14/EU Description: Compatibility with: EIRENE FRS version 7.4.0 EIRENE SRS version 15.4.0</p>	<p>Agency: Not clear what is the requirement, further more not clear what is the additional requirements to the TSI. The indication of compatibility with the previous version of the TSI is not understandable. Reference is made to the old TSI version (radio baseline 0), especially the disturbance issue is covered in B1. This basic parameter relates to specific/additional requirements to the GSM-R system on-board. There are no indications of what are the additional requirements. The requirements related to protection against interferences are included in the latest versions of the CCS TSI (GSM-R Baseline 1). Please clarify the content and the scope of the rule. NSA LU: (TSI vehicles) All possible modifications as filters, etc. don't have an impact on the compatibility with the actual version requirements of GSM-R network version, used in LU</p>	<p>Under review NSA LU and ERA to further discuss.</p>
<p><u>12.2.3-Transitions</u> Technical file for the transition at the border from one safety system to the other; this occurs in both directions. Functionality test in cooperation with the concerned Infrastructure Managers and the national safety authorities. Description: The border transitions shall be managed by bilateral agreements between the concerned Infrastructure Managers.</p>	<p>Agency: Rule temporary allowed, see following note. Note: Topic to be discussed when ERTMS-Platform testing activity is finalised. It has to be avoided that authorised vehicles have to perform (on their own costs) additional tests for each new line being placed in service, to be covered as part of the trackside projects. Today the TTSV, tomorrow the ESC tests. NSA LU:</p>	<p>Accepted</p>
<p><u>12.2.5.2-Braking safety margins</u> GI.II. STC - VF (see pts 24.2 and 24.4) Description: Open points in CCS TSI 2012/88/EU, amended by 2012/696/EU, Annex A 4.2.2.b and Annex A 4.2.3.b</p>	<p>Agency: OK and also part of the Excel table LU04 and LU06 are required, for B2 only. Open point in TSI CCS - Please add information below in the NTR (basic parameter tag in RDD) ETCS Baseline 2</p>	<p>Accepted</p>
<p><u>12.2.5.6-Interface with service brake</u> GI.II. STC - VF (see pts 24.2 and 25)</p>	<p>Agency: OK and also part of the Excel table (LU04) LU04 is required, clause 25 describes the</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>Description: because of different baselines and brake models</p>	<p>different braking models - for B2 only. Open point in TSI CCS Please add in the rule (RDD) ETCS Baseline 2 NSA LU: see ID 47019 (12.2.1) Initially NSA LU had written this information in another parameter but had to delete it because of a 'headline'</p>	
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> GI.II. STC - VF (see chap 23 and 24) Description: national requirements</p>	<p>Agency: OK and also part of the Excel table chapter 24 LU's. Chapter 23 is SMS of the RU Please revise the rule Please indicate in the NTR the is limited to pre-baseline 2 NSA LU: Not correct because the GI.II. STC - VF document is strictly for the autorisation process and not part of the different SMS of the RUs. In the other chapters network version 2.3.0.d is mentioned and columns BC and BD mention the kind of vehicle (TSI or non-TSI).</p>	<p>Under review NSA LU and ERA to further discuss.</p>
<p><u>12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances</u> GI.II. STC - VF (see chap 24) Description: national requirements</p>	<p>Agency: Chapter 24 only states that conditions and restrictions of use need to be separately analysed (case by case). This is business as usual. Agency agree on LU point of view. Moreover the rule should be extended to all deviations from the set of specifications implemented in order to cover the added functions (e.g. NTR from other MS) too. NSA LU: (TSI vehicles) Regarding actually all the problems (with existing authorisations of ETCS systems) because of exported constrains to the RUs and the IMs because of ETCS sub-system not fully conform to the TSI CCS criteria (or innovative interpretations of it), NSA LU can't follow the position of the Agency that it's actually 'business as usual'.</p>	<p>Accepted</p>

5.19 Member state LV

5.19.1 Summary of actions

Action	Responsible
Agency to take into account the actions identified below as “Action ERA”	ERA
NSA LV to take into account the actions identified below as “Action NSA LV”	NSA LV

5.19.2 Rolling Stock Subsystem

5.19.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD RDD : published
	LoP version : New
	If no, forecast
Assessment status	Taken into account by MS : Yes
Amount of remaining NRs in addition to latest TSIs	26

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	9 parameters: 6.2-Impact of the vehicle on the environment 6.2.1.2-Exhaust gas emissions 8.4.1-EMC within the vehicle, 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.3.2-Induced interference current/voltage 8.7.2-Pressure vessel systems/pressure equipment 8.7.3-Steam boiler installations 8.7.4-Technical systems in potentially explosive atmospheres 14.1-Design, operation and maintenance constraints for the transport of dangerous goods	-
Rules related to documentation	Parameters listed in section 3.2.4	1 parameter: 1.4-National requirement for testing	Rule deal with the set of documents to be delivered for performing on track tests.
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter	-
Other rules related to compatibility with network / legacy system	See subsection 2 below	4 parameters: 3.3.7-Axle shaft 3.3.8-Axle bearing condition monitoring 9.3.1-Speed indication 9.3.4-Driver supervision	Detailed analysis per parameter provided in section 2 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	4 parameters: 2.2.1-Automatic coupling 2.2.2-Characteristics of rescue coupling 2.2.4-Buffering 3.1-Vehicle gauge	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	5 parameters: 2.1.2.2-Axle load and wheel load, 8.4.2.1.1-Rail return current, 8.4.2.1.4-Harmonic characteristics and related overvoltage on the overhead contact line 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle	Detailed analysis per parameter provided in section 4 below -
Existence of non mandatory rules	-	1 parameter: 7.1-Integrity of software employed for safety related functions	Reference to EN 50128 remain pending the revision of TSI Loc&Pas application guide. Action ERA: publication of the revised application guide that refer to EN 50128.

5.19.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.19.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>2.1.2.2-Axle load and wheel load</u> Requirement on axle load for 1520mm regarding train detection is given from IM specification C-108, which prescribes min.axle load at least 11 t.	The national rule refers to open point 4.2.3.3.1.1 - Compatibility with train detection systems - axle load for 1520 mm in Loc&Pas TSI 1302/2014.	Accepted
<u>3.2.1-Running safety and dynamics</u> Agreement with Infrastructure Manger, LVS EN14363:2005 Requirements of EN14363 is foreseen to apply for the TSI conform vehicles, for Non TSI vehicles the requirements comes from Rules of Cabinet of Ministers Nr.1211 "The order how to put into exploitation new rolling stock and the rolling stock after special repair and updating" (MK_1211) <u>3.2.4-Track loading compatibility parameters</u> LVS EN14363:2005	The national rule refers to open point 4.2.3.4.2 - Running dynamic behaviour for 1520 mm track gauge system in Loc&Pas TSI 1302/2014. Agency : The EN143636:2016 do not allow to close the open point related to 1520 mm track gage as it does not cover the quality of track of 1520mm.	Accepted Action ERA/1520mm: to take actions to close the open point as revision of EN14363 to cover 1520mm track gage
<u>3.2.3-Wheel profile and limits</u> Wheel profile and limits -TEN 10 appendix	The national rule refers to open point 4.2.3.4.3.1Design values for new wheel profiles : 1520mm / 1600mm in Loc&Pas TSI 1302/2014.	Accepted
<u>8.4.2.1.1-Rail return current, 8.4.2.1.4-Harmonic characteristics and related overvoltage on the overhead contact line, 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u>	The national rule refers to open points: - 4.2.3.3.1.1 - Compatibility with track circuits- EMC- EMC interference - 4.2.3.3.1.2 - Compatibility with axle counters – EMC - Electromagnetic fields (frequency management for 1520 and 1524 mm system) In Loc&Pas TSI 1302/2014	See section : Analysis of rules related to compatibility with TDS

5.19.2.2.2 Requirements covering specific cases not described in TSIs

No requirements

5.19.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>3.3.7-Axle shaft</u> IM rules Nr.D-3/450 "Specification for the traction rolling stock on their wheelset formation, repairment and maintenance" and IM rule Nr.DR-71/2005 "Specification for the freight wagons on their wheelset formation, inspection, repair an maintenance"	The national rule refers to clause 4.2.3.5.2.1 of Loc&Pas TSI 1302/2014. A specific case will be requested by NSA LV as for of 1520mm locos their strength requirements are much bigger than for 1435 mm track gage. The national rule does not include case of variable gauge wheelset.	Accepted Action ERA: ERA to check with CEN to see if and how the EN standards (EN 13103, 13104) cover 1520 mm. Action NSA LV: To request a specific case

National rules	Agency evaluation	Agency evaluation status
<u>3.3.8-Axle bearing condition monitoring</u> Infrastructure Manager specification Nr.DR-6/99 foreseen for Locos and EMU, DMU	The national rule refers to clause 4.2.3.3.2.2 of Loc&Pas TSI 1302/2014. A specific case will be requested according to clause 4.2.3.3.2.2. (2) of Loc&Pas TSI : For units designed to be operated on other track gauges a specific case is declared where relevant (harmonized rule available for the concerned network). IM requirements concerns the axle bearing monitoring condition only from the track side.	Accepted Action NSA LV : To request a specific case
<u>9.3.1-Speed indication, 9.3.4-Driver supervision</u> Technical operational rules (TOR) Nr.724	The national rule refers to clauses 4.2.9.3.2 and 4.2.9.3.1 of Loc&Pas TSI 1302/2014. The rule covers the Latvia Class B system.	Accepted

5.19.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<u>2.2.1-Automatic coupling, 2.2.2-Characteristics of rescue coupling, 2.2.4-Buffering</u> TEN 395 p. - 400 p. Autocoupling type SA-3	The national rule refers to clauses 4.2.2.2.2,4.2.2.2.3 and 4.2.2.2.4 of Loc&Pas TSI 1302/2014. The rule specifies the SA3 coupler type as it is not defined in the TSI Loc&Pas.	Accepted Action ERA : Next revision of Loc&Pas TSI should cover the specification of SA3 coupler.
<u>3.1-Vehicle gauge</u> TEN 3 p., 8.p., national standard LVS 282:2015 Construction and rolling stock clearance diagrams for railways	The national rule refers to clauses 4.2.3.1 and annex B of Loc&Pas TSI 1302/2014. The rule cover the calculation methodology for gauge T that is not specified in the EN standard mentioned in the Loc&Pas TSI 1302/2014.	Accepted Action ERA : To consider wether the EN standard cover calculation methodology for gauge T or a specific case is needed.

5.19.2.4 Analysis of rules related to compatibility with TDS

National rules	Agency evaluation	Agency evaluation status																					
<p><u>2.1.2.2-Axle load and wheel load:</u> Requirement on axle load for 1520mm regarding train detection is given from IM specification C-108, which prescribes min.axle load at least 11 t.</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : Rule is related to axle load and wheel load (The 11t requirements is stated in the Version 4 of ERA/ERTMS/033281 under § 3.1.7.1)</p>	Accepted																					
<p><u>8.4.2.1.1-Rail return current:</u> EN 50121-4 2015</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : EN 50121-4 not relevant Based on the outcome of the bilateral discussions: Proposal for a national rule</p> <table border="1"> <thead> <tr> <th>Track Circuit Info (Manufacturer-Type)</th> <th>Frequency Band</th> <th>Part of the FM of ERA/ERTMS Circuits listed in Annex A1 of TSI</th> </tr> </thead> <tbody> <tr> <td>0, 25 and 50 Hz Track Circuits</td> <td>0, 25 and 50 Hz</td> <td>No</td> </tr> <tr> <td>Audio frequency track circuits coded with ALSN codes</td> <td>420 Hz, 480 Hz, 580 Hz, 720 Hz, 780 Hz</td> <td>No</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>RDD parameter</th> <th>Requirement</th> <th>Concerned vehicles (TSI compliant)</th> </tr> </thead> <tbody> <tr> <td rowspan="4">8.4.2.1.1-Rail return current</td> <td>НБ ЖТ ЦТ 01-98, Annex A.38</td> <td>Diesel Multiple Units</td> </tr> <tr> <td>НБ ЖТ ЦТ 02-98, Annex A.38</td> <td>Diesel Locomotives</td> </tr> <tr> <td>НБ ЖТ ЦТ 03-98, Annex A.38</td> <td>Electrical Multiple Units</td> </tr> <tr> <td>НБ ЖТ ЦТ 04-98, Annex A.38</td> <td>Electrical Locomotives</td> </tr> </tbody> </table>	Track Circuit Info (Manufacturer-Type)	Frequency Band	Part of the FM of ERA/ERTMS Circuits listed in Annex A1 of TSI	0, 25 and 50 Hz Track Circuits	0, 25 and 50 Hz	No	Audio frequency track circuits coded with ALSN codes	420 Hz, 480 Hz, 580 Hz, 720 Hz, 780 Hz	No	RDD parameter	Requirement	Concerned vehicles (TSI compliant)	8.4.2.1.1-Rail return current	НБ ЖТ ЦТ 01-98, Annex A.38	Diesel Multiple Units	НБ ЖТ ЦТ 02-98, Annex A.38	Diesel Locomotives	НБ ЖТ ЦТ 03-98, Annex A.38	Electrical Multiple Units	НБ ЖТ ЦТ 04-98, Annex A.38	Electrical Locomotives	<p>Accepted if the national rule is drafted according to the proposal and available in RDD</p> <p>Action NSA LV : The NR is to be drafted according to the proposal</p>
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<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle:</u> EN 50121-4 2015</p>	<p>The national rule refers to clause XXXXX of Loc&Pas TSI 1302/2014. Agency : EN 50121-4 not relevant Based on the outcome of the bilateral discussions: Proposal for a national rule</p> <table border="1"> <thead> <tr> <th>Axle counter Info (Manufacturer-Type)</th> <th>Frequency Band</th> <th>Part of the FM of ERA/ERTMS listed in Annex A1 of TSI</th> </tr> </thead> <tbody> <tr> <td>Thales Zp 30</td> <td>29,5 – 30,5 kHz</td> <td></td> </tr> <tr> <td>Promelektronika ZAO PDDPV-02U-100h</td> <td>48kHz</td> <td></td> </tr> <tr> <td rowspan="2">Siemens WSD</td> <td>830 kHz ± 40 kHz</td> <td></td> </tr> <tr> <td>960 kHz ± 40 kHz</td> <td></td> </tr> </tbody> </table>	Axle counter Info (Manufacturer-Type)	Frequency Band	Part of the FM of ERA/ERTMS listed in Annex A1 of TSI	Thales Zp 30	29,5 – 30,5 kHz		Promelektronika ZAO PDDPV-02U-100h	48kHz		Siemens WSD	830 kHz ± 40 kHz		960 kHz ± 40 kHz		<p>Accepted if the national rule is drafted according to the proposal and available in RDD</p> <p>Action NSA LV : The NR is to be drafted according to the proposal</p>							
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	960 kHz ± 40 kHz																						

5.19.3CCS onboard Subsystem

5.19.3.1 Requirements covering open points for ETCS Baselines 2 and 3

The parameters below contain national rules to cover the open points: None

The parameters below do not contain national rules to cover the open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.2, 12.2.5.6 B2 “braking aspects”
- 12.2.5.4; 12.2.5.5 B2 “ETCS DMI”

5.19.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes Latvia has only published rules for their class B systems. GSM-R is partly installed, no ETCS for the moment (foreseen > 2020)		
	Nature : RDD RDD : published		
	LoP version : New		
	If no, forecast		
Assessment status	Taken into account by MS : Yes Accepted by ERA Concerning the STM requirements there is no document listed in the RDD		
Amount of remaining NRs in addition to latest TSIs	3		
Distribution of remaining rules			
Group of rules	Corresponding parameters in RDD	Number of parameters for which a rule exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	1 parameter : 12.2.2-STM requirements	Requirement document not part of the RDD

5.19.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> Technical operational rules (TOR) Nr.724 4.2. chapter 29/02/1996 Infrastructure manager rules TA0696 L23/96 ""Instruction of Automatic locomotive signalling of continuous operation and for driver surveillance control"" IM rules No.PP-31/494 from 18.12.2014. "Operational rules for train, station and shunting yard radio communication""	The national rules refers to clauses 4.2.5.1 (Radio communication with the train) of CCS TSI. Agency : They are related to the class B radio communication system.	Accepted
<u>12.2.1-National on-board signalling systems</u> ALSN: Automatic locomotive signalling of continuous operation - (General, technical and functional description) IM rules from 26.08.2004. order Nr.DV-3/367 "Operational rules on diesel locomotive continuous type automatic locomotive signalling and driver vigilance devices""	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency : They are related to train protection on-board class B system.	Accepted

National rules	Agency evaluation	Agency evaluation status
IM rules from 06.15.1994. ""Locomotive speed register 3SL- 2M, operational and maintenance instructions		

5.19.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<u>12.2.2-STM requirements</u> The Specific Transmission Module	Valid NTR but requirement specification is missing	Accepted

5.20 Member state NL

5.20.1 Summary of actions

Action	Responsible
NL to state its position regarding the ERA assessment.	NL
<p>The NL Ministry informed that it is a fact that the RIS 2017 (and 2014) is not completely represented in the actual RDD. Closing the gap before June 2019 is not feasible. I therefore propose the following steps:</p> <p>1. Ministry will adapt the comments made by ERA 12/04 as much as possible in the RIS 2019 text. A second discussion with ERA is necessary for the comments, which are not acceptable.</p> <p>2. Ministry will bring the new articles/changes of the RIS 2019 in the RDD (incl the NTR's for ERTMS). This information will be exchanged and discussed with ERA before the Ministry publishes RIS 2019. The goal is that RDD fully covers the RIS 2019.</p> <p>It is expected that the steps can be made just after summer and completed in Oct 2019.</p>	NL
NL to publish the cleaned NRs in RDD	NL
NSA NL and ERA to take into account the list of actions referred in the detailed assessment	NL/ ERA

5.20.2 Rolling Stock Subsystem

5.20.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table, based on the rules published in RDD. The Agency assessed NRs published in RDD that refers to RIS 2014. The Agency has been informed of a revised RIS (version 2017) and asked to NSA NL to revise RDD with the amended RIS 2017: still to be done. RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
	-
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -
Amount of remaining NRs in addition to latest TSIs	47

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	3 parameters: 6.2.1.2-Exhaust gas emissions 8.4.1-EMC within the vehicle	Other directives covering : • Exhaust emission directive

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
		8.4.2.4-Psophometric current	EMC directive
Rules related to documentation	Parameters listed in section 3.2.4	1 parameter: 1.1-General documentation	Not accepted
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	
Other rules related to compatibility with network / legacy system	See subsection 2 below	26 parameters: 2.1.1-Strength and integrity 2.1.5-Fixing of devices to car body structure 3.1-Vehicle gauge 3.2.1-Running safety and dynamics 3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius 3.3.1-Bogies 3.3.2-Wheelset (complete) 3.3.8-Axle bearing condition monitoring 4.1-Functional requirements for braking at train level 4.3-Brake system - Recognised architecture and associated standards 4.5.1-Emergency braking performance 4.6.2-Wheel slide protection system (“WSP”) 4.7.3-Magnetic track brake 4.7.4-Eddy current track brake 8.2.1.1-Specific requirements for power supply 8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line 8.2.2-Pantograph functional and design parameters 8.2.2.8-Pantograph lowering 8.2.3.2-Contact strip material 8.3.4-Earthing 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 8.4.2.1.5-Effects of DC content in AC supply 9.1.3.2-Optical characteristics 9.1.5-Driver's seat 9.6-Recording device 10.1-Fire protection concept and protection measures	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameters:	

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	5 parameters: 8.4.2.1.1-Rail return current 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 8.4.2.3-Vehicle entrance impedance 12.2.4.3-Metal and inductive components-free space between wheels 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters:	

5.20.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.20.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>3.3.4-Wheel/rail interaction influencing systems</u> Art. 16</p> <p>1. If rail vehicles are equipped with wheel flange lubrication systems, the position of the nozzle and the capacity and location where the lubrication is applied on the wheel comply with EN 15427.</p> <p>2. Wheel flange lubrication should not have a negative influence on the operation of the train detection and the length of the braking distance. Rule applicable also for passenger coaches with driving cab</p> <p>Description: Type of evidence: -Technical Description -Drawing / Part List -Test Report -Maintenance Plan</p>	<p>The national rules refers to clause 7.5.3.1, Track interaction (clause 4.2.3) - Flange or track lubrication of Loc&Pas TSI 1302/2014.</p> <p>Agency: Rule refer to parameter 7.5.3.1 of Loc&Pas TSI - open point.</p>	Accepted

5.20.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.20.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>2.1.1-Strength and integrity</u> Art. 9: 4, 6, 8</p> <p>4. The equipment affixed to a carriage body complies with EN 12663.</p>	<p>The national rule refers to clause 4.2.2.4 of Loc&Pas TSI 1302/2014.</p>	<p>Not accepted</p> <p>National rule should be repealed.</p>

National rules	Agency evaluation	Agency evaluation status
<p>6. The fatigue strength of a carriage body complies with EN 12663.</p> <p>8. The strength of the carriage body complies with category P-II as per EN 12663.</p> <p>Rule applicable also for passenger coaches with driving cab</p> <p>Description:</p> <p>Type of evidence:</p> <p>-Technical Description</p>	<p>The national rule refers to clauses:</p> <ul style="list-style-type: none"> - 4.2.2.4 of Loc&Pas TSI 1302/2014 and - 4.2.2.2 of TSI WAG <p>Agency:</p> <p>The parameter 2.1.1 refer to clause 4.2.2.4 of Loc&Pas TSI and clause 4.2.2.2 of TSI WAG that already refer to EN 12663-2:2010</p> <p>There is no open point in TSI.</p> <p>Article 9 in the regulation is no valid anymore '[Expired per 23/09/2015]'</p>	
<p><u>2.1.5-Fixing of devices to car body structure</u></p> <p>Art. 9: 15</p> <p>15. The mounting of devices and components in the railway vehicle complies with EN 12663.</p> <p>Rule applicable also for passenger coaches with driving cab</p> <p>Description:</p> <p>Type of evidence:</p> <p>-Technical Description</p>	<p>The national rule refers to clauses:</p> <ul style="list-style-type: none"> - 4.2.2.4 of Loc&Pas TSI 1302/2014 and - 4.2.2.2 of TSI WAG <p>Agency:</p> <p>The parameter 2.1.1 refer to clause 4.2.2.4 of Loc&Pas TSI and clause 4.2.2.2 of TSI WAG that already refer to EN 12663-2:2010</p> <p>There is no open point in TSI.</p> <p>Article 9 is no valid anymore '[Expired per 2309/2015]'</p>	<p>Not accepted</p> <p>National rule should be repealed.</p>
<p><u>3.1-Vehicle gauge</u></p> <p>Art. 23</p> <p>Rail vehicles that use border routes with Belgium comply with the bottom of recess for Crocodile according to EN 15273-2:2010, annexure A 3.5. This concerns the track between the manoeuvring yard in Roosendaal and the Belgian border and the track between the manoeuvring yard in Maastricht Randwijck and the Belgian border.</p> <p>Rule applicable also for passenger coaches with driving cab</p> <p>Description:</p> <p>Type of evidence:</p> <p>-Technical Description</p>	<p>The national rule refers to clause 4.2.3.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency:</p> <p>Parameter 3.1 is covered by clause 4.2.3.1 of Loc&Pas TSI which already refer to EN 15273-2 (relevant clauses).</p> <p>Article 23 is more related to route compatibility check.</p>	<p>Not accepted</p> <p>National rule should be repealed.</p>
<p><u>3.1-Vehicle gauge</u></p> <p>Art. 13</p> <p>1. Rail vehicles shall comply with EN 15273 if the kinematic reference gauge G2 is used.</p> <p>2. After testing route-specific infrastructure compatibility, a kinematic reference gauge larger than G2 but within the kinematic reference gauge NL-1, NL-2 or GC, as described in EN 15273-2, can be permitted.</p> <p>3. The lower side of railway vehicles meets the reference profile GIC1, or GIC2 as described in EN 15273. The zone for the 'Crocodile' as described in EN 15273 is only applicable to railway vehicles that use border railway lines with Belgium as per</p>	<p>The national rule refers to clause 4.2.3.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency:</p> <p>Rule 1 . Parameter 3.1 is covered by clause 4.2.3.1 of Loc&Pas TSI . TSI requires that the compliance of rolling stock with reference profile is checked in accordance to the chosen profile(s) by the applicant. This value (s) are registered in the vehicle technical file.</p> <p>TSI refers to EN 15273-2 (relevant clauses)</p> <p>Rule 2 is not part of vehicle authorisation as it refers to route compatibility check performed after authorisation (art 23 of IOD).</p> <p>See also application guide of TSI Loc&Pas</p>	<p>Not accepted</p> <p>National rule should be repealed.</p>

National rules	Agency evaluation	Agency evaluation status
<p>Article 23. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Drawing / Part List -Calculation -User Manual</p>		
<p><u>3.2.1-Running safety and dynamics</u> Art. 14: 1, 2, 6 1. With the exception of maintenance vehicles that comply with EN 14033-1, the axle load - wheel diameter ratio of a wheelset complies with UIC 510-2. 2. Sui veicoli con ruote con diametro inferiore a 730 mm possono essere poste delle limitazioni relativamente alle intersezioni da percorrere. 6. The run characteristics of a rail vehicle comply with EN 14363 chapter 5. Exceeding quasistatic guiding force Yqst can be permitted according to EN 14363:2005 chapter 5.3.2.3 in consultation with the infrastructure manager, if it does not compromise safety. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Test Report -Calculation -Evidence</p>	<p>The national rule refers to clause 6.1.3.1 of Loc&Pas TSI 1302/2014. Agency: Rule 1. NL to justify the necessity of the rule. The rule is covered by TSI clause 6.1.3.1 that refers to EN 13979 clauses 7,2,1, 7.2.2,7.2.3,7.3,6 Rule 2. is more related to route compatibility check where RU check : RST Minimum in-service wheel diameter with the route in RINF .1.1.1.1.5.2 Minimum wheel diameter for fixed obtuse crossings (see appendix D1 of revised OPE TSI) Rule 6. already covered by TSI</p>	<p>Not accepted National rule should be modified.</p>
<p><u>3.2.1-Running safety and dynamics</u> Art. 9: 11 11. The limitation of the quasi-static guiding force Yqst shall comply with section 14, sixth paragraph. Rule applicable also for passenger coaches with driving cab</p>	<p>The national rules refers to clause 4.2.3.4 of Loc&Pas TSI 1302/2014. Agency: Article 9 is [Expired per 23/09/2015] Rule 11. Is fully covered by TSI that refer to EN 14363:2005 relevant cl. EN 14363:2005 5.3.2.2 EN 15686:2010 relevant cl. EN 14363:2005 5.3.2.3 EN 14363:2005 4.1 EN 14363:2005 5 relevant cl. ERA/TD/2012-17/INT rev 3.0 All</p>	<p>Not accepted National rule should be repealed.</p>
<p><u>3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius</u> Art. 14: 3, 4, 5 3. A horizontal bend with a radius of 190 m and larger can be passed through by a railway vehicle in S-bends without an included straight stretch of line.</p>	<p>The national rule refers to clause 4.2.3.6 of Loc&Pas TSI 1302/2014. Agency: Rule 3 is covered by TSI Loc&Pas clause 4.2.3.6 that requires 'The minimum curve radius to be negotiated shall be 150 m for all units.' Rules 4 and 5 are not relevant for vehicle</p>	<p>Not accepted National rule should be repealed.</p>

National rules	Agency evaluation	Agency evaluation status
<p>4. A vertical bend with a radius of 2000 m and larger can be passes through by a railway vehicle. 5. A vertical top curve of 250 m and larger, and a vertical lower curve of 300 m and larger, can be passed through by a railway vehicle that is hump-shunted.</p> <p>Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Test Report</p>	<p>authorisation as it describe a characteristic of your infrastructure (should be in RINF). At authorisation , applicant apply TSI Loc&Pas 4.2.3.1 and declare in ERATV the vertical radius characteristic of the RST: 4.8.5 Minimum vertical convex curve radius capability and 4.8.6 minimum concave curve radius capability Please note that after authorisation at route compatibility check RU check the compatibility of the vehicle with the intended route (OPE 4.2.2.5 and annex D) . The vertical radius is an item to be checked for siding</p>	
<p><u>3.3.1-Bogies</u> Art. 9: 2, 5 2. The strength of the bogies complies with EN 13749. 5. The equipment affixed to bogey frames and axle pots complies with EN 13749. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description</p>	<p>The national rule refers to clauses 4.2.3.5.1 of Loc&Pas TSI 1302/2014. Agency: Article 9 is not valid anymore 'Expired per 23/09/2015'] rule mentioned area already covered by clause 4.2.3.5.1. of Loc&Pas TSI and clause 4.2.3.6.1. of WAG TSI. Both TSIs mandate already the application of EN 13740 There is no open point</p>	<p>Not accepted National rule should be repealed.</p>
<p><u>3.3.2-Wheelset (complete)</u> Art. 9: 3, 7 3. The design, manufacturing and approval of wheel sets complies with EN 13103, EN 13104, EN 13260, EN 13261, EN 13262, EN 13979-1 and UIC 510-5. 7. The fatigue strength of a wheelset shall comply with EN 13103, EN 13104, EN 13979-1 and UIC 510-5. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description</p>	<p>The national rule refers to clauses: - 4.2.3.6.2, 4.2.3.6.4, 6.1.2.2 of WAG TSI 321/2013. - 4.2.3.5.2, 6.2.3.7 of Loc&Pas TSI 1302/2014. Agency: Article 9 is not valid anymore 'Expired per 23/09/2015'] Parameter 3.3.2 is covered by clause 4.2.3.5.2, 6.2.3.7 of Loc&Pas TSI and clause 4.2.3.6.2, 6.1.2.2. of TSI WAG that already refer to following standards: EN 13260, EN 13103,EN 13104,EN 12082 TSI AG already mentioned other set of standard : EN13261, EN12080, EN 12081 EN12082, EN15313, EN13103, EN 13104.</p>	<p>Not accepted National rule should be repealed.</p>
<p><u>3.3.8-Axle bearing condition monitoring</u> Art. 11: 2 1. The area of railway vehicles visible for the apparatus for monitoring the status of axle bearings in the infrastructure complies with Para. 5.1 and 5.2 of EN 15437-1. Description: Type of evidence: -Technical Description</p>	<p>The national rule refers to clauses 4.2.3.4 WAG TSI 321/2013. The national rules refers to clauses 4.2.3.3.2, Axle bearing condition monitoring of Loc&Pas TSI 1302/2014. Agency: Article 11 1 : [Expired per 09/09/2015] parameter 3.3.8 is covered by clause 4.2.3.3.2 of</p>	<p>Not accepted National rule should be repealed.</p>

National rules	Agency evaluation	Agency evaluation status
	Loc&Pas TSI and clause 4.2.3.4 of WAG TSI that already refers to EN 15437-1.(5.1, 5.2)	
<p><u>4.1-Functional requirements for braking at train level</u> Art. 9: 12 For the braking characteristics, it is necessary that:</p> <p>a. the characteristics of the pneumatic brakes including automatic stopping in the event of a break in coupling complies with UIC 540 up to and including UIC 547—for which the 3rd edition of the 1966-01-01 reprint from 1985-07-01 incl. 9 modification sheets from 1985-01-01 applies to UIC 544-1, UIC 640 and UIC 648;</p> <p>b. an electrodynamic brake may only be considered for the braking power of the safety brake if it can be verified that it is fail-safe and always available, which means that in no case will it fail if the overhead contact line power is removed;</p> <p>c. the reduced coefficient of friction for brake shoes and brake discs resulting from moisture complies with Section 2.1.2.3 of UIC 541-3. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Drawing / Part List -Test Report -Calculation</p>	<p>The national rules refers to clauses 4.2.4.2.1 Loc&Pas TSI 1302/2014. Agency: Article 9 is [Expired per 23/09/2015]</p>	<p>Not accepted National rule should be repealed.</p>
<p><u>4.3-Brake system - Recognised architecture and associated standards</u> Art 11: 3 3. ... Description: Type of evidence: -Technical Description -Test Report</p>	<p>The national rules refers to clauses 4.2.4.3 of Loc&Pas TSI 1302/2014. Agency: Article 11 is [Expired per 09/09/2015] TSI Loc&Pas clause 4.2.4.3 cover the rules , TSI refer to EN 14198:2004 5.4. The TSI application guide refer to the following standards: EN 14198:2004 (Design principle of brake system) EN 15179:2007 (Design principle of brake system) EN15355:2008 (Definition and verification of brake component of UIC brake system) EN15611:2008 (Definition and verification of brake component of UIC brake system) EN 15612:2008 (Definition and verification of brake component of UIC brake system) EN 15625:2008 (Definition and verification of brake component of UIC brake system)</p>	<p>Not accepted National rule should be repealed.</p>

National rules	Agency evaluation	Agency evaluation status
	<p>For WAG :</p> <p>See annex C and Application guide refer to Annex C 9:</p> <ul style="list-style-type: none"> - EN 15355:2008+A1:2010 - EN 15611:2008+A1:2010 - UIC 540:2006 - EN 14531-1:2005 - EN 15624:2008+A1:2010 - EN 15625:2008+A1:2010 - EN 286-3:1994 - EN 286-4:1994 - EN 15807:2011 - EN 14601:2005+A1:2010 - UIC 541-1:2010 an E - UIC leaflet 542:2010 - ERA technical document ERA/ TD/2012-05/INT version 1.0 of 4. 6.2012 - EN 15595:2009+A1:2011 	
<p><u>4.5.1-Emergency braking performance</u> Art. 15: 6 6. Braking percentage and braked weight shall be determined according to UIC 544-1, third edition, reprint of 1 July 1985. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Test Report</p>	<p>The national rules refers to clause 4.2.4.5.2 of Loc&Pas TSI 1302/2014. Agency: The rule is covered by clauses 4.2.4.5. of Loc&Pas TSI that refer to EN 14531-1 : 2005 or EN14351:2009 Please note that UIC 544-1 :2004 is also mentioned in Application guide.</p>	<p>Not accepted National rule should be repealed.</p>
<p><u>4.6.2-Wheel slide protection system (“WSP”)</u> Art. 15: 1 1. Rail vehicles equipped with brake and compressed air systems must fulfill the licensing requirements listed below, are fitted with an anti-blocking device and an adhesion independent device or with adhesion independent measures that properly counter wheel blocking. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Test Report -Safety Case</p>	<p>The national rule refers to clause 6.1.3.2 of Loc&Pas TSI 1302/2014. Agency: The parameter 4.6.2 is covered by Loc&Pas TSI clauses: 4.2.4.6.2, 5.3.5, 6.1.3.2 and 6.2.3.10. NL to justify the necessity of rule in addition to TSI</p>	<p>Not accepted National rule should be modified.</p>
<p><u>4.7.3-Magnetic track brake</u> Art. 15: 2 2. The first paragraph (art. 15: 1) is anyway complied with if: a. by trains, consisting of one unit, two bogies are</p>	<p>The national rules refers to clause 4.2.4.8.2 of Loc&Pas TSI 1302/2014. Agency: See also comment made on parameter 4.6.2. Seems to be a not mandatory requirement. You</p>	<p>Under review National rule should be repealed.</p>

National rules	Agency evaluation	Agency evaluation status
<p>fitted with a pair of magnetic brakes; b. by trains, consisting of two units, a minimum of two bogies are fitted with a pair of magnetic brakes; c. by trains, consisting of three or more units, a minimum of one pair of magnetic brakes has been fitted for every two units.</p> <p>Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Test Report -Safety Case</p>	<p>may consider to notify this as a not mandatory - Acceptable National Means Of Compliance. It is consistent with the requirement for magnetic track brake limited to emergency braking?</p>	
<p><u>4.7.3-Magnetic track brake</u> Art. 15: 3, 4 3. If a train, in accordance with the second paragraph (art. 15: 2), has been fitted with two or more pairs of magnetic brakes, the magnetic brake pairs are distributed over such a train that, in all cases, the first and last of the train's units are fitted with a pair of magnetic brakes. 4. The magnetic brake can only be used in the event of emergency braking and/or as parking-/stop brake, if a rail vehicle is equipped with a magnetic brake system. Description: Type of evidence: -Technical Description -Test Report -Drawing / Part List</p>	<p>The national rules refers to clause 4.2.4.8.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Rule 3 should not be mandatory Rule 4 to be justified by NL (part related to parking brake) Usage as emergency brake is already covered in the TSI: Already covered in the TSI: LOC PAS TSI 1302 2014 - 4.2.4.8.2 Magnetic track brake (2) A magnetic track brake is allowed to be used as an emergency brake, as mentioned in the TSI INF, clause 4.2.6.2.2.</p>	<p>Not accepted National rule should be repealed.</p>
<p><u>4.7.3-Magnetic track brake</u> Art. 7: 9 9. The use of magnetic brakes and eddy current brakes shall comply with section 15 fourth and fifths paragraphs. Rule applicable also for passenger coaches with driving cab</p>	<p>The national rules refers to clauses 4.2.4.8.2, 4.2.4.8.3, of Loc&Pas TSI 1302/2014.</p> <p>Agency: Section 15.4 is already mentioned in the rule above Section 15.5 apply to eddy current Rule should be removed</p>	<p>Not accepted National rule should be modified.</p>
<p><u>4.7.4-Eddy current track brake</u> Art. 15: 5 5. This can be switched off if a rail vehicle is equipped with a eddy flow braking system. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Test Report</p>	<p>The national rules refers to clause 4.2.4.8.3, Braking system independent of adhesion conditions: eddy current track brake of Loc&Pas TSI 1302/2014.</p> <p>Agency: Seems that the rule is not covering LOC PAS TSI 1302 2014 - 4.2.4.8.3, Braking system independent of adhesion conditions: eddy current track brake, Braking system independent of adhesion conditions: eddy current track brake, Open Point</p>	<p>Not accepted National rule should be modified.</p>

National rules	Agency evaluation	Agency evaluation status
	Rule relate to open point 4.2.3.3.1.2 Rolling stock characteristics for compatibility with train detection system based on axle counters -EMC- Magnetic track brake, Eddy current brake ???	
<p><u>4.7.4-Eddy current track brake</u> Art. 10: 2 2. If a rail vehicle is equipped with an eddy current brake, this shall comply with section 15, fifth paragraph. Rule applicable also for passenger coaches with driving cab</p>	<p>The national rules refers to clauses 4.2.4.8.3, Braking system independent of adhesion conditions: eddy current track brake, Open Point of Loc&Pas TSI 1302/2014. Agency: Rule mentioned here is redundant with the rule above. Should be removed.</p>	<p>Not accepted National rule should be repealed.</p>
<p><u>8.2.1.1-Specific requirements for power supply</u> Art. 24 Electric traction on border routes 1. Vehicles that run on border routes equipped with 15kV 16,7Hz AC energy supply, should comply with the national stipulations of Germany for the German route. 2. Rail vehicles, travelling on border lines fitted with 3kV DC energy supply, meet Belgium's national stipulations for accessing the Belgian line. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description</p>	<p>The national rules refers to clauses 4.2.8.2 of Loc&Pas TSI 1302/2014. Agency: NL is responsible to notify their national rules covering NL network, general reference to rules of other MSs are not acceptable. Are we talking here about vehicle operating in several MSs: BE, NL and DE? Or the routes mentioned here are inside NL?</p>	<p>Not accepted National rule should be modified.</p>
<p><u>8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line</u> Art. 19 Electric Traction 1500V DC The collection of current is automatically limited in accordance with EN 50388 article 7.2: a. $U_1 = 1000V$; b. $U_2 = 1350V$; c. $I_{max} (\text{train}) = 4000A$; and d. the low voltage device is set to 950V. [Figure RIS Art. 19] Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Test Report -Calculation</p>	<p>The national rules refers to clauses 4.2.8.2.4, 6.2.3.18 of Loc&Pas TSI 1302/2014. Agency: TSI clauses 4.2.8.2.4, 6.2.3.18 covered already the national rules mentioned TSI refer to clause 7.2 of EN 50388. For U_{min2}, U_{max2} the ENE 50163 called by TSI ENE provide the value for 1,5kV. NL do not have specific case declared in TSI Loc&Pas or ENE to cover $U_{max 2}$ of 1350V.... The rule may be acceptable with an action to NL to require a specific case – to be further discussed</p>	<p>Accepted National rule should be modified. NL to confirm the necessity of a specific case and to apply for a specific case.</p>
<p><u>8.2.2-Pantograph functional and design parameters</u> Art. 9: 13 13. The following applies to pantographs:</p>	<p>The national rules refers to clause 4.2.8.2.9.10 of Loc&Pas TSI 1302/2014</p>	<p>Not accepted National rule should be repealed.</p>

National rules	Agency evaluation	Agency evaluation status
<p>a. for the lifting, the pantograph system should have a back-up system;</p> <p>b. one should be able to give the lifting command from the driver's cabin;</p> <p>c. the command for lowering can be given from the driver's cabins and that command always, regardless of the operating condition and the service location, leads to lowering the raised pantograph or pantographs;</p> <p>d. The railway vehicle has a device that ensures that all high-voltage consumers are switched off, before the pantograph is lowered. If the automatic device that lowers the pantograph from the contact strip in the event of damage is activated, this device must not function;</p> <p>e. they cannot be lifted in the earthed condition of the high voltage installation and are earthed to be short-circuit proof.</p> <p>Rule applicable also for passenger coaches with driving cab</p> <p>Description:</p> <p>Type of evidence:</p> <ul style="list-style-type: none"> -Technical Description -Drawing / Part List -Test Report -Measurement Sheet 	<p>Agency:</p> <p>Article 9 is [Expired per 23/09/2015]</p> <p>8.2.2 is a title and should no contain any rule, rule are to be put in sub parameters</p> <p>Rule already covered by TSI 4.2.8.2.9.10, to be removed</p>	
<p><u>8.2.2-Pantograph functional and design parameters</u></p> <p>Art. 20</p> <p>Electric Traction 1500V DC</p> <p>The pantographs installed on the railway vehicles fulfil the following requirements:</p> <p>a. The imprint of the contact wire should not exceed 100 mm at a speed of up to 140 km/h;</p> <p>b. The imprint of the contact wire should not exceed 120 mm at a speed from 140 km/h up to 160 km/h;</p> <p>c. the dynamic upthrust amounts to at least 40 N and at most 300 N;</p> <p>d. the current take-off of every pantograph with a stationary train is such that the temperature of the contact wire amounts to at most 150°C;</p> <p>e. the maximum distance of the head from the railway vehicle to the last pantograph of the train is at most 400 m;</p> <p>f. a locomotive has been fitted with linked, raised pantographs.</p> <p>Rule applicable also for passenger coaches with driving cab</p> <p>Description:</p>	<p>Agency:</p> <p>Article 9 is [Expired per 23/09/2015]</p> <p>8.2.2 is a title and should no contain any rule, rule are to be put in sub parameters</p> <p>We understand a,b,c as already covered by the Requirements for dynamic behaviour and current collection quality of the OCL (4.2.12 ENE TSI). d) is covered by 4.2.8.2.5 Maximum current at standstill for DC systems</p> <p>e) and f) are covered by 4.2.8.2.9.7 Arrangement of pantographs (RST level)</p>	<p>Not accepted</p> <p>National rule should be repealed.</p>

National rules	Agency evaluation	Agency evaluation status
Type of evidence: -Technical Description		
<u>8.2.2-Pantograph functional and design parameters</u> Art. 22 Electric Traction 25kV AC The pantograph fulfils the following requirements: a. The lifting of the contact wire should not exceed 100 mm at a vehicle speed up to 140 km/h. The lifting of the contact wire should not exceed 120 mm at a speed from 140 km/h up to 160 km/h. b. The dynamic pushing force amounts to: - at least 40 N; - at most 200 N at a speed of 160 km/h; - at most 350 N at a transition to rigid suspension. c. The current take-off of every pantograph with a stationary train is such that the temperature of the contact wire is at most 150°C. d. The pantograph is raised to the maximum height within 10 seconds. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Drawing / Part List -Test Report	The national rules refers to clauses 4.2.8.2.5, 4.2.8.2.9.6 and 4.2.8.2.9.10 of Loc&Pas TSI 1302/2014. Agency: 8.2.2 is a title and should no contain any rule, rule are to be put in sub parameters a and b are covered by 4.2.8.2.9.6 Pantograph contact force and dynamic behaviour c is covered by 4.2.8.2.5 Maximum current at standstill for DC systems d To be justified the need of a minimum time to raise the panto. TSI covers the 4.2.8.2.9.10 Pantograph lowering (RST level), not raising. Please provide the reason behind?	Not accepted National rule should be modified.
<u>8.2.2.8-Pantograph lowering</u> Art. 10: 4 4. If the 25 kV AC pantograph of a rail vehicle suitable for speeds higher than 160 km/h becomes defective, it shall be lowered automatically to roof position, dropping 20 cm below the contact wire within 1 second. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Drawing / Part List -Test Report -Calculation	The national rules refers to clause 4.2.8.2.9.10 of Loc&Pas TSI 1302/2014. Agency: Article 10 is not referring to ADD but to eddy current. TSI Loc&Pas clause 4.2.8.2.9.10. Clause 4.2.8.2.9.10(4) require ADD for vehicle with speed above 160km/h Clause 4.2.8.2.9.10 (3) If an electric unit is equipped with an automatic dropping device (ADD) that lowers the pantograph in case of a collector head failure, the ADD shall meet the requirements of the specification referenced in Appendix J-1, index 51, clause 4.8. The TSI refers to EN50206-1 clauses 4.7 and 4.8 that requires to lower the pantograph in a period of 3 seconds. No specific case in Loc&Pas TSI for NL.	Not accepted National rule should be modified. NSA NL to provide justification if a specific case is necessary.
<u>8.2.3.2-Contact strip material</u> Art. 10: 3 A pantograph's contact strip is manufactured	The national rules refers to clauses 4.2.8.2.9.4.2, 4.2.8.2.9.4 of Loc&Pas TSI 1302/2014. Agency:	Not accepted

National rules	Agency evaluation	Agency evaluation status
<p>from carbon or metalized carbon as intended in EN 50367. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description</p>	<p>Article 10 is not referring to contact strip but with eddy current. Permissible contact strip materials are fully defined in point 4.2.8.2.9.4.2 of LOC&PAS TSI Contact strip is an IC</p>	<p>National rule should be repealed.</p>
<p><u>8.3.4-Earthing</u> Art. 18 See the content of the article in the Description and/or attached document in the Legal Text. Rule applicable also for passenger coaches with driving cab Description: Reverse current and safety ground loops: 1. The reverse current system is for the most part separated electrically from the vehicle attachments and the safety ground loop and can come together through the brush holder. 2. Safety grounding circuits have built-in redundancy. 3. If the vehicle attachments in one train set are connected to each other by cables, each vehicle attachment must be equipped with at least one safety ground brush holder. 4. If the vehicle bodies are not connected to each with power stands, the vehicle bodies must be equipped with at least two safety ground brush holders and at least one safety ground brush holder for each bogie; 5. When planning the size of the safety ground loop, consideration should be given to: a The shutdown behavior of the substation in the event of a short-circuit; b The redundancy of the system; c de maximale weerstand tussen metalen delen van het spoorvoertuig en spoorstaven. 6. Damage is to be prevented to the wheel axle box as a result of the inverter current or the conductive continuity; 7. The reverse current of the main consumer is to be carried along a preferably short distance to the railway tracks; 8. If the ground brush holders are mounted to the axle pots, the brush holders will be distributed onto both the safety ground loop as well as evenly onto the reverse current circuit on the left and the right side of the device; 9. The number of brush holders required for the reverse current and the safety ground loop are to be distributed onto the maximum number of axles;</p>	<p>The national rules refers to clauses 4.2.8.4 of Loc&Pas TSI 1302/2014. Agency: Parameter 8.3.4 is covered by clause 4.2.8.4. of Loc&Pas TSI 1302/2014 that refers to EN 50153 relevant cl. NSA NL to provide justification for potential requirements in addition to the TSI.</p>	<p>Not accepted National rule should be modified.</p>

National rules	Agency evaluation	Agency evaluation status
<p>10. The carbon brushes and the counter disks of the ground and safety brush holders can be easily inspected;</p> <p>11. The electrical resistance between the wheel axle and the surface of the wheel tires must be as low as possible, whereas it is not permissible to attach strands for the purpose of lowering the electrical resistance;</p> <p>12. In contrast to sub-section 14, for wheels onto which insulation is attached, between the inside wheel and the wheel tire, strands may be attached, whereas no work may be performed to the wheel and the surface of the wheel tire by means of soldering or drilling, unless it can be demonstrated that this will not lead to any adverse impacts on the mechanical strength and the operating safety of the wheel;</p> <p>13. Rail vehicle parts, other than those mentioned in paragraphs 1 to 12, which can come into contact with rails for a certain period of time, have to be isolated from the bogie and the vehicle.</p> <p>Type of evidence: -Technical Description -Drawing / Part List -Test Report -Measurement Sheet</p>		
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> Art. 21: 1, 2a See the content of the article in the Description and/or attached document in the Legal Text. Rule applicable also for passenger coaches with driving cab Description: Electric Traction 25kV AC Infrastructure compatibility 1. A compatibility study, in accordance with chapter 10 of EN 50388, is used to indicate that the requirements from the Network code Electricity, in respect of overvoltage and harmonic emission limits, on the connection point with the national network controller, have been met. 2. The following applies to executing the compatibility study: a. the data, in accordance with chapter 10 of EN 50388, is submitted to the controller for executing the compatibility study; Type of evidence: -Technical Description</p>	<p>The national rules refers to clauses 4.2.8.2.7 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Who is the controller executing the compatibility study? Roles and responsibilities should be clearly identified</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.5-Effects of DC content in AC supply</u> Art. 21: 1, 2a See the content of the article in the Description and/or attached document in the Legal Text.</p> <p>Rule applicable also for passenger coaches with driving cab Description: Electric Traction 25kV AC Infrastructure compatibility</p> <p>1. A compatibility study, in accordance with chapter 10 of EN 50388, is used to indicate that the Autoriteit Consument en Markt's requirements from the Network code Electricity, in respect of overvoltage and harmonic emission limits, on the connection point with the national network controller, have been met.</p> <p>2. The following applies to executing the compatibility study: a. the data, in accordance with chapter 10 of EN 50388, is submitted to the controller for executing the compatibility study; Type of evidence: -Technical Description</p>	<p>The national rules refers to clauses 4.2.8.2.7 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Who is the controller executing the compatibility study? Roles and responsibilities should be clearly identified</p>	<p>Accepted</p>
<p><u>9.1.3.2-Optical characteristics</u> Art. 9: 10 The colour of the front windows complies with EN 15152, while the requirements are applicable to all colours. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description</p>	<p>The national rules refers to clauses 6.2.3.22 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Article 9 is : [Expired per 23/09/2015] Parameter 9.1.3.2 is covered by clauses 4.2.9.2.2. and 6.2.3.22. of Loc&Pas TSI that already refer to EN 15152:2007 4.2.2,4.2.3,4.2.4,4.2.5,4.2.6 EN 15152:2007 6.2.1 to 6.2.7</p>	<p>Not accepted National rule should be repealed</p>
<p><u>9.1.5-Driver's seat</u> Art. 9: 9 The driver's seats comply with Section 5 of UIC 651. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description</p>	<p>The national rules refers to clause 5.3.13 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Article 9 is : [Expired per 23/09/2015] The parameter 9.1.5 is covered by clause 4.2.9.1.5 and 5.3.13 of Loc&Pas TSI. Driver seat is an IC. Please note that UIC651 is already called by TSI Application guide. There is no open point in TSI</p>	<p>Not accepted National rule should be repealed.</p>
<p><u>9.6-Recording device</u> Art. 10: 5 5. Railway vehicles which can travel faster than 40 km/h, are provided with a system for automatic journey registration which complies with the following requirements: a) the resolution of the registration is sufficiently</p>	<p>The national rules refers to clauses 4.2.9.6 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The national rule refers to clause 4.2.9.6 of Loc&Pas TSI 1302/2014 that refer to EN/IEC 62625-1.</p>	<p>Not accepted National rule should be modified.</p>

National rules	Agency evaluation	Agency evaluation status
<p>large to be able to make a pure analysis of the event to be investigated;</p> <p>b) the registration starts not later than the initiation of movement of the train;</p> <p>c) the storage capacity of the automatic journey registration determines the deployment possibilities of the railway vehicle after an event for which the registration is read out;</p> <p>d) data is still registered for 30 seconds after the railroad vehicle has come to a stillstand;</p> <p>e. the automatic journey registration can stand particular circumstances without losing information; and</p> <p>f) at least the data stated in Appendix 7 must be recorded by the automatic journey registration. Rule applicable also for passenger coaches with driving cab</p> <p>Description: Appendix 7 (Art. 10: 5f & Appendix 3, 1.7.f) [Table RIS Appendix 7] When a railway vehicle is provided with a automatic train control system (ATB), that works on the basis of brake curve control, from this ATB-System at least the following functions must be registered:</p> <ul style="list-style-type: none"> ● Information put in by the driver ● Assignments and allowances given to the driver ● Operating acts on behalf of or requested by the ATB ● Operating act through which the brake curve control is ignored ● Operation of “slippery track” button*) ● ATB controlled speed ● Controlled speed shown to the driver ● Data received from the ATB track equipment by the ATB train equipment ● Data send by the ATB train equipment to the ATB track equipment *) ● Malfunction messages ATB track equipment ● Malfunction messages ATB train equipment ● The execution and result of testing the ATB train equipment ● Interferences performed by ATB ● ATB putting out of service <p>* Information concerning adhesion behaviour of the railway vehicle¹ ¹ When present / available</p> <p>Type of evidence: -Technical Description -Declaration of Conformity -Test Report</p>	<p>The TSI demand that any unit in the scope of TSI is to be equipped with recording device see 4.2.9.6(1) independent of vehicle speed. The information to be registered by the recording device are covered by the TSI OPE. The information that is recorded must be for investigation purposes in the event of an accident.</p> <p>Requirements related to operation are not part of vehicle authorisation.</p> <p>Rule to be revised taking into account comments above</p>	

National rules	Agency evaluation	Agency evaluation status
-Maintenance Plan -User Manual		
<u>10.1-Fire protection concept and protection measures</u> Art. 9: 16 16. The precautionary measures for preventing fires are in accordance with EN 45545. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description -Evidence	The national rule refers to clauses 4.2.10.2 of Loc&Pas TSI 1302/2014. Agency: Article 9 is : [Expired per 23/09/2015] The parameter 10.1 is covered by clause 4.2.10.2 of Loc&Pas TSI that already refer to EN 45454-2 Please also note that TSI Application guide already refer to : EN 45545-7:2013 (Only prevention of leakage of flammable liquids) EN 45545-6:2013 cl 6.3, EN 3-7, EN 3-8 and EN 3-10 (Portable fire extinguisher requirements and situation in the vehicle) EN 45545-6:2013 Table 1 and 2, cl. 5.2, 5.3 and 5.4(excluding 5.4.5)(Requirements for Fire detection systems and automatic actions) EN 45545-6:2013Table 1, and 2, cl. 5.2,5.3 and 5.4.2.2 (Requirements for diesel fire detection system and cutting of fuel supply + shutting down equipment actions)	Not accepted National rule should be repealed.

5.20.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements

5.20.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> Art. 7: 2 2. The effective value of the AC-component in the DC line current for a railway vehicle amounts to no more than 50 A for frequencies of 5 Hz or greater. Rule applicable also for passenger coaches with driving cab Description: Type of evidence: -Technical Description	The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: rule acceptable	Accepted
<u>8.4.2.1.1-Rail return current</u> Art. 7: 7 See the content of the article in the Description and/or attached document in the Legal Text. Rule applicable also for passenger coaches with driving cab Description: Interference current detectors 7. If the railway lines equipped with 75-Hz track	The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Acceptable, but preferable to put it under 12.2.4.5. as it is related to the compatibility with the Class B 75Hz track circuits, which are not taken into account in the FM in the interface document	Under review National rule should be modified.

National rules	Agency evaluation	Agency evaluation status
<p>circuits/ clear-track signalling systems can exceed the requirements referred to in Paragraph 6. Sentence a (see following list) due to a defect or failure of the equipment, if the interference current detector is present, it can detect the transgression and initiate an appropriate action. This is considered fulfilled whenever:</p> <p>a. Interference current detectors comply with EN 50155;</p> <p>b. the line current according to the frequency characteristic meets at least:</p> <p>1° Up to the tipping point at 68 Hz ± 1 Hz: Increasing at 96 dB/oct ± 3 dB/oct;</p> <p>2° Range 68 Hz to 82 Hz: Flat ± 0.5 dB;</p> <p>3° After tipping point at 82 Hz ± 1 Hz: Decreasing at 120 dB/oct ± 3 dB/oct;</p> <p>c. the interference current detector generates a shutdown command if the line current's effective value, in the described frequency range, exceeds an adjustable threshold value;</p> <p>d. the interference current detector only generates a switch-off command after the threshold value has been uninterruptedly exceeded for a certain period of time;</p> <p>e. the interference current detector generates a switch-off command the minimum value of which depends on materials;</p> <p>f. the interference current detector is equipped with a block or override of the switch-off command in case of a defect; and</p> <p>g. The total response time for the interference current detector is a maximum of 1000 ms.</p> <p>Type of evidence: -Technical Description -Test Report -Maintenance Plan -User Manual</p>		
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Art. 7: 6</p> <p>6. In consideration of the traction current and of the electrical, magnetic and electromagnetic fields, it is necessary that:</p> <p>b. railway vehicles travelling on railway lines equipped with axle counters comply with the applicable requirements listed in the appendix. Rule applicable also for passenger coaches with driving cab</p> <p>Description: Appendix 4</p>	<p>The national rule refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency: No rule as point is closed in the CCS TSI interface document, except if on the Network axle counters are installed not listed in Annex A of 50238-3.</p>	<p>Under review National rule should be modified.</p>

National rules	Agency evaluation	Agency evaluation status
Type of evidence: -Technical Description -Drawing / Part List -Test Report -Calculation		
<u>8.4.2.3-Vehicle entrance impedance</u> Art. 17: 1g, 1h Detection characteristics - frequency track circuits 75Hz - audio frequency track - pulse voltage track circuits - axle counters - controlled with pedals - detection looping See the content of the article in the Description and/or attached document in the Legal Text. Rule applicable also for passenger coaches with driving cab Description: Detection characteristics 1. Railway vehicles are, with regard to detection equipment, suitable for deployment on parts of the main railway infrastructure where the detection is regulated by means of 75Hz low-frequency track circuits, if: g. the impedance between pantograph and wheels of rolling stock is at train level with a frequency of 75 ± 3 Hz at least $0,40 \Omega$ and is not capacitive. h. the impedance between pantograph and wheels amounts to at least 0.2Ω and is not capacitive at a frequency of 50 Hz. This value limits the maximum 50 Hz current at the train level; Type of evidence: -Technical Description	The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: rule acceptable	Accepted
<u>12.2.4.3-Metal and inductive components-free space between wheels</u> Art. 7: 8 8. Figure 3 of the document, mentioned under Appendix A, Table A2, Index Number 77, of the TSI CCS is applicable to all railway vehicles. This need not be complied with if compatibility with the main railway infrastructure has been shown to be in accordance with Appendix 4 of this regulation. Rule applicable also for passenger coaches with driving cab Description:	The national rule refers to open point 4.2.3.3.1.2 Compatibility with axle counters – Vehicle design : metal free space in Loc&Pas TSI 1302/2014. Agency: rule acceptable	Accepted

National rules	Agency evaluation	Agency evaluation status
Type of evidence: -Technical Description		
<u>12.2.4.3-Metal and inductive components-free space between wheels</u> Art. 7: 6b 6. In consideration of the traction current and of the electrical, magnetic and electromagnetic fields, it is necessary that: b. railway vehicles travelling on railway lines equipped with axle counters comply with the applicable requirements listed in the appendix. Rule applicable also for passenger coaches with driving cab Description: Appendix 4 Type of evidence: -Technical Description -Drawing / Part List -Test Report -Calculation	The national rule refers to open point 4.2.3.3.1.2 Compatibility with axle counters – Vehicle design : metal free space in Loc&Pas TSI 1302/2014. Agency: rule acceptable	Accepted
<u>12.2.4.5-Compatibility with fixed installations of CCS</u> Art. 7: 5 The short circuit value of a wheel set of a locomotive and of a multiple-unit set, measured from wheel tyre to wheel tyre, including the transition resistance between the wheel tyre and the rail heads is less than 0.20 Ohm. This is considered fulfilled whenever the detection quality of the railway vehicle is consistent with the requirements presented in appendix 5. Rule applicable also for passenger coaches with driving cab Description: Appendix 5 Rail vehicles detection quality A train composition is admitted on the aspect of detection quality based on the score in the points model, or if the tested short circuit behaviour meets a combined requirement. If it seems in practise that the detection behaviour is insufficient, the Minister reserves the right to prescribe additional requirements. Points model The train composition is admitted if a total of 43 or more points are scored according to table below: [Table - RIS Appendix 5] Combined requirement An electric train set is allowed on a railway line if the travel frequency of the other electric trains	The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: Acceptable rule related to dynamic shunting.	Accepted

National rules	Agency evaluation	Agency evaluation status
<p>that will also travel in addition to the railway vehicle to be approved is at least 36 times every 24 hours per track, as recorded in the schedule. This is combined with the requirement that the train set must have at least 6 axles (of which at most the middle 2 per 6 axles may be interrupted, but electrically connected), with an axle load of at least 6 tonnes or it must have at least 4 axles with a minimum axle load of 18 tonnes.</p> <p>Measured short circuit behaviour No more than 2 measurements may be performed every 24 hours at a speed between 40 and 60 km/hour, where no braking or or traction may be applied while crossing the measurement section.</p> <p>Before travelling over the measurement section, the applicant must contact the railway line operator and provide the following data:</p> <ul style="list-style-type: none"> ● material type, Dutch designation and manufacturing number of the railway vehicle; ● axle distances in millimetres (i.e. distance from axle 1 to axle 2, from 2 to 3, etc.) of the railway vehicle; ● scheduled date and time (hour and minute) for entering the measurement section. <p>After completion of the measurement section, the applicant must give the railway line operator an overview indicating the date and estimated time (hour and minute) of actual travel across the measurement section as well as driving direction. If there are exceptional circumstances (leaves falling, extreme wind, etc.) this could also be indicated in the overview.</p> <p>Type of evidence:</p> <ul style="list-style-type: none"> -Technical Description -Declaration of Conformity -Drawing / Part List -Test Report -Calculation -Maintenance Plan -User Manual -Evidence 		

5.20.3 CCS onboard Subsystem

5.20.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover the open points:

- 12.2.5.2 B2 “braking aspects
- 12.2.5.5 B2 “ETCS DMI”

The parameters below do not contain national rules to cover the open points:

- 12.2.5.4 DMI safety requirements
- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.6 B2 “braking aspects”

5.20.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature: Excel table, based on the rules published in RDD and the file maintained by ERA for ETCS rules. The Agency assessed NRs published in RDD that refers to RIS 2014. The Agency has been informed of a revised RIS (version 2017) and asked to NSA NL to revise RDD with the amended RIS 2017: still to be done. RDD: ready for upload in RDD		
	LoP version: New list as in Decision 2015/2299/EU		
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -		
Amount of remaining NRs in addition to latest TSIs	14		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	1 parameter: 12.2.1-National on-board signalling systems	Some requirements need to be moved to other RDD clauses
ETCS and GSM-R	Parameters listed in section 3.2.1	1 parameter: 12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)	Some requirements need to be moved to other RDD clauses

5.20.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.2.1-National on-board signalling systems</u> Art. 3: 1 1. The subsystem 'on-board' equipment for control and signalling of a locomotive, multiple-unit set, control car or shunting vehicle	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency:	Accepted in case point d is deleted. For the class B part, STM and ERTMS requirements

National rules	Agency evaluation	Agency evaluation status
<p>encompasses:</p> <p>a. an ATB-EG that complies with the requirements listed in Appendix 1 and has been installed in accordance with the specifications of the system supplier;</p> <p>b. an ATB-NG that has been installed in accordance with the specifications of the system supplier;</p> <p>c. an STM ATB that complies with the requirements listed in Appendix 1 and 2 and has been installed in accordance with the specifications of the system supplier; or</p> <p>d. an ERTMS that complies with the requirements listed in Appendix 2.</p> <p>Rule applicable also for passenger coaches with driving cab</p> <p>Description: Appendix 1 Appendix 2</p>	<p>Regarding point c: Requirements which are STM specific should be notified under 12.2.2</p> <p>Regarding point d: requirements related to ETCS should be placed in the appropriate RDD sections. Content of Appendix 2 to be checked. Several requirements are already covered in another NTR, in case the reference is kept, the NTR cannot be accepted (e.g. 2 EDOR are required – but there is another NTR asking for 2 com sessions only)</p>	<p>should be moved to the appropriate RDD parameter.</p>
<p><u>12.2.1-National on-board signalling systems</u> Art. 3: 2, 3</p> <p>2. A railway vehicle in accordance with Para. 1 that is used in the Netherlands exclusively on a railway line with a train control system that complies with regulations in effect in Germany, or if departing from Para. 1 has a train control system that complies with regulations in effect in Germany and and has been installed in accordance with those regulations.</p> <p>3. A rail vehicle, as intended in the first paragraph, used, exclusively, in The Netherlands on a track section with a safety system that complies with the stipulations applicable in Belgium has, in deviation from the first paragraph, a safety system that complies with the stipulations applicable to the track section in Belgium and this has been installed in accordance with the stipulations.</p> <p>Rule applicable also for passenger coaches with driving cab</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI.</p> <p>Agency: Seems that the rule is covering the cross border operation. In those cases the respective national rules shall apply The rule should be removed.</p>	<p>Not accepted</p> <p>National rule should be repealed</p>
<p><u>12.2.1-National on-board signalling systems</u> Art. 3: 4</p> <p>4. If the onboard equipment for ATB on a railway vehicle has been fitted with ATBvv, then this should be installed in accordance with the prescriptions of the system's supplier.</p> <p>Rule applicable also for passenger coaches with driving cab</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI.</p> <p>Agency: Please clarify what ATBvv means because above was mentioned only ATB-EG and ATB-NG. It seems that ATBvv covers some additional functionalities of track side equipment. Does the on-board equipment need a special version of ATB, besides/in addition to the above notified ATB-EG, ATB NG, STM-ATB?</p>	<p>Under review</p> <p>National rule should be modified</p>

5.20.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> Process and content of compatibility check according to RLN 00295</p> <p>ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2</p>	<p>Agency: TTSV (according to TSI CCS 2019 to be transferred to ESC therefore kept under review) Topic to be discussed when ERTMS-Platform testing activity is finalised. It has to be avoided that authorised vehicles have to perform (on their own costs) additional tests for each new line being placed in service, to be covered as part of the trackside projects. - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	<p>Under review ERA and NSA NL to further discuss the rule</p>
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> The choice of NL mode shall only be possible if there is a technical measure preventing the leading operation of the vehicle. If the technical measure preventing the leading operation of the vehicle is suspended in NL mode, the exit from NL mode shall be made only if the train is at standstill. NTR valid for Baseline 2 only as the issue is solved in Baseline 3. ETCS Baseline 2</p>	<p>Agency: Not clear what is missing in B3 > What mandatory engineering rules is missing? Validity for B3 to be withdrawn. NL: This requirement will be limited to baseline 2 equipment in next version of the regulation. Error covered in B3, NTR will be reworded. Agency agree - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	<p>Accepted National rule should be modified</p>
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> All self propelling vehicles have to be equipped with an ATP system which supervises the speed of the train according to information received from track side. As a consequence after a transition order to Level STM (Level NTC), the onboard shall operate in Level STM (Level NTC). ETCS Baseline 2</p>	<p>Agency: Transition to L0 is only possible when ordered/allowed by trackside (see B2 SRS 5.10.2) or when selected by the driver (awakening, cold movement). For case one you prohibit by trackside the transition, for the second case it should be part of the SMS of the RU on top you set the speed to 10km/h. We do not see here a requirement for vehicle authorisation >> NTR to be deleted NL: Requirement for B2 equipment will be changed in: "After a transition order to Level STM (Level NTC), the onboard shall operate in Level STM." NL will change the wording, see above. NL limit this requirement to B2, but a TSI conform B2 vehicle will not allow a transition to L0 via a transition order when L0 is not part of the Prio list. According ERA this is a type 8 requirement. Wording changed. most of the requirements are related to SMS (type 9) rest 2b. Requirement should be reworded and splitted in Types 2b and 9. ETCS must switch to level STM/NTC when the</p>	<p>Accepted National rule should be modified</p>

National rules	Agency evaluation	Agency evaluation status
	<p>appropriate level transition order was received. There was an grey area in B2, therefore this is a 2b requirement.</p> <p>- National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> ETCS equipped vehicles in a train have to be operated in a mode which registers a level transition. For all engines in the train, which are remote controlled by the leading engine, the ETCS shall be in SL mode. The use of NP is prohibited in this context. ETCS Baseline 2</p>	<p>Agency: In B3 (SS034) the topic is solved, which means a B3 TSI conform RS will fulfill this requirement. In case the RS is not capable to provide the information, this is a restriction and condition of use (to be checked case by case) and in such a case the vehicle may not be allowed to operate within such a train composition (SMS). Requirement to be withdrawn for B3. NL: Agree with Agency. Subset 034 par 2.2.1 of baseline 3 defines the use of SL mode. This obligation will be limited to baseline 2 equipment in next version of regulation. Requirement for B2 only, NL agreed to modify wording - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	Accepted
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> Traction units which are remote controlled by radio during shunting operations shall be operated in SH mode. The use of NP mode is prohibited in this context. ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2</p>	<p>Agency: Requirement for train operation radio remote controlled is outside the scope of TSI CCS. In the TSI LOC&PAS, we cover remote radio control only for shunting operation in clause 4.2.9.3.6. Requirement to be withdrawn as NTR for a normal ERTMS loco, could be seen as "National requirement for a train with additional functionality". NTR to be placed in 12.2.5.8 Note: A CR was launched by the Agency to add remote control shunting under ETCS to the Annex A specifications. - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	Accepted NR should be moved to parameter 12.2.5.8
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> When ordered by trackside by means of a level transition to the Dutch class B system (NID_STM=1) the train movement shall be supervised by the Dutch ATB. Manual transitions while running are forbidden. ETCS Baseline 2 ETCS Baseline 3MR1 ETCS Baseline 3R2</p>	<p>Agency: Reworded requirement to be moved to 12.2.1. The TSI CCS requires the MS is in charge of the transitions and that onboard configuration (e.g. external class B system) should not export constraints to trackside. This means that a TSI conform train with the Dutch ATB would transit and a train with an external class B system needs either an add on for automatic transitions or has</p>	Accepted NR should be modified and moved to parameter 12.2.1.

National rules	Agency evaluation	Agency evaluation status
	<p>to make the transition manually at stand still. In such a case the certificate has to indicate that the transition is only possible at stand still (condition/restriction of use). What cannot be required as NTR is a transition for such a train while running, nevertheless in the line/network access criteria it could be noted that e.g. for this line a transition at stand still is not possible because e.g. traffic or infrastructure constraints at all/during day/during peak hours/ Requirement to be withdrawn as NTR, acceptable as type 8 requirement. Requirement for the class B system (type 1b). Dutch ATB should be installed in a way that manual transitions are not possible. - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> The ERTMS train brake distances shall at least be long enough to cover the real emergency braking distance of the train while not exceeding the calculated braking distance which result from the braking curve model as defined in Subset-026 V360 in combination with the following parameters given from the track side: For Lambda trains: Kv = 0,9 up to 160 km/hour, Kv= 0,77 above 160 km/hour, Kr = 1,0, Kt = 1,0 For Gamma trains: The actual train deceleration values and brake build up application time applicable for a confidence interval (M_NVEBCL) of value '4' and a weight factor (M_NVAVADH) of value '1,0'. ETCS Baseline 2</p>	<p>Agency: NR to be moved to 12.2.5.2 Open point in B2, according to us solved in B3. Requirement for B3 to be deleted. NL: For baseline 2 this national rule is necessary and will remain obligatory. For baseline 3 equipment the requirement is superfluous but still helpful for RU's. They are informed on forehand that these values are being send by the infra. NL will rephrase the wording into an information (not a rule) for baseline 3. 20.07.2017 Agency agreed on the re-worded NR - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	<p>Accepted NR to be moved to parameter 12.2.5.2</p>
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> ERTMS trains shall be fitted with a DMI as specified in the ERA_ERTMS_015560 V360 or higher. The DMI planning area is in the Netherlands not an option but an obligation. ETCS Baseline 2</p>	<p>Agency: Open point in B2, ok. NR should be moved to 12.2.5.5 - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	<p>Accepted NR to be moved to parameter 12.2.5.5</p>
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> ERTMS vehicles shall respect the requirements in the baseline 3 version SUBSET-027 for the information which has to be recorded as juridical data. ETCS Baseline 2</p>	<p>Agency: Require the solutions from B3 for B2 (acceptable), no requirement for B3 >> acceptable - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	<p>Accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> ERTMS vehicles shall be able to manage simultaneous communication sessions with at least two different ERTMS entities. ETCS Baseline 2 ETCS Baseline 3MR1</p>	<p>Agency: 2 EDORS because of T-NVCONTACT Seems ok but to be discussed if there could be an issue of line access instead for authorisation. NL: This requirement is included in ERTMS baseline 3 R2 (CR1184). We prescribe this condition also for baseline 3 MR 1. For baseline 2 equipment the NTR is anyhow applicable. NTR to be reworded: The term from the SRS 3.6.0 chapter 3.5.2.4. "The ERTMS/ETCS on-board equipment shall be able to manage simultaneous communication sessions with at least two different entities." shall be used. Wording changed - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	<p>Accepted</p>
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> ERTMS vehicles shall be compliant with the solution of CR 887, 1170, 1251, 1288 and 1306. ETCS Baseline 2 (TBC) ETCS Baseline 3MR1 (TBC) ETCS Baseline 3R2</p>	<p>Agency: These CRs are part of the "Article 10 Opinion". The Agency has recommended to create a NTR for this since all known on-boards are compliant with this CRs. Additional CR added - National rule that shall be notified, in consistency with the published ERA ERTMS rules file agreed with NL (last e-mail 06/03/2019)</p>	<p>Accepted</p>

5.21 Member state NO

5.21.1 Summary of actions

Action	Responsible
NSA NO to take into account the actions identified below as “Action NSA NO”	NSA NO

5.21.2 Rolling Stock Subsystem

5.21.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : Excel table RDD : ready for publication
	LoP version : New
	-
Assessment status	Taken into account by MS : on going
Amount of remaining NRs in addition to latest TSIs	22

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	2 parameters: 8.4.2.4-Photometric current 8.4.3.2-Induced interference current/voltage	Other directive cover EMC directive
Rules related to documentation	Parameters listed in section 3.2.4	1 parameter : 1.4-National requirement for testing	The parameter 1.4 should contain only rules related to testing (organisation of tests...) Not accepted National rule should be modified The rule refer to : “Vehicle Regulation FOR-2016-12-19-1846 clause 12 and additional requirements relatd to the tests to be performed (as EN 50215). Action NSA NO : Only clause 12 should remain for TSI vehicle.

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules not retained in TSIs	Parameters listed in section 3.2.5	1 parameter: 4.7.1.3-Brake pads	-
Other rules related to compatibility with network / legacy system	See subsection 2 below	10 parameters: 3.2.2-Equivalent conicity 3.2.3-Wheel profile and limits 3.2.4-Track loading compatibility parameters 3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius 8.2.1.2-Voltage and frequency of overhead contact line power supply 8.2.1.3-Regenerative braking 8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 8.4.2.1.5-Effects of DC content in AC supply	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	2 parameters: 4.7.1.1-Brake blocks 6.1.1.3-Humidity	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	1 parameters: 8.4.2-EMC between the vehicle and the railway system	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameter	

5.21.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.21.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<p>4.7.4-Eddy current track brake</p> <p>Vehicle Regulation FOR-2016-12-19-1846-Royal act/law</p> <p>Eddy current brake can interfere with the signal systems, and other electrical systems. It shall therefore be considered in each case if eddy current brake can be used so that the requirements of technical compatibility with the national railway network are met. It is required a</p>	<p>The national rule refers to open points:</p> <ul style="list-style-type: none"> - 4.2.4.8.3 - Braking system independent of adhesion conditions: eddy current track brake - 4.2.3.3.1.2 - Rolling stock characteristics for compatibility with train detection system based on axle counters -EMC in Loc&Pas TSI 1302/2014. 	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
complete risk assessment and validation by test run on the railway network.		

5.21.2.2.2 Requirements covering open points and specific cases not described in TSIs

No requirement.

5.21.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>3.2.2-Equivalent conicity</u></p> <p>The national rule attached to this parameter might have a longer text than the RDD data base can store. The complete text can be found in the DESCRIPTION field</p> <p>Description:</p> <p>The requirements in TSI LOC & PAS 4.2.3.4.3 applies correspondingly. In addition, the following requirements apply:</p> <p>The range for the equivalent conicity where the vehicle running dynamics has been assessed and found to be stable, shall be specified in the documentation under point 1.4.</p> <p>The wheel profile shall contribute to stable running characteristic. Measurements and process of the measured values shall be done according to UIC 518 or 14363. Wheel profile shall be in accordance to UIC 510-2. Generally accepted wheel profile is S1002. Based on testing and safety assessments can other wheel profiles be accepted. Coordinate tables and drawings for rail-head are provided by the infrastructure manager.</p> <p>The size of wear groove in the wheel tread shall not be more than 2 mm. Wheel surface material defects (flaked-off material) and wheel hammer-blow/wheel flats shall not exceed an area of 60 mm in length for wheels with diameter over or equal to 920mm, and 40 mm for wheels with diameter under 920mm.</p> <p>Accepted standards shall be used, for instance: EN 15302:2008, EN 13715:2006, EN 13674-1:2003, EN 14363, UIC 518, UIC 519 and UIC 510.</p>	<p>The national rule refers to clause 4.2.3.4.3 of Loc&Pas TSI 1302/2014.</p> <p>NSA NO already indicated that some re-wording is needed, most valid as test requirements and safe integration, the NTR will be re-assessed in connection with the 2018 revision.</p> <p>Agency :</p> <p>The applicant will demonstrate running dynamic behaviour via the EN 14363 and ERA/TD/2012-17/INT that determines the operating conditions. Contact conditions covering the norway case (e.g rail inclination) shall be covered.</p>	<p>Not accepted National rule should be modified</p> <p>Action NSA NO : to revise the rule</p>
<p><u>3.2.3-Wheel profile and limits</u></p> <p>The wheel profile shall contribute to a stable running characteristic. Measurements and process of the measured values shall be done according to UIC 518 or EN14363. Wheel profile shall be in accordance with UIC 510-2. Generally accepted wheel profile is S1002. Based on testing and safety assessments can other wheel profiles be accepted. Coordinate tables and drawings for rail-head are provided by the infrastructure</p>	<p>See parameter 3.2.2 above</p>	<p>Not accepted National rule should be modified</p> <p>Action NSA NO : to revise the rule</p>

National rules	Agency evaluation	Agency evaluation status
<p>manager. The size of wear groove in the wheel tread shall not be more than 2 mm. Wheel surface material defects (flaked-off material) and wheel hammer-blow/wheel flats shall not exceed an area of 60 mm in length for wheels with diameter over or equal to 920mm, and 40 mm for wheels with diameter under 920mm.</p> <p>Accepted standards shall be used, for instance: EN 15302:2008, EN 13715:2006, EN 13674-1:2003, EN 14363, UIC 518, UIC 519 og UIC 510</p>		
<p><u>3.2.4-Track loading compatibility parameters</u></p> <p>The national rule attached to this parameter might have a longer text than the RDD data base can store. The complete text can be found in the DESCRIPTION field</p> <p>Description :</p> <p>"Vehicles shall not cause higher dynamic track load than the values specified by the infrastructure manager in order to ensure compatibility between the vehicle and railway track. The requirements in section 3.2.1 applies correspondingly for track load test. The requirements in TSI LOC & PAS point 4.2.3.4.2.2 applies correspondingly. For freight wagons the requirements in TSI WAG point 4.2.3.5 applies correspondingly. For vehicles with axle load higher than 25 tons, adequate risk assessments, calculations and verifications shall be carried out. Accepted standards shall be used, for instance: EN 15528, EN 14363, UIC 615 og EN 13749.</p> <p>Vertical acceleration, self-resonant frequency and dynamic load for bridges shall not exceed bridge's carrying capacity. Limit values are set by the infrastructure manager.</p> <p>To accomplish safety and running stability, measurements under different operating conditions or comparison studies with a proven design (e. g. simulation/calculation) shall be carried out in order to assess the dynamic load. Elements to be examined are, i.e. mass and inertia of car body, bogies and wheelsets, vehicle's suspension characteristic, distribution of the payload.</p> <p>The requirements in TSI LOC & PAS point 4.2.3.4.2.2 applies correspondingly. For freight wagons WAG TSI point 4.2.3.5 applies correspondingly. For vehicles with axle load higher than 25 tons, adequate risk assessments, calculations and verifications shall be carried out. Test conditions set in section 3.2.1 applies correspondingly</p>	<p>The national rule refers to clause 4.2.3.4.2.2 of Loc&Pas TSI 1302/2014.</p> <p>NSA NO already indicated that some re-wording is needed, most valid as test requirements and safe integration, ref for specifications over 25 tons , the NTR will be under revision during 2018.</p> <p>Agency :</p> <p>The application of TSI loc&Pas (including ERA/TD/2012-17/INT clause 4.1) cover severe conditions.</p> <p>For vehicle with axle load above 25 tones: not covered by TSI, National rule is possible. The rule is to be revised by NSA NO.</p>	<p>Not accepted National rule should be modified</p> <p>Action NSA NO : to revise the rule</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius</u> The requirements in TSI LOC & PAS clause 4.2.3.6 applies correspondingly. Minimum curve radius, vertical, horizontal, or in track switches, is specified in the infrastructure manager's Network statement</p>	<p>The national rule refers to clause 4.2.3.6 of Loc&Pas TSI 1302/2014. NSA NO justify that the requirements referes to test and radius under 150 m in e.g. switches. The rule will be revised and re-worded in revision 2018 Agency : The requirement refers to the register of infrastructure(RINF) and is more related to the route compatibility check performed by a railway undertaking after authorisation (see revised TSI OPE 4.2.2.5 and appendix D). Information form the network statement metionned in the rule should be transferred in RINF.</p>	<p>Not accepted National rule should be modified</p>
<p><u>8.2.1.2-Voltage and frequency of overhead contact line power supply</u> The requirements in TSI LOC & PAS clause 4.2.8.2.2 applies correspondingly along with the testing requirements given in EN50163 point 5. There are no requirements as to the length of ""unspecified period"" described under point 4.1 letter f) in EN 50163 if the voltage increase is caused by the backfeed of energy. This means that a traction vehicle can generate voltage up to Umax2 continuously by backfeed. Practical short circuit test as specified in EN 50215 point 9.16.5 shall not be performed on the line, but as a factory test.</p>	<p>The national rule refers to clause 4.2.8.2.2 of Loc&Pas TSI 1302/2014. NSA NO indicates that the rule apply to all vehicles due to power supply system particularities Agency: There is no additional requirement on top of TSIs, if a specific case is needed for regenerative brake, UMax2 shall be set as done in section 7.3.2.12 of Loc&Pas 1302/2014 . If so the second paragraph should be transfered to parameter 8.2.1.3</p>	<p>Not accepted National rule should be repealed</p>
<p><u>8.2.1.3-Regenerative braking</u> The national rule attached to this parameter might have a longer text than the RDD data base can store. The complete text can be found in the DESCRIPTION field Description : "The requirements in TSI LOC & PAS clause 4.2.8.2.3 applies corespondingly along with the testing requirements given in EN50388 point 15.7. Due to the contact line's thermal capacity and the contact line's protective device ability to detect a short circuit on the same section where a traction vehicle is regenerating power, is the national railway network divided into classes with maximum allowed regenerated effect/power. This classification is indicated by the infrastructure manager in the network statement. Limitation applies to total effect/power from all traction vehicles in multiple formation, and can be managed either manually by the driver or through a technical solution. If the traction vehicle in a satisfactory manner automatically stops the regenerated power when</p>	<p>The national rule refers to clause 4.2.8.2.3 of Loc&Pas TSI 1302/2014. NSA NO indicates that the rule apply to all vehicles due to power supply system particularities. Agency : The functional requirement is already covered by TSI, see clause 4.2.8.2.3 (2) "<i>It shall be possible to control the use of the regenerative brake.</i>" TSI does not impose a solution.</p>	<p>Not accepted National rule should be repealed</p>

National rules	Agency evaluation	Agency evaluation status
<p>there is a short circuit in the section where the traction vehicle is located, the limitations due to the ability of the contact line's protective device to detect a short circuit at the same time might be mitigated. This functionality shall be documented. See also point 8.2.2.10 in the appendix here.</p>		
<p><u>8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line</u> The requirements in TSI LOC & PAS clause 4.2.8.2.4 applies correspondingly along with the testing requirements given in the TSI LOC & PAS clause 6.2.3.18. The classification of the national railway network in terms of maximum effect and power allowed to draw from the contact line is specified by the infrastructure manager in the network statement. Automatic current limiting, at low contact line voltage according to 50388 point 7.2 shall be active in normal operation due to the weak power supply.</p>	<p>The national rule refers to clause 4.2.8.2.4 of Loc&Pas TSI 1302/2014. NSA NO indicates that the rule apply to all vehicles due to power supply system particularities. Agency: The requirements are covered by TSIs : <i>"The requirements in TSI LOC & PAS clause 4.2.8.2.4 applies correspondingly along with the testing requirements given in the TSI LOC & PAS clause 6.2.3.18. Automatic current limiting, at low contact line voltage according to 50388 point 7.2 shall be active in normal operation due to the weak power supply."</i> The clause : <i>"The classification of the national railway network in terms of maximum effect and power allowed to draw from the contact line is specified by the infrastructure manager in the network statement."</i> is relevant for route compatibility check and has to be in RINF If Norway impose power limitation different to what is in the clause 4.2.8.2.4 it shall be highlighted.</p>	<p>Not accepted National rule should be repealed Clarification needed from Norway</p>

5.21.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<p><u>6.1.1.3-Humidity</u> The requirements in TSI LOC & PAS clause 4.2.6.1.3 applies correspondingly, but the maximum temperature variation to be taken into account shall be up to 40 K.. It shall exists the possibility of drainage of all safety-critical spaces and openings in which condensation can occur. On design and operation of electrical and brake systems, the risk of condensation and freezing shall be taken into account . The general requirements in TSI LOC & PAS clause 4.2.6.1 and TSI WAG clause 4.2.5 applies correspondingly, as far as appropriate with regard to the geographical conditions.</p>	<p>The national rule refers to clause 4.2.6.1 of Loc&Pas TSI 1302/2014. NSA NO indicates that the rules are valid mainly for use of vehicles without operational restrictions, the text will be revised in 2018 Agency: The rule refer to a parameter corresponding to technical requirements not retained in TSIs (see clause 3.2.5 of this report). The requirement is already covered by clause 4.2.6.1 of Loc&Pas TSI and clause 7.4.</p>	<p>Not accepted National rule should be repealed Action NSA NO : to revise the rule</p>

5.21.2.4 Analysis of rules related to compatibility with TDS

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2-EMC between the vehicle and the railway system</u> Tests of electromagnetic compatibility between the vehicle and the signal and telecommunications network according to EN 50121, TS 50238-2 and TS 50238-3 shall be performed. Vehicles shall not affect other vehicles and the ground-based infrastructure of the rail system in a negatively way. Infrastructure equipment, such as train detection and axle counter types, can be found in the infrastructure manager's network statement. Declaration of conformity according to regulation 15. April 2016 nr. 378 about electromagnetic compatibility (EMC) for electronic communication equipment shall be provided. The main switch shall be automatically disconnected if the current in all frequency areas with 1 Hz frequency gap in the areas 92 – 98 Hz and 102 – 108 Hz is equal to or greater than 2 Arms for minimum 1,0 s. The following standard is accepted: EN 50121. Accepted standards shall be used, for instance: EN 50121.</p>	<p>Agency:</p> <ul style="list-style-type: none"> - No requirements under 8.4.2. as this is a header - EN 50121, TS 50238-2 and TS 50238-3 to be placed under the right parameters according to my table - The different §s of regulation 15. April 2016 nr. 378 about electromagnetic compatibility (EMC) have to be placed under the relevant parameters - The main switch shall be automatically disconnected if the current in all frequency areas with 1 Hz frequency gap in the areas 92 – 98 Hz and 102 – 108 Hz is equal to or greater than 2 Arms for minimum 1,0 s: To be placed under parameter 8.4.2.1.1 	<p>Not accepted National rule should be modified</p>
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> The national rule attached to this parameter has longer text than the data base can store. The complete text can be found in the DESCRIPTION field Description : "The requirements in TSI LOC & PAS clause 4.2.8.2.7 applies correspondingly. Additionally, in order to ensure technical compatibility, information shall also be obtained from the infrastructure manager in accordance with EN50388:2012 Annex D insofar as the information in EN50388:2012 Annex D is not sufficient to ensure technical compatibility between the vehicle and the infrastructure on the national railway network. When testing the technical compatibility of the vehicle and the power supply on the national railway network, the following shall be taken into consideration:</p> <ul style="list-style-type: none"> • A generally weak power supply characterised by long feeding distances, single tracks (high impedance on the catenary) and rotating converters as well as static converters from 50 Hz to 16 2/3 Hz with a low level of output 	<p>The national rule refers to clause 4.2.8.2.7 of Loc&Pas TSI 1302/2014. NSA NO indicates that the rule Apply for all vehicles due to infrastructure particularities. Agency : Accepted as rule, but it has no sense to reference to the LOC&PAS TSI for TSI compliant vehicles</p>	<p>Accepted, National rule should be modified Action NSA NO: To revise the rule</p>

National rules	Agency evaluation	Agency evaluation status
<ul style="list-style-type: none"> • Low-frequent oscillations at feeding from rotating converters due to electromagnetic resonant frequencies with little alleviation • A high amount of harmonic (over 30 % THDu) in the catenary voltage, especially 3. and 5. harmonic and repeating high top voltage values (up to 33 kV) due to many existing traction vehicles with half-controlled thyristor bridges. • The use of automatic limitation of the power/current at low catenary voltages and capacitive compensation for increased transmission capacity at long feeding distances • The use of automatic limitations of power/current at high catenary voltages and inductive compensation to limit the catenary voltage when recuperating energy • Low electrical resonance frequencies due to a high amount of cable in the infrastructure and passive filters in existing traction vehicles. 		
<p>8.4.2.1.5-Effects of DC content in AC supply Electric traction vehicles shall be designed so that they are not affected by the limited DC content in the AC power supply. Limit values for the DC content is specified by the infrastructure manager and will be validated by testing. EN 50388 point 13 applies correspondingly with additional conditions: transitory DC content up to 40 A in 60 seconds and 70 A shortly will be measured on existing vehicles on the national railway network due to rim on the contact line.</p>	<p>The national rule refers to clause 4.2.8.2.7 of Loc&Pas TSI 1302/2014. NSA NO indicates that the rule Apply for all vehicles due to infrastructure particularities. Agency : 1st § : Based on the max DC content on the overhead line accepted by the IM, are there requirements for the vehicle? Reinjection of max DC currents in the power supply, filters,...? What is tested and how? According to what procedure if relevant for vehicle authorisationTo clarify 2nd § : OK</p>	<p>Not accepted National rule should be modified. Discussion with NSA NO needed</p>

5.21.3CCS onboard Subsystem

5.21.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover open points:

None

The parameters below do not contain national rules to cover open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.2 B2 “braking aspects”
- 12.2.5.4; 12.2.5.5 B2 “ETCS DMI”
- 12.2.5.6 B2 “braking aspects” (maybe)

5.21.3.2 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD RDD : published
	LoP version : New

Availability and status of remaining national rules		
	If no, forecast	
Assessment status	Taken into account by MS : Yes/No Checked by the Agency	
Amount of remaining NRs in addition to latest TSIs	6	
Distribution of remaining rules in the List of parameters		
Group of rules	Corresponding parameters in RDD	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	12.2.1-National on-board signalling systems
ETCS and GSM-R	Parameters listed in section 3.2.1	12.1.1-Non-GSM-R radio system 12.1.2.2-Other GSM-R requirements 12.2.2-STM requirements 12.2.3-Transitions 12.2.5.6-Interface with service brake 12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances

5.21.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.1-National on-board signalling systems</u> Traction vehicles to be used on sections equipped with class-B automatic train control shall have equipment compatible with the control system. Class B equipment approved for use in Norway is listed in TSI CCS Annex B.-see also point 12.2.2-STM requirements. Accepted standards shall be used, for instance: EN 50129.</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. NSA NO indicates that the rule give indication of the class B system used in Norway. Ref to Test requirements will be provided in connection with revision in 2018 Agency: NSA NO to explain what are the functional/interface requirements checked and tested during authorisation? What and how? Annex B gives only a description of the basic functionalities NSA NO to Indicate at least the type of Class B, manufacturer and Version</p> <p>Annex B does not exist at least since TSI CCS 2012 (see comment in the Excel file from 16.02.2018). Normally Annex B and the follow up document contains a description of the relevant Class B parameter, therefore I do not see a problem with the NTR.</p>	<p>Not accepted National rule should be modified</p> <p>To be discussed with NSA NO</p>

5.21.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.1-Non-GSM-R radio system</u> Other radio communication systems may be used in addition to the GSM-R system in connection with shunting.</p>	<p>The national rules refers to clauses 4.2.5.1 (Radio communication with the train) of CCS TSI. NSA NO indicates that the rule is to be assessed and cleaned up in connection with revision 2018 Agency: This rule is an OPE rule and not related to VA, so to be deleted in RDD.</p>	<p>Not accepted NRs should be repealed</p>
<p><u>12.1.2.2-Other GSM-R requirements</u> ETCS-requirements when the vehicle is not operated from the drivers cab: a safety case shall be prepared in case of ETCS use when the vehicle is remote controled, for instance, during shunting; the function shall be tested and validated. Key Management requirements compliance: a risk assessment shall be carried out for Key Management, for instance, requirements dealing with exchange of crypto keys.</p>	<p>Agency : Requirement is marked for Non TSI conform vehicles, nevertheless it is valid for TSI conform vehicles too. Mixture of several topic, further clarification from Norway is needed. No requirement on top of a TSI conform vehicle.</p>	<p>Accepted Action NSA NO: To clarify</p>
<p><u>12.2.2-STM requirements</u> The national rule attached to this parameter might have a longer text than the RDD data base can store. The complete text can be found in the DESCRIPTION field Description: "Norwegian railway supervision shall have complementary requirements for STM-unit. To ensure technical compatibility and safe integration, testing of management and control equipment shall be performed in connection with integration of this equipment in the vehicle (integration testing). Infrastructure manager has complementary provisions regarding integration testing. STM-unit shall communicate securely with the class B system. The following shall be documented: a) description of the STM device. Description of all interfaces that are not part of the TSI CCS. b) compliance with the specification for STM device (ref. supplementary provisions from the SJT). c) ISA report for compliance with the requirements of EN 50126, EN 50128 and EN50129 c) safety report confirming safe integration of STM-unit with relevant subsystems, see. section 14 d) d) safety report that confirms secure integration between the vehicle and the Norwegian railway network, cf. section 14 d) or section 15 e), including integration tests.</p>	<p>NSA NO indicates that the rule applies to all vehicles. Ref to STM specifications and test specifications will be added- revision 2018. Agency : The "complementary provisions" coming from the IM shall be documented and made available as a national technical requirement. What is tested exactly and how during the authorisation? Is there a document describing the STM and the connection with the Class B system? The testing issues will be part of the ESC tests.</p>	<p>Not accepted National rule should be modified Action NSA NO : to revise the rule</p>
<p><u>12.2.3-Transitions</u></p>	<p>Agency : Mixture of requirements, to be discussed.</p>	<p>Not accepted</p>

National rules	Agency evaluation	Agency evaluation status
<p>It shall be carried out a risk assessment on matters related to border crossing (Directed/automatic network selection). This shall at least deal with the frequency limitations, network selection, installation of filters to reduce interference (see also point 12.1.2.2) and key management. Only manual procedures for selection of GSM-R-network are accepted.</p>	<p>It seems that GSM-R filter are required In case filter are required for re-authorisation this is not acceptable > DV 81 to be applied.</p>	<p>National rule should be modified</p> <p>Action NSA NO: To clarify</p>
<p><u>12.2.5.6-Interface with service brake</u> It shall be carried out risk assessment and test for validation of the interface between ETCS-onboard equipment and vehicle's braking system.</p>	<p>Agency : No requirement on top of TSI CCS for a B3 on-board, part of the safe integration of ETCS (NoBo), to be clarified if this is an requirement for B2 (open point) only.</p>	<p>Not accepted National rule should be modified</p> <p>Action NSA NO : To clarify/delete the rule</p>
<p><u>12.2.5.8-Specification of condition of use where ETCS on-board does not implement all functions, interfaces and performances</u> Risk analysis shall be carried out for all ETCS-on board functions differing from TSI CCS, and a compatibility test shall be performed. Conditions for use shall be mentioned separately.</p>	<p>Agency : Agency agree that this actions need to be performed. To be clarified with the NoBo, if there is a grey area which needs to be covered by a national rule</p>	<p>Under review NSA NO/ERA</p> <p>Action NSA NO/ERA: To clarify</p>

5.22 Member state PL

5.22.1 Summary of actions

Action	Responsible
ERA to provide the assessment for the new version of rules	ERA
PL to publish the cleaned NRs in RDD	NSA PL
NS PL to state its position regarding the ERA assessment	NSA PL

5.22.2 Rolling Stock Subsystem

5.22.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table, ready for RDD import. ERA provided the assessment based on the published rules in RDD. In response, NSA PL provided a important modification of the rules on the 15/05/2019. The assessment of the new version of rules is in progress. The rules presented in the report are those in the new version. RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -
Amount of remaining NRs in addition to latest TSIs	59

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	6 parameters: 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.3.1-Maximum electro-magnetic fields 8.4.3.2-Induced interference current/voltage 8.4.3.3-Psophometric current	Other directives covering : • EMC directive
Rules related to documentation	Parameters listed in section 3.2.4	4 parameters: 1.1-General documentation 1.2.1-Maintenance instructions 1.2.2-The maintenance design justification file 1.3.1-Instructions for operation in normal and degraded modes of the vehicle	

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter	
Other rules related to compatibility with network / legacy system	See subsection 2 below	33 parameters: 2.1.2.1-Load conditions and weighed mass 2.1.2.2-Axle load and wheel load 3.1-Vehicle gauge 3.2.1-Running safety and dynamics 3.2.2-Equivalent conicity 3.3.4-Wheel/rail interaction influencing systems 3.3.5-Sanding system 4.4.5-Parking braking command 4.7.3-Magnetic track brake 4.7.4-Eddy current track brake 5.7.2-Signs and information 7.2.1-Vehicle marking 7.2.2.1-Headlights 7.2.2.2-Marker lights 7.2.2.4-Lamp controls 8.2.1.1-Specific requirements for power supply 8.2.1.2-Voltage and frequency of overhead contact line power supply 8.2.1.3-Regenerative braking 8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line 8.2.2.1-Pantograph overall design 8.2.2.2-Pantograph head geometry 8.2.2.3-Pantograph contact force (including static contact force, dynamic behaviour and aerodynamic effects) 8.2.2.4-Working range of pantographs 8.2.2.5-Current capacity of pantograph including contact strip 8.2.2.6-Arrangement of pantographs 8.2.2.7-Insulation of pantograph from the vehicle 8.2.3.2-Contact strip material 8.2.3.3-Contact strip assessment 8.3.2-Requirements for electrical installations on-board of a railway vehicle 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 8.5-Protection against electrical hazards 9.3.4-Driver supervision 13.1-Specific items to place on-board	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g	See subsection 3 below	0 parameters:	Detailed analysis per parameter provided in section 3 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
potential TSI deficiency)			
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	4 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.1.3-Interference current under the vehicle 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.22.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.22.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.2.1-Running safety and dynamics</u> PN-EN 14363:2016-04 PN-EN 50129:2007/AC:2010	Agency: Assessment undergoing	Under review by ERA
<u>3.2.1-Running safety and dynamics</u> PN-EN 14363:2016-04	Agency: Assessment undergoing	Under review by ERA
<u>3.3.2-Wheelset (complete)</u> PN-EN 15302+A1:2011, UIC 518	Agency: Assessment undergoing	Under review by ERA
<u>3.3.2-Wheelset (complete)</u> UIC 510-4	Agency: Assessment undergoing	Under review by ERA
<u>3.3.2-Wheelset (complete)</u> UIC 430-3, UIC 430-5	Agency: Assessment undergoing	Under review by ERA
<u>3.3.8-Axle bearing condition monitoring</u> PN-EN 15437-1:2009	Agency: Assessment undergoing	Under review by ERA
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle attachment S-02</u>	Agency: Assessment undergoing	Under review by ERA
<u>10.1-Fire protection concept and protection measures</u> PN-EN 45545-3:2013-07 PN-EN 45545-6:2013-07	Agency: Assessment undergoing	Under review by ERA

5.22.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.22.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>2.1.2.1-Load conditions and weighed mass</u> PN-EN 14363:2016-04, annex TM-1	Agency: Assessment undergoing	Under review by ERA
<u>2.1.2.2-Axle load and wheel load</u> PN-EN 14363:2016-04, annex TM-1	Agency: Assessment undergoing	Under review by ERA
<u>3.1-Vehicle gauge</u> PN-EN 14033 (series) PN-EN 15273-2:2013-09 PN-EN 15746 (series) UIC 505-1 UIC 505-6 UIC 506 § 4 Order of the Minister for Infrastructure of 12 October 2005 on the general technical conditions for the operation of railway vehicles (Journal of Laws, No 212, item 1771 with later amendments)	Agency: Assessment undergoing	Under review by ERA
<u>3.2.1-Running safety and dynamics</u> PN-EN 12299:2009 PN-EN 14033 (series) PN-EN 14363:2016-04 PN-EN 15746 (series) PN-EN 15839+A1:2015-12 PN-EN 16235:2013-12 UIC 432 UIC 518 UIC 530-2	Agency: Assessment undergoing	Under review by ERA
<u>3.2.2-Equivalent conicity</u> PN-EN 14363:2016-04 PN-EN 15302+A1:2011 UIC 518 UIC 519	Agency: Assessment undergoing	Under review by ERA
<u>3.3.4-Wheel/rail interaction influencing systems</u> PN-EN 15427+A1:2011 UIC 512	Agency: Assessment undergoing	Under review by ERA
<u>3.3.5-Sanding system</u> ERA/ERTMS/033281 (version 2.0 of 12 maj 2014)	Agency: Assessment undergoing	Under review by ERA
<u>4.4.5-Parking braking command</u> PN-K-88177:1998+Az1:2002 UIC 543 UIC 544-1	Agency: Assessment undergoing	Under review by ERA
<u>4.7.3-Magnetic track brake</u> CLC/TS 50238-3:2013 UIC 541-6, Annex S-02	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
<p><u>4.7.4-Eddy current track brake</u> CLC/TS 50238-2:2015 CLC/TS 50238-3:2013, Annex S-02</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>5.7.2-Signs and information</u> ISO 3864-1:2011 PN-EN ISO 7010:2012+A5:2015-05 PN-EN 16334:2014-10 PN-EN 15877-2:2013-12 UIC 176 UIC 413 UIC 580 UIC 567 UIC 567-1 UIC 567-2 § 20, 23, 24, 26 and Attachment 5 to the Order of the Minister of Transport, Construction and Maritime Economy of 3 January 2013 on how to keep a register and how to mark rail vehicles (Journal of Laws of 2013, item 211)</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>7.2.1-Vehicle marking</u> ISO 3864-1:2011 PN-EN ISO 7010:2012 PN-EN 15877-1:2012 PN-EN 15877-2:2013-12 UIC 438-1 UIC 438-2 UIC 438-3 UIC 438-4 UIC 552 UIC 545 UIC 580 UIC 640 PN-K 88200:2002 Annex 11 to the General Agreement About the use of freight wagons (AVV) - Inscriptions and signs on freight wagons, § 20, 23, 24, 26 And Attachment 5 of the Order of the Ministry of Transport, Construction and Maritime Economy of 3 January 2013 on how to keep a register and how to mark rail vehicles (Journal of Laws of 2013, item 211)</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>7.2.2.1-Headlights</u> EN 15153-1 (for headlight low) UIC 534 (for headlight top)</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>7.2.2.2-Marker lights</u> PN-EN 15153-1: 2013-06 (signal lights - white and colored marker bottom) UIC 534 (signal light - white top marker)</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>
<p><u>7.2.2.4-Lamp controls</u> § 105, § 108 Order of the Minister of Infrastructure of 18 July 2005 on the general</p>	<p>Agency: Assessment undergoing</p>	<p>Under review by ERA</p>

National rules	Agency evaluation	Agency evaluation status
conditions of railway traffic and signaling (Journal of Laws of 2015, item 360)		
<u>8.2.1.1-Specific requirements for power supply</u> PN-EN 50343:2014-11 PN-EN 50388:2012 PN-EN 61287-1:2014-2 UIC 550-2 UIC 550-3 UIC 552	Agency: Assessment undergoing	Under review by ERA
<u>8.2.1.2-Voltage and frequency of overhead contact line power supply</u> PN-EN 50163:2006/A1:2007	Agency: Assessment undergoing	Under review by ERA
<u>8.2.1.3-Regenerative braking</u> PN-EN 50388:2012 PN-EN 50163:2006/A1:2007	Agency: Assessment undergoing	Under review by ERA
<u>8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line</u> PN-EN 50388:2012	Agency: Assessment undergoing	Under review by ERA
<u>8.2.2.1-Pantograph overall design</u> PN-EN 50206-1:2010 PN-EN 50367:2012	Agency: Assessment undergoing	Under review by ERA
<u>8.2.2.2-Pantograph head geometry</u> PN-EN 50367: 2012 (Fig. B.2 and Fig. B.7)	Agency: Assessment undergoing	Under review by ERA
<u>8.2.2.3-Pantograph contact force (including static contact force, dynamic behaviour and aerodynamic effects)</u> PN-EN 50206-1:2010 PN-EN 50317:2012 PN-EN 50367:2012	Agency: Assessment undergoing	Under review by ERA
<u>8.2.2.4-Working range of pantographs</u> PN-EN 50206-1:2010 PN-EN 50367:2012	Agency: Assessment undergoing	Under review by ERA
<u>8.2.2.5-Current capacity of pantograph including contact strip</u> PN-EN 50206-1:2010	Agency: Assessment undergoing	Under review by ERA
<u>8.2.2.6-Arrangement of pantographs</u> PN-EN 50367:2012	Agency: Assessment undergoing	Under review by ERA
<u>8.2.2.7-Insulation of pantograph from the vehicle</u> PN-EN 50124-1:2007 PN-EN 50124-1:2007/AC:2010	Agency: Assessment undergoing	Under review by ERA
<u>8.2.3.2-Contact strip material</u> PN-EN 50405:2016-06, Annex TE-1	Agency: Assessment undergoing	Under review by ERA
<u>8.2.3.3-Contact strip assessment</u> PN-EN 50405:2016-06, Annex TE-1	Agency: Assessment undergoing	Under review by ERA
<u>8.3.2-Requirements for electrical installations on-board of a railway vehicle</u> PN-EN 50388:2012 PN-EN 60077 (seria)	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
Annex TE-2 PN-EN 50343: 2014 PN-EN 45545-5: 2013		
<u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> PN-EN 50388:2012	Agency: Assessment undergoing	Under review by ERA
<u>8.5-Protection against electrical hazards</u> PN EN 50153:2014-11 UIC 533 UIC 550 UIC 611 PN-EN 50388:2012/AC:2014-03 PN-EN 60077 (series), Annex TE-2	Agency: Assessment undergoing	Under review by ERA
<u>9.3.4-Driver supervision</u> PN-EN 15437-1:2009 UIC 641 PN-K-88177:1998/Az1:2002 § 21 fourth subparagraph of the Order of the Minister of Infrastructure of 18 July 2005 on general traffic and signaling conditions (Journal of Laws of 2015, item 360) Annex S-04	Agency: Assessment undergoing	Under review by ERA
<u>13.1-Specific items to place on-board</u> § 3 Order of the Minister for Infrastructure of 12 October 2005 on the general technical conditions for the operation of railway vehicles (Journal of Laws, No 212, item 1771 with later amendments)	Agency: Assessment undergoing	Under review by ERA

5.22.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements

5.22.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> PN-EN 50238:2003 CLC/TS 50238-3:2013 PN-EN 50617-2:2015-12 PN-EN 50617-2:2015-12/AC:2016-02 PKN-CLC/TR 50507:2007	Agency: Assessment undergoing	Under review by ERA
<u>8.4.2.1.2-Heating cable interference current</u> PN-EN 50238:2003 CLC/TS 50238-3:2013 PN-EN 50617-2:2015-12 PN-EN 50617-2:2015-12/AC:2016-02 PKN-CLC/TR 50507:2007 UIC 550-3	Agency: Assessment undergoing	Under review by ERA
<u>8.4.2.1.3-Interference current under the vehicle</u> PN-EN 50238:2003 CLC/TS 50238-3:2013	Agency: Assessment undergoing	Under review by ERA

National rules	Agency evaluation	Agency evaluation status
PN-EN 50617-2:2015-12 PN-EN 50617-2:2015-12/AC:2016-02 CLC/TS 50238-2:2010 PKN-CLC/TR 50507:2007 UIC 550-3		
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle attachment S-02</u>	Agency: Assessment undergoing	Under review by ERA
<u>8.4.2.1.3-Interference current under the vehicle attachment S-02</u>	Agency: Assessment undergoing	Under review by ERA
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> PN-EN 50121-1:2015-10; PN-EN 50121-4:2015-10; attachment S-02	Agency: Assessment undergoing	Under review by ERA
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle attachment S-02</u>	Agency: Assessment undergoing	Under review by ERA
<u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle attachment S-02</u>	Agency: Assessment undergoing	Under review by ERA
<u>12.2.4.5-Compatibility with fixed installations of CCS</u> attachment S-05	Agency: Assessment undergoing	Under review by ERA

5.22.3 CCS onboard Subsystem

5.22.3.1 Requirements covering open points for Baselines 2 and 3

Under assessment

5.22.3.2 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table, ready for RDD import. ERA provided the assessment based on the published rules in RDD. In response, NSA PL provided a consistent review of the rules on the 15/05/2019. The assessment of the new version of rules is in progress. The rules presented in the report are those in the new version. RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	Assessment sent to the MS, MS position not yet received Taken into account by MS: -
Amount of remaining NRs in addition to latest TSIs	4
Distribution of remaining rules in the List of parameters	

Availability and status of remaining national rules			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	2 parameters: 12.1.2.1-Use of hand portables as cab mobile radio 12.2.2-STM requirements	

5.22.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.2.1-Use of hand portables as cab mobile radio</u> PN-ETSI EN 300 086-1 V1.3.1:2008	Agency: Assessment undergoing	Under review by ERA
<u>12.2.2-STM requirements</u> Annex TS-1	Agency: Assessment undergoing	Under review by ERA

5.22.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> PN-ETSI EN 300 086-1 V1.3.1:2008 PN-EN 50129:2007 PN-EN 50129:2007/AC:2010	Agency: Assessment undergoing	Under review by ERA
<u>12.2.1-National on-board signalling systems</u> PN-EN 15437-1:2009 Annex S-04	Agency: Assessment undergoing	Under review by ERA

5.23 Member state PT

5.23.1 Summary of actions

Action	Responsible
Agency to take into account the actions identified below as “Action ERA”	ERA
NSA PT to take into account the actions identified below as “Action NSA PT”: <ul style="list-style-type: none"> - Specific cases to be addressed to cover vehicle gauge (cascais line), pantograph - Rule relate to the description of infrastructure (parameter 3.2.5) to be transferred in RINF 	NSA PT

5.23.2 Rolling Stock Subsystem

5.23.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD RDD : published
	LoP version : New
	-
Assessment status	Taken into account by MS : Yes
Amount of remaining NRs in addition to latest TSIs	57

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	parameters: 6.2-Impact of the vehicle on the environment 6.2.1.2-Exhaust gas emissions 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.2.4-Psophometric current 8.4.3.1-Maximum electro-magnetic fields 8.4.3.2-Induced interference current/voltage 8.4.3.3-Psophometric current 8.6-Diesel and other thermal traction system requirements 8.7.2-Pressure vessel systems/pressure equipment 14.1-Design, operation and maintenance constraints for the transport of dangerous goods	Other directives covering : <ul style="list-style-type: none"> • Environmental impact • Exhaust emission directive • EMC directive • Pressure vessel • Transport of dangerous good
Rules related to documentation	Parameters listed in section 3.2.4	parameters : 2 1.1-General documentation 1.4-National requirement for testing	<u>Parameters 1.1</u> : rules cover the content and structure of authorisation file.

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
			Parameter 1.4 : rule address conditions for performing on track test
Rules not retained in TSIs	Parameters listed in section 3.2.5	Parameter : 0	-
Other rules related to compatibility with network / legacy system	See subsection 2 below	parameter: 3.1-Vehicle gauge 3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius 3.3.4-Wheel/rail interaction influencing systems 8.2.2.4-Working range of pantographs 8.2.2.6-Arrangement of pantographs 9.3.3-Controls and indicators 9.6-Recording device	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	parameters: 3.3.5-Sanding system	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	4 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	parameter: 7.1-Integrity of software employed for safety related functions	Reference to EN 50128 remain pending the revision of TSI Loc&Pas application guide. Action ERA: Publication of the revised application guide that refer to EN 50128.

5.23.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.23.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>4.7.3-Magnetic track brake</u> Not allowed for now	The national rule refers to open point 4.2.3.3.1.2 - Rolling stock characteristics for compatibility with train detection system based on axle counters in Loc&Pas TSI 1302/2014.	Accepted
<u>4.7.4-Eddy current track brake</u> Not allowed for now	The national rule refers to open point 4.2.4.8.3 - Braking system independent of adhesion conditions: eddy current track brake in Loc&Pas TSI 1302/2014.	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
<u>8.4.2.1.1-Rail return current, 8.4.2.1.2-Heating cable interference current, 8.4.2.2.1-Electromagnetic fields/Induced voltages in the track/under the vehicle</u>	The national rule refers to open points: <ul style="list-style-type: none"> - 4.2.3.3.1.1 - Compatibility with track circuits- EMC- EMC interference - 4.2.3.3.1.2 Rolling stock characteristics for compatibility with train detection system based on axle counters -EMC in Loc&Pas TSI 1302/2014 	See section : Analysis of rules related to compatibility with TDS

5.23.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.23.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>3.1-Vehicle gauge</u> Refer drawing 10002054476 - Cascais Line	The national rule refers to clause 4.2.3.1 of Loc&Pas TSI 1302/2014. The rule remains for TSI vehicle as Cascais line reference dynamic clearance gauge is more restrictive than the national gauge CPb.	Accepted Action NSA PT: NSA PT to address to TSI WP a specific case that covers the Cascais line.
<u>3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius</u> IT.GER.009 v01 2012 clause 5.4 “Deverão considerar-se os seguintes raios mínimos de curvatura em planta: <ul style="list-style-type: none"> • Em plena via: 150 m • Em aparelhos de via: 150 m • Em linhas de desvio ou de resguardo: 90 m Deverão considerar-se os seguintes raios mínimos de curvatura em perfil longitudinal: <ul style="list-style-type: none"> • Em plena via: Curvas convexas: 1500 m • Curvas côncavas: 1000 m • Em linhas de resguardo: Curvas côncavas: 300 m • Curvas convexas: 400 m” 	The national rule refers to clauses 4.2.3.1 and 4.2.3.6 of Loc&Pas TSI 1302/2014. The NR describes the infrastructure is kept pending that RINF is updated.	Accepted Action NSA PT : To transfer content of national rule to RINF
<u>3.3.4-Wheel/rail interaction influencing systems</u> IET 74 annex 1 :- flange lubricators Locomotive equipment – locomotives should be provided with the following equipment: "flange lubricators, at least on the end wheels, which do not diminish adherence and offer good wheel/rail contact.	The national rule refers to clause 7.5.3.1 of Loc&Pas TSI 1302/2014. The rule remains as it covers an aspect relevant for the EU railway system but out of the scope of TSI (see clause 7.5.3.1 of Loc&Pas TSI).	Accepted
<u>8.2.2.4-Working range of pantographs,8.2.2.6-Arrangement of pantographs</u> IT GER 009 V01-2012 § 7.5.1 Distância entre pantógrafos – Catenária 25 kV 50 Hz Atendendo às dimensões atuais das zonas neutras, as distâncias entre pantógrafos em serviço (L) devem respeitar os seguintes valores:	The national rule refers to clause 4.2.8.2.9.7 of Loc&Pas TSI 1302/2014. PT network includes some specific lines that are not according to TSI (EN 50367 : the rule covers the risk of short circuits of the substation when two consecutive pantographs are at the same time in the section.	Accepted Action NSA PT: NSA PT to send a proposal of specific case (see specific case of France 7.3.2.14.Pantograph

National rules	Agency evaluation	Agency evaluation status
<ul style="list-style-type: none"> - $L \leq 20,00$ m, para pantógrafos eletricamente ligados entre si; - $L \leq 25,20$ m ou $L \geq 39,68$ m, para pantógrafos não eletricamente ligados entre si; <p>$L \geq 81,00$ m, entre dois pantógrafos não consecutivos.</p>	The rule is maintained pending a specific case is addressed in the TSI Loc&Pas.	head geometry (4.2.8.2.9.2))
<p>9.3.3-Controls and indicators, 9.6-Recording device ICS 104/06</p>	The national rule refers to clauses 4.2.9.3.4 and 4.2.9.6 of Loc&Pas TSI 1302/2014. The rule covers the Class B system.	Accepted

5.23.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<p>3.3.5-Sanding system IET 74 annex 1 :- sanding Locomotive equipment – locomotives should be provided with the following equipment: sanders.</p>	<p>The national rule refers to clause 7.4 of Loc&Pas TSI 1302/2014. The rule requires that locomotives and power head units shall be provided with sanding devices.</p>	<p>Accepted Action ERA : The rule is maintained pending the revision of the TSI Loc&Pas section 7.4 for PT considering the national rule of PT.</p>

5.23.2.4 Analysis of rules related to compatibility with TDS

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.1-Rail return current, 8.4.2.1.2-Heating cable interference current</u></p> <ul style="list-style-type: none"> • IT.GER.009 v01 - Compatibilidade do Material Circulante com a Infra-estrutura de Via Larga - § 9.2 Emissões conduzidas - Sinalização e equipamentos de detecção de comboios • EN 50238 Compatibility between rolling stock and train detection systems • IEC 62427:2007. Railway applications - Compatibility between rolling stock and train detection systems • CLC/TS 50238-2 Compatibility between rolling stock and train detection systems - part 2 compatibility with track circuits • For all traction vehicles equipped with line cable with current return through the rail, compliance 4.1 of IET51 shall be fulfilled; Even if the mentioned point refers to specific series of locomotives • For all electric traction vehicles equipped with more than one operational pantograph, compliance 9.2.4 of IT.GER.009 v01 shall be fulfilled 	<p>The requirement refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency :</p> <p>What is the exact requirement under 4.1. of IET51?</p>	<p>Accepted if the national rule is revised to include frequency management.</p> <p>Action NSA PT:</p> <p><u>Parameter 8.4.2.1.1 :</u> The national rule refer to clause 9.2 of IT GER 009 (2012) that will be revised in 2018. IT GER 009 will include Frequency Management for compatibility with track circuits.</p>
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u></p> <p>The THD (Total Harmonic Distortion) in the primary calculated according to NP EN 50160, shall not exceed 4%</p> <p>Relevant document : Regulamento de Qualidade de Serviço (RQS) da Entidade Reguladora de Sector Eléctrico (ERSE) - Regulamento n.º 629/2017 de 20 de dezembro ; § 3.4</p>	<p>The requirement refers to the clause 4.2.8.2.10 of Loc&Pas TSI 1302/2014.</p> <p>Agency :</p> <p>OK</p>	<p>Accepted</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u></p> <ul style="list-style-type: none"> • CLC/TS 50238-3 Compatibility between rolling stock and train detection systems - part 3 compatibility with axle counters • EN 50238 Compatibility between rolling stock and train detection systems • IEC 62427 :2007. Railway applications - Compatibility between rolling stock and train detection systems • IT.GER.009 v01 - Compatibilidade do Material Circulante com a Infra-estrutura de Via Larga - § 9.2.4 Point 12 CSEE pedal electrónico 	<p>The national rule refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014.</p> <p>Agency :</p> <p>IEC 62427 is the same as EN 50238, so leave it out.</p>	<p>Accepted</p>

5.23.3 CCS onboard Subsystem

1.1.1.1.2 Requirements covering open points for ETCS Baselines 2 and 3

The parameters below contain national rules to the cover open points:

None

The parameters below do not contain national rules to cover the open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.2, 12.2.5.6 B2 “braking aspects”
- 12.2.5.4; 12.2.5.5 B2 “ETCS DMI”

5.23.3.1 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature : RDD RDD : published		
	LoP version : New		
	If no, forecast		
Assessment status	Taken into account by MS : Yes Checked by ERA		
Amount of remaining NRs in addition to latest TSIs	2		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	No rules	

5.23.3.1.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> RGS I, 8.9	The national rules refers to clauses 4.2.5.1 (Radio communication with the train) of CCS TSI. Agency :They are related to the class B radio communication system.	Accepted
<u>12.2.1-National on-board signalling systems</u> ICS 104/06 – Sistema de Controlo Automático de Velocidade – Convel RGS I, 8.8	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency : They are related to class B system train protection system.	Accepted

5.23.3.1.2 Analysis of rules for ETCS and GSM-R

No requirements

5.24 Member state RO

5.24.1 Summary of actions

Action	Responsible
NSA RO to provide the additional information required in some rules	NSA RO
NSA RO to publish the cleaned NRs in RDD	NSA RO
NSA RO and ERA to take into account the list of actions referred in the detailed assessment	NSA RO/ ERA

5.24.2 Rolling Stock Subsystem

5.24.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table and RDD RDD: rules to be imported in RDD, checked and published by RO
	LoP version: New
	-
Assessment status	On going Taken into account by MS: see assessment below
Amount of remaining NRs in addition to latest TSIs	12

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	7 parameters: 8.4.1-EMC within the vehicle 8.4.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.2.4-Psophometric current 8.4.2.5-Transverse voltage limits for compatibility voice/data circuits 8.4.3.1-Maximum electro-magnetic fields 8.4.3.2-Induced interference current/voltage 8.4.3.3-Psophometric current	Other directives covering : • EMC directive
Rules related to documentation	Parameters listed in section 3.2.4	0 parameters	
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	
Other rules related to compatibility	See subsection 2 below	0 parameters:	

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
with network / legacy system			
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameters:	
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	4 parameters: 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 8.4.2.1.3-Interference current under the vehicle 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters:	

5.24.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.24.2.2.1 Requirements covering open points

No requirements.

5.24.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.24.2.2.3 Other rules related to compatibility with existing network/legacy system

No requirements.

5.24.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements.

5.24.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<u>8.4.2.1.1-Rail return current</u> TS 50238-2 Compatibility between rolling stock and train detection systems - Part 2: Compatibility with track circuits EN 50238: Railway applications - Compatibility between rolling stock and train detection systems	Agency: Please add in the rule the maximum interference currents in the rails for different frequencies (Compatibility Track Circuits).	Accepted if the national rule is revised to include frequency management. NSA RO to add in the rule the missing information as in ERA comment

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.2-Heating cable interference current</u> TS 50238-2 Aplicații feroviare. Compatibilitatea între materialul rulant și sistemele de detectare a trenului - Partea 2 Compatibilitatea cu circuitele de cale EN 50238: Railway applications - Compatibility between rolling stock and train detection systems</p>	<p>Agency: Please add in the rule the maximum interference currents in the rails for different frequencies (Compatibility Track Circuits).</p>	<p>Accepted if the national rule is revised to include frequency management. NSA RO to add in the rule the missing information as in ERA comment</p>
<p><u>8.4.2.1.3-Interference current under the vehicle</u> TS 50238-2 Compatibility between rolling stock and train detection systems - Part 2: Compatibility with track circuits EN 50238: Railway applications - Compatibility between rolling stock and train detection systems</p>	<p>Agency: Please add the maximum interference currents in the rails for different frequencies missing (Compatibility Track Circuits). The requirements for this parameter are relevant/necessary only if loop systems in the track are used. - please indicate if loop systems in the track are used.</p>	<p>Accepted if the national rule is revised to include frequency management. NSA RO to add in the rule the missing information as in ERA comment</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> TS 50238-3 Railway applications - Compatibility between rolling stock and train detection systems Part 3: Compatibility with axle counters EN 50238: Railway applications - Compatibility between rolling stock and train detection systems</p>	<p>Agency:Rule acceptable</p>	<p>Accepted</p>

5.24.3CCS onboard Subsystem

5.24.3.1 Requirements covering open points for Baselines 2 and 3

No requirements

5.24.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature: Excel table and RDD RDD: rules to be imported in RDD, checked and published by RO		
	LoP version: New		
	-		
Assessment status	On going Taken into account by MS: see assessment below		
Amount of remaining NRs in addition to latest TSIs	2		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information

Availability and status of remaining national rules		
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems
ETCS and GSM-R	Parameters listed in section 3.2.1	0 parameters:

5.24.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> Instruction for the efficient use of radio-installations, maintenance, troubleshooting and repair of operative no. 322/1975: Instruction for the efficient use of radio-installations, maintenance, troubleshooting and repair of operative no. 322/1975	Agency: Not clear from the description which radio system is required. Please indicate the applicable specification for it. NSA RO: Under review with the Infrastructure Manager, CNCF CFR SA .	Not accepted NSA RO revise the rule after consultation with IM
<u>12.2.1-National on-board signalling systems</u> system in use: INDUSI PZB (discret system) : system in use: INDUSI PZB (discret system)	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency: Romania has notified - in the list of class B system > Indusi - and for the NID_NTC value > Indusi I60. It is also not clear what PZB (discrete system means). Please indicate which on-board systems are required/accepted, starting with the lowest level e.g. Indusi I60, PZB 90. NSA RO: Under review with the Infrastructure Manager, CNCF CFR SA .	Not accepted NSA RO revise the rule after consultation with IM

5.24.3.2.2 Analysis of rules for ETCS and GSM-R

No requirements

5.25 Member state SE

5.25.1 Summary of actions

Action	Responsible
Sweden to take into account the actions identified below as “Action NSA SE”	NSA SE
Agency to take into account the actions identified below as “Action ERA”	ERA

5.25.2 Rolling Stock Subsystem

5.25.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : RDD RDD : published
	LoP version : New
	-
Assessment status	Taken into account by MS : Yes
Amount of remaining NRs in addition to latest TSIs	27

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	11 parameters: 6.2.1.2-Exhaust gas emissions 6.2.1.3-Chemical and particulate emission 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.4.2.4-Photosometric current 8.4.3.1-Maximum electro-magnetic fields 8.4.3.2-Induced interference current/voltage 8.4.3.3-Photosometric current 8.6-Diesel and other thermal traction system requirements 8.7.2-Pressure vessel systems/pressure equipment 14.1-Design, operation and maintenance constraints for the transport of dangerous goods	Other directives : <ul style="list-style-type: none"> Exhaust emission directive Chemical emission EMC directive Pressure vessel Transport of dangerous good

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to documentation	Parameters listed in section 3.2.4	4 parameters : 1.1- General documentation 1.2.1-Maintenance instructions 1.3.1-Instructions for operation in normal and degraded modes of the vehicle 1.4-National requirement for testing	<u>Parameters 1.1, 1.2.1; 1.3.1:</u> <u>TSFS 2010:116 § 9, 16 :</u> Rule covering the content of the authorisation file. Maintenance instructions and driver manual have to be in user language <u>Parameter 1.4 :</u> TSFS 2010:116 section 3 : rule address conditions for performing on track test
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter	-
Other rules related to compatibility with network / legacy system	See subsection 2 below	1 parameter: 3.3.3-Wheel	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	3 covering parameters : 6.1.1.2-Temperature 6.1.1.5-Snow, ice and hail	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	3 parameters : 8.4.2.1.1-Rail return current 8.4.2.1.2-Heating cable interference current 12.2.4.1-Minimum axle distance	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	3 covering parameters: 1.4-National requirement for testing 3.3.3-Wheel 7.1-Integrity of software employed for safety related functions	Parameter 3.3.3 Wheels: Cover “other types of wheels” (see Loc&Pas 6.1.3.1(3)) Parameter 7.1 application of EN 50128 for software SIL 2 : Reference to EN 50128 remain pending the revision of TSI Loc&Pas application guide. Action TSI WP: publication of the revised application guide that refer to EN 50128.

5.25.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.25.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>4.7.4-Eddy current track brake</u> Eddy current track brake are not allowed to be used in Sweden today.</p>	<p>The national rule refers to open point 4.2.4.8.3 - Braking system independent of adhesion conditions: eddy current track brake in Loc&Pas TSI 1302/2014.</p>	<p>Accepted</p>
<p><u>8.4.2.1.1-Rail return current,8.4.2.1.2-Heating cable interference current</u></p>	<p>The national rule refers to open point 4.2.3.3.1.1 - Compatibility with track circuits-EMC- EMC interferencein Loc&Pas TSI 1302/2014</p>	<p>See section : Analysis of rules related to compatibility with TDS</p>
<p><u>10.1-Fire protection concept and protection measures</u> Multiple units and coaches of category B shall be provided with measures to limit the spread of heat and flue gases through the train as required by the TSI Loc and Pas Section 4.2.10.3.4. This can be designed as alternatively: "Multiple units and coaches of category B shall be provided with measures to limit the spread of heat and flue gases through the train as required by the TSI Loc and Pas Section 4.2.10.3.4. This can be designed as alternatively: 1. Partitions extending across the width of the vehicle in spaces for passenger and personnel according to the TSI Loc and Pas Section 4.2.10.3.4 (3); or 2. System for limiting and preventing fire propagation (FCCS-systems) that are permanently installed. The FCCS systems shall ensure that fire and smoke are not spread at hazardous concentrations of more than 30 m in spaces for passengers / personnel inside the vehicle for at least 0.25 h after a fire has started. The applicant shall provide a functional safety analysis taking into account fault conditions for components, redundancies, software, regular checks and other measures to limit the spread of heat and flue gases. This analysis should show that the probability of an error that does not limit the spread of heat and flue gases (THR) $\leq 10^{-7}$ error/h. THR is the estimated error rate for the function, this shall be stated in the technical documentation for the vehicle. Based on this analysis, the operating and maintenance conditions for the FCCS system shall be determined and specified in the vehicle maintenance documentation.</p>	<p>The national rule refers to open point 4.2.10.3.4 - Fire Containment and Control Systems in Loc&Pas TSI 1302/2014</p>	<p>Accepted</p>

5.25.2.2.2 Requirements covering open points and specific cases not described in TSIs

No requirements

5.25.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>3.3.3-Wheel</u> For cast steel wheels TS 13979-2 accepted.	The requirement related to clause 6.1.3.1(3) of of Loc&Pas TSI 1302/2014 and 6.1.2.3(b) of WAG TSI Agency : the rule cover other types of wheels not defined by TSI.	Accepted

5.25.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<u>6.1.1.2-Temperature</u> Vehicles shall fulfil requirements on safe operation in temperatures down to -40°C (T2 enlgt standard EN 50125-1:2014). Vehicles that are safe down to -25°C only, are not authorised for operation on a line when the air temperature is below -25°C.	The national rule refers to clause 7.4 of Loc&Pas TSI 1302/2014. The rule precises the specific environmental conditions related to restriction of operation when a Rolling Stock is not designed for class T2 (according to clause 4.2.6.1.1 of Loc&Pas TSI).	Accepted Action ERA : The rule is maintained pending the revision of the clause 7.4 of Loc&Pas TSI.
<u>6.1.1.5-Snow, ice and hail</u> Wagons and coaches not designed for severe snow conditions are authorised to use maximum 75% of their brake weight when operated in severe winter conditions. Other vehicles not designed for severe snow conditions are authorised to use maximum 50% of their brake weight or brake percent when operated in severe winter conditions.	The national rule refers to clause 7.4 of Loc&Pas TSI 1302/2014. The rule provides information on the restriction that is to be applied when a Rolling Stock is not designed for severe snow conditions (according to clause 4.2.6.1.2 of Loc&Pas TSI).	Accepted Action ERA : The rule is maintained pending the revision of the clause 7.4 of Loc&Pas TSI.

5.25.2.4 Analysis of rules related to compatibility with TDS

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.1-Rail return current, 8.4.2.1.2-Heating cable interference current:</u> At normal operation the limits for DC are 25 A DC in frequency 0,0 - 2,0 Hz. Inrush current can exceed 45 A under 1.5 seconds and 25 A under 2.5 seconds. The measurement of the inrush current shall be performed according to standard ""Requirements on rolling stock regarding EMC with the electrical infrastructure and coordination with the power supply and other vehicles"" - TDOK 2014:0774 version 1.0, appendix 1 section 3.2.1 or similar. EN 50238:2003, CLC/TS 50238-2:2010 and ""Requirements on rolling stock regarding EMC with the electrical infrastructure and coordination with the power supply and other vehicles"" - TDOK 2014:0774 version 1.0 § 3.2.1; § 3.3 and § 3.4 applies for non-TSI vehicles.</p>	<p>The national rule refers to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : The requirement is related to the parameters 8.4.2.1.1. and 8.4.2.1.2</p>	Accepted
<p><u>12.2.4.1-Minimum axle distance</u> Non-TSI compliant infrastructure in Sweden: ERA/ERTMS 033281 § 3.1.2.1 Maximum axle distance: The distance a_i does not exceed 17500 mm. ERA/ERTMS 033281 § 3.1.2.4 Minimum axle distance: The distance between the first and last axle $L - (b_1 + b_2)$ is at least 4500 mm. ERA/ERTMS 033281 § 3.1.2.6 Distances between end of train and first axle on other lines: When the distance b_x exceed 2500mm the width on the gauge clearance measured from center of track (d_i) is: $d_i \leq 1,93 - 0,206 \times (b_x - 2,50)$ when $2,50 < b_x \leq 4,20$ m To be compatible with all track circuits in Sweden, the vehicle's outer contour shall be in this gauge clearance. OTM's and shunting locomotives that do not fulfil this requirement will be authorised with restrictions.</p>	<p>The national rule refers to clause 4.2.3.3.1.2 of Loc&Pas TSI 1302/2014. Agency : The requirement of 17500 mm is acceptable as it is a SC in the new CCS TSI, but to be placed under parameter 12.2.4.5. as it is the maximum distance here The requirement of 4500 mm is acceptable as it is a SC in the new CCS TSI The requirement is related to the gauge...so to be placed under parameter 12.2.4.5</p>	Accepted Action NSA SE : Rule to be removed NRs as the specific case is included in the TSI CCS revised. Rules to be placed in the right parameter

5.25.3 CCS onboard Subsystem

5.25.3.1 Requirements covering open points for ETCS Baselines 2 and 3

The parameters below contain national rules to the cover the open points:

- 12.2.5.3 B2 and B3 "Availability"

The parameters below do not contain national rules to cover the open points:

- 12.2.5.2, 12.2.5.6 B2 "braking aspects"
- 12.2.5.4; 12.2.5.5 B2 "ETCS DMI"

5.25.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature : RDD RDD : published		
	LoP version : New		
	If no, forecast		
Assessment status	Taken into account by MS : Yes Checked by the Agency		
Amount of remaining NRs in addition to latest TSIs	5		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	<u>1 parameter</u> : 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	<u>3 parameters (4records)</u> : 12.2.2-STM requirements 12.2.5.3-Reliability - availability requirements 12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)	

5.25.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.1-National on-board signalling systems</u> Locomotives and multiple units shall have a train protecting system onboard that is compatible with the infrastructures train protecting system in the vehicles area of use. Locomotives and multiple units shall have a train protecting system that is compatible with the ATC2-system. Vehicles with drivers cab and have no train protecting system of type ETCS onboard can only get a limited authorisation that do not include operation on lines with ERTMS system according to specifications in TSI CCS. Guideline ""ATC-installationer i fordon 411-b2 v01""</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency : They are related to class B system train protection system.</p>	Accepted

5.25.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<u>12.2.2-STM requirements</u>	Agency : Requirements related to STM	Accepted

National rules	Agency evaluation	Agency evaluation status
<p>The STM function of a on-board train protection system shall meet the following requirements for safety and function. See description</p> <ol style="list-style-type: none"> 1. For the STM function, acceptable hazard for hazardous error (THR) shall be no more than $1 \cdot 10^{-9}$ error / h. Hazardous faults in the train protection system are incorrect, which means that the vehicle speed may be higher than the ATC2 ground-based system permits. Applicants should show that the train protection system meets this requirement based on accepted methods for calculating the THR. 2. The STM feature shall have features and features that make it compatible with the ATC2 ground-based train protection system (STM function). 3. The STM function should have sufficient features to be at least as safe as an ATC2 desktop system. If the STM feature does not have all the features of an ATC2 desktop system, a risk analysis is required that shows that traffic safety is maintained. <p>Swedish STM specification "TSJ 2009-2412, 2009-10-29" "SPECIFIC TRANSMISSION MODULE (STM) - EBICAB RAMS REQUIREMENTS" 100 200 E 003, ver. A §3See</p>		
<p><u>12.2.5.3-Reliability - availability requirements</u> Mean time between failure (MTBF) between such failures in an on-board system that require isolating of the functions of the train protection system shall be minimum 30 000.</p>	<p>Open point in the TSI CCS, valid for all ETCS baselines Agency : Valid NTR closing an open point</p>	Accepted
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> The following requirements apply to a vehicle equipped with type ETCS train protection system and with a remote control system that allows the vehicle to be operated remotely:</p> <ol style="list-style-type: none"> 1. It should only be possible to activate the remote control equipment when ETCS on board is in operation mode "skiftning" (shunting). 2. If the ETCS board leaves operating mode "skiftning" (shunting) while the remote control equipment is active, the vehicle shall immediately be automatically braked to standstill. <p>Vehicles with remote control systems that do not meet these requirements receive limited approval, which does not include the use of the remote control system within the ERTMS area</p>	<p>Agency : This is a requirement for a function on top of a TSI conform vehicle. Agency proposal to change should to shall.</p>	Accepted

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.5.7-Other ETCS requirements (related to existing not interoperable networks)</u> To demonstrate compatibility between the on-board and the ground-based train protection systems which are in the scope of the application, the applicant shall do analysis and testing. These analyzes and tests shall result in proof that on-board and ground-based train protection systems work together with required reliability and without increasing safety risks</p> <ol style="list-style-type: none"> 1. for any deviations, restrictions and conditions to which the subsystems are subject, 2. for open points and special cases as well 3. for transitions between different versions of ground-based train protection systems. <p>The Swedish Transport Administration has a generic basis for a test specification for compatibility between Swedish ETCS level 2 trackside systems and an ETCS onboard system (Doc. no. TE14-027). The latest version can be found at www.trafikverket.se.</p>	<p>ESC tests</p>	<p>Accepted, but to be further discussed where to finally put this requirement</p>

5.26 Member state SI

5.26.1 Summary of actions

Action	Responsible
NSA SI to notify the final version of the rules (publication in RDD)	NSA SI
ERA to provide the final assessment after the final version of the rules will be available	ERA
NSA SI and ERA to take into account the list of actions referred in the detailed assessment	NSA SI/ ERA

5.26.2 Rolling Stock Subsystem

5.26.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Draft rules Yes. The final form of the rules is under preparation in the MS.
	Nature: Excel table RDD: ready for upload in RDD.
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	On going: assessment of ERA provided for the available version of the rules Taken into account by MS : see assessment below
Amount of remaining NRs in addition to latest TSIs	21

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	2 parameters: 8.4.1-EMC within the vehicle 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track	NTR in preparation by MS. Other directives covering : • EMC directive •
Rules related to documentation	Parameters listed in section 3.2.4	1 parameter: 1.4-National requirement for testing	NTR in preparation by MS.
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	
Other rules related to compatibility with network / legacy system	See subsection 2 below	8 parameters: 4.2-Safety requirements for braking at train level 4.7.4-Eddy current track brake 7.2.1-Vehicle marking 9.3.1-Speed indication 9.3.2-Driver display unit and screens 9.3.4-Driver supervision 9.4-Marking and labelling in driver's cab	Detailed analysis per parameter provided in section 2 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
		9.6-Recording device	
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	0 parameters	
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	8 parameters: 8.4.2-EMC between the vehicle and the railway system 8.4.2.1-Maximum currents 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 12.2.4-Compatibility of rolling stock with CCS Trackside 12.2.4.1-Minimum axle distance 12.2.4.2-Minimum wheel diameter 12.2.4.3-Metal and inductive components-free space between wheels 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.26.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.26.2.2.1 Requirements covering open points

National rules	Agency evaluation	Agency evaluation status
<u>4.7.4-Eddy current track brake</u> The use is not allowed on the public railway infrastructure Description: The NTR will prohibit the use of this braking system.	The requirement related to clause 4.2.4.8.3 of Loc&Pas TSI 1302/2014	Accepted NSA SI to provide the final version of the rule

5.26.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.26.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>4.2-Safety requirements for braking at train level</u> EN 14531-1 EN 50126	The requirement related to clause 4.2.1.3of Loc&Pas TSI 1302/2014 .	Not accepted

National rules	Agency evaluation	Agency evaluation status
<p>EN 50128 EN 50129 UIC 544-1 EN 15327-1 UIC 541-1 UIC 541-3 UIC 544-1 UIC 641 PN-EN 15327-1, EN 14531-6, UIC 540, UIC 541, UIC 541-03, UIC 541-04, UIC541-05, UIC541-06, UIC541-07, UIC 541-2, UIC 541-4, UIC 541-5, UIC 542, UIC 543, UIC 544-2, UIC 545, UIC 546, UIC 547, UIC 640, UIC 648 Description: The NTR will specify the types and requirements for performed braking tests</p>	<p>Agency: The sub parameters of the parameter 4.2 are covered by TSI requirements and no open points are identified - justification is necessary for potential rules applicable to vehicles covered by TSI. Please also note that this is a title parameter and the rule should be moved to the appropriate sub parameter.</p> <p>NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	<p>NSA SI to provide the final version of the rule</p>
<p><u>7.2.1-Vehicle marking</u> TSI OPE UIC 545 UIC 580 UIC 582 UIC 640 UIC 650 Description: In case of non-use of harmonized pictograms, the inscription must be in the Slovenian language</p>	<p>Agency: The topic is covered by the TSI Loc&Pas and TSI WAG.</p> <p>Please provide the arguments/justification of the necessity of the rule in addition to the TSI requirements. Please revise/remove the rule.</p> <p>NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	<p>Not acceptedReviewed and nNot accepted</p> <p>NSA SI to provide the final version of the rule considering the ERA position.</p>
<p><u>9.3.1-Speed indication</u> Description: The NTR will prescribe a stored-time record of speed measurement.</p>	<p>The national rule refers to clauses 4.2.9.3.2 and 4.2.9.3.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: If the rule is covering the recording of speed - shall be moved in parameter 9.6. The same rule is presented also for parameter 9.6 - redundant.</p> <p>NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	<p>Not acceptedReviewed and nNot accepted</p> <p>NSA SI to remove the rule.</p>
<p><u>9.3.2-Driver display unit and screens</u> Description: The software must be in Slovene language</p>	<p>The national rule refers to clause 4.2.9.3.3 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The topic is covered by TSI Loc&Pas clause 4.2.9.3.3 Please provide the arguments/justification of the necessity of the rule in addition to the TSI requirements.</p> <p>NSA SI:</p>	<p>Not acceptedReviewed and nNot accepted</p> <p>NSA SI to provide the final version of the rule considering the ERA position.</p>

National rules	Agency evaluation	Agency evaluation status
	NTR is in preparation for TSI and NON TSI vehicles	
<p><u>9.3.4-Driver supervision</u></p> <p>Description: The NTR will set time limits according to UIC 641</p>	<p>The national rule refers to clauses 4.2.9.3.1 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The topic is covered by the clause 4.2.9.3.1. of Loc&Pas TSI. Please see the 4.2.9.3.1. (5) Notes and prepare and provide the appropriate justification. Please note that there is an open point only in TSI Loc&Pas2011 for this topic – please confirm if the rule is covering this open point.</p> <p>NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	<p>Not accepted</p> <p>NSA SI to provide the final version of the rule</p>
<p><u>9.4-Marking and labelling in driver's cab</u></p> <p>Description: In case of non-use of harmonized pictograms, the inscription in the Slovenian language must be used</p>	<p>The national rule refers to clauses 4.2.9.3.5 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The topic is covered by the TSI Loc&Pas clause 4.2.9.3.5 The TSI requirements impose the usage of harmonised pictograms for controls and indicators in the cab.</p> <p>Please indicate the requirements in addition to the TSI that you may have and the justification.</p> <p>NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	<p>Not acceptedReviewed and notNot accepted</p> <p>NSA SI to provide the final version of the rule considering the ERA position.</p>
<p><u>9.6-Recording device</u></p> <p>Description: The NTR will prescribe a stored-time record of speed measurement.</p>	<p>The national rule refers to clauses 4.2.9.6 of Loc&Pas TSI 1302/2014.</p> <p>Agency: The topic is covered in LOC PAS TSI 1302 2014 - 4.2.9.6</p> <p>Please indicate the requirements in addition to the TSI that you may have and the justification.</p> <p>NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	<p>Not acceptedReviewed and notNot accepted</p> <p>NSA SI to provide the final version of the rule considering the ERA position.</p>

5.26.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements

5.26.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2-EMC between the vehicle and the railway system</u> Compatibility check of the rolling stock with the infrastructure Description: Requirements from standard EN 50121, according to the organizational regulation of the infrastructure manager.</p>	<p>Agency: This parameter is a headline - the rule shall be moved in the appropriate sub parameter(s). Please note that the following standards (in EN 50121 series) are relevant for some parameters under 8.4.2. EN 50121-1 EMC -General EN 50121-3-2 EMC Rolling stock - Apparatus. The applicable regulation of IM should be identified and uploaded in RDD. Please include in the rules the references to the applicable section(s) of the IM document. NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	
<p><u>8.4.2.1-Maximum currents</u> Description: Requirements from standard EN 50388, according to the organizational regulation of the infrastructure manager.</p>	<p>Agency: This parameter is a headline - the rule shall be moved in the appropriate sub parameter(s). Please note that the EN 50388 is relevant for some parameters under 8.4.2.1 The applicable regulation of IM should be identified and uploaded in RDD. Please include in the rules the references to the applicable section(s) of the IM document. The NTR Title cannot be empty for RDD import NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	<p>Not accepted NSA SI to provide the final version of the rule</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> Compatibility check of the rolling stock with the infrastructure Description: Requirements from standard EN 50122, according to the organizational regulation of the infrastructure manager.</p>	<p>Agency: The applicable regulation of IM should be identified and uploaded in RDD. Please include in the rule the references to the applicable section(s) of the IM document. Please note that the EN 50122 is not relevant for this parameter. NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	<p>Not accepted NSA SI to provide the final version of the rule</p>
<p><u>12.2.4-Compatibility of rolling stock with CCS Trackside</u> Compatibility check of the rolling stock with the infrastructure Description: Requirement according to the organizational rule of the Infrastructure Manager.</p>	<p>Agency: The applicable regulation of IM shall be identified and uploaded in RDD. Please include in the rules the references to the applicable section(s) of the IM document. NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	<p>Not accepted NSA SI to provide the final version of the rule</p>
<p><u>12.2.4.1-Minimum axle distance</u> <u>Minimum axle distance</u> <u>TSI CCS</u> Description: Requirement according to the organizational rule of the Infrastructure Manager.</p>	<p>Agency: Please explain the relevance of the requirements as the scope of the parameter is limited to speeds above 350 km/h. The applicable regulation of IM should be identified and uploaded in RDD. Please include in the rules the references to the applicable section(s) of the IM</p>	<p>Not accepted Reviewed and not accepted NSA SI to provide the final version of</p>

National rules	Agency evaluation	Agency evaluation status
	document. NSA SI: NTR is in preparation for TSI and NON TSI vehicles ERA/ERTMS/033281	the rule considering the ERA position.
<u>12.2.4.2-Minimum wheel diameter</u> <u>Minimum wheel diameter</u> <u>TSI CCS</u> Description: Requirement according to the organizational rule of the Infrastructure Manager.	Agency: Please explain the relevance of the requirements as the scope of the parameter is limited to speeds above 305 km/h. The applicable regulation of IM should be identified and uploaded in RDD. Please include in the rules the references to the applicable section(s) of the IM document. NSA SI: NTR is in preparation ERA/ERTMS/033281	Not accepted Reviewed and not accepted NSA SI to provide the final version of the rule considering the ERA position.
<u>12.2.4.3-Metal and inductive components-free space between wheels</u> <u>TSI CCS</u> EN 50238 Description: Requirement according to the organizational rule of the Infrastructure Manager.	Agency: TSI CCS is by default applicable for vehicles covered by TSIs. The applicable regulation of IM should be identified and uploaded in RDD. Please include in the rules the references to the applicable section(s) of the IM document. NSA SI: NTR is in preparation for TSI and NON TSI vehicles ERA/ERTMS/033281	Not accepted NRS should be modified NSA SI to provide the final version of the rule.
<u>12.2.4.5-Compatibility with fixed installations of CCS</u> <u>Minimum axle distance</u> <u>TSI CCS</u> <u>Minimum wheel diameter</u> <u>TSI CCS</u> Description: Requirement according to the organizational rule of the Infrastructure Manager.	Agency: TSI CCS is by default applicable for vehicles covered by TSIs. The applicable regulation of IM should be identified and uploaded in RDD. Please include in the rules the references to the applicable section(s) of the IM document. NSA SI: NTR is in preparation for TSI and NON TSI vehicles ERA/ERTMS/033281	Not accepted NRS should be modified NSA SI to provide the final version of the rule.

5.26.3 CCS onboard Subsystem

5.26.3.1 Requirements covering open points for Baselines 2 and 3

5.26.3.2 No requirements Summary table

Availability and status of remaining national rules	
Availability of data	Yes. The final form of the rules is under preparation in the MS.
	Nature: Excel table RDD: ready for upload in RDD.
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	On going: assessment of ERA provided for the available version of the rules Taken into account by MS : see assessment below

Availability and status of remaining national rules			
Amount of remaining NRs in addition to latest TSIs	2		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	0 parameters	

5.26.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> UIC 751-3 Description: The use of Class B communication equipment according to UIC 751-3 is determined in the NTR	Agency: We have received from your side the information: "The Slovenia is still using railway radio system, the so called »RDZ«, which is compliant to UIC 751-3 standard, and UKV radio system (30MHz – 470MHz), Motorola 2m handsets (12 channels, 167/171MHz). In 2017 the project GSM-R (only voice system) was finished and it covers the complete Slovenian railway network (GSM-R FRS: 7.4.0 and SRS: 15.4.0). The transition from system B to system A is in progress." When confirmed as still accurate please amend the rule accordingly. Is the installation of a class B radio system mandatory for authorisation in Slovenia? For all vehicles? (TSI/nTSI). Class B radio system in use on the network shall be notified. In case they are not mandatory for authorisation this shall be stated. NSA SI: NTR is in preparation for TSI and NON TSI vehicles	Under review NSA SI to provide the final version of the rule.
<u>12.2.1-National on-board signalling systems system in use:</u> INDUSI (I60, I60R, PZB) Description: In the NTR are the conditions of use of a Class B safety device (INDUSI)	Agency: We have received information from your side regarding the applicable rules for this parameter: "Apparently the following documents are relevant for the Class B on-board CCS system (CLASS B INDUSI/PZB called "Avto stop naprava I 60") SI-4-1103-1 Rules on brakes, safety devices, special devices and equipment of railway vehicles (Pravilnik o zavorah, varnostnih napravah in	Under review NSA SI to provide the final version of the rule.

National rules	Agency evaluation	Agency evaluation status
	<p>opremi železniških vozil) (Class B CCS and radio - General) Rules on technical accordances of railway vehicles (Pravilnik o tehnični skladnosti tirnih vozil) (Class B CCS and radio - General) "425 ZBIRKA NAVODIL o INDUKTIVNI AUTOSTOP NAPRAVI I60" (CLASS B INDUSI/PZB called "Avto stop naprava I 60" - Detailed description)"</p> <p>When confirmed as still accurate please amend the rule accordingly. Is the installation of a class B signalling system mandatory at authorisation in Slovenia?</p> <p>Class B system in use on the network shall be notified. In case they are not mandatory for authorisation this shall be stated.</p> <p>NSA SI: NTR is in preparation for TSI and NON TSI vehicles</p>	

5.26.3.2.2 Analysis of rules for ETCS and GSM-R

No requirements.

5.27 Member state SK

5.27.1 Summary of actions

Action	Responsible
NSA SK to provide the input for the rules now under discussion with the IM	NSA SK
NSA SK to publish the cleaned NRs in RDD	NSA SK
NSA SK and ERA to take into account the list of actions referred in the detailed assessment	NSA SK/ ERA

5.27.2 Rolling Stock Subsystem

5.27.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table RDD: ready for upload in RDD
	LoP version: New list as in Decision 2015/2299/EU
	-
Assessment status	Ongoing Taken into account by MS: see assessment below
Amount of remaining NRs in addition to latest TSIs	14

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	5 parameters: 8.4.2.2.2-Electro-magnetic fields/Induced voltages outside the track 8.7.1-Tanks and pipe systems for flammable liquids 8.7.2-Pressure vessel systems/pressure equipment 8.7.3-Steam boiler installations 14.1-Design, operation and maintenance constraints for the transport of dangerous goods	Other directives covering : <ul style="list-style-type: none"> • EMC directive • Pressure vessel • Dangerous goods • Etc.
Rules related to documentation	Parameters listed in section 3.2.4	1 parameter: 1.4-National requirement for testing	Under review ERA to assess the feedback from the NSA SK
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter	
Other rules related to compatibility with network / legacy system	See subsection 2 below	2 parameters: 9.3.4-Driver supervision 14.2-Specific facilities for the transport of freight	Detailed analysis per parameter provided in section 2 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Other rules not covered above (e.g. potential TSI deficiency)	See subsection 3 below	0 parameters:	
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	3 parameters: 8.4.2.1.1-Rail return current 8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters:	

5.27.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.27.2.2.1 Requirements covering open points

No requirements

5.27.2.2.2 Requirements covering specific cases not described in TSIs

No requirements.

5.27.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<u>9.3.4-Driver supervision</u> Decree No. 351/2010 Coll. Art. 10	Agency: Requirements for this parameter are covered by Loc&Pas TSI - 4.2.9.3.1, Driver's activity control function From the provided references we cannot determine the requirements in addition to the TSI - please clarify (to determine if a specific case is necessary). Please revise the rule/remove the rule/the applicability for vehicles covered by TSIs. NSA SK: The Decree No. 351/2010 Coll. Art. 10 is dealing with requirements for train protection systems (European and national part).	Under review ERA and NSA SK to further discuss based on the received feedback from NSA SK.
<u>14.2-Specific facilities for the transport of freight</u> Act No. 513/2009 Coll. Art. 16 Decree No. 205/2010 Coll. Art. 11, Art. 17	The national rule refers to clauses 4.2.6.1.2.4, Flammable liquids from TSI of WAG TSI 321/2013. Agency: The provided references are not in scope of the parameter. Please revise the rule/remove the rule. The Act No. 513/2009 Coll. Art. 16 seems not in	Not accepted ERA and NSA SK to further discuss based on NSA SK feedback.

National rules	Agency evaluation	Agency evaluation status
	<p>the parameter scope as it covers installation used for operating containers - please confirm Decree No. 205/2010 Coll. Art. 11: Containers and swap bodies - conditions for official test of containers - not in scope of the parameter. Decree No. 205/2010 Coll. Art. 17: Containers and swap bodies -conditions for the revision of containers and for checking after loading NSA SK: In Slovakia we have here so called designed technical equipment like containers, tanks, pressure equipment etc. and all of them shall undergo periodical revisions when they are put into operation. The same applies for some technical equipment (at specific circumstances) that are in scope of this Act 513/2009 Coll. Art. 16 and the Decree 205/2010 Coll.</p>	

5.27.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

No requirements.

5.27.2.4 Analysis of rules related to compatibility with Train Detection System

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.1-Rail return current</u> under the terms of the infrastructure manager</p>	<p>Agency: The NSA has to make the limit harmonic currents and the test method publicly available. Please provide the document containing the requirements and precise also the applicable section(s) of it. The document should normally be uploaded in RDD. This way, the applicant is also informed whenever an update to the document is available. Please revise the rule. Please note that generally these kind of rule definitions cannot be accepted.</p> <p>NSA SK: We are going to discuss it with the infrastructure manager</p>	<p>Not accepted NSA SK to provide the feedback after consultation with the IM</p>
<p><u>8.4.2.2.1-Electro-magnetic fields/Induced voltages in the track/under the vehicle</u> STN 342613 - Electrical signalling and security apparatus for railways. Track circuits</p>	<p>Agency: Only if axle counters are installed on the network and are not listed in Annex A of EN 50238-2 a requirement is expected (Class B axle counters). STN 342613 - Electrical signalling and security apparatus for railways. Track circuits should be moved under parameter 8.4.2.1.1. Is this document containing limits for vehicles or only requirements/maximum currents for the track circuits itself?</p> <p>NSA SK: We have to ask the infrastructure manager to get the appropriate answer.</p>	<p>Not accepted to be modified NSA SK to provide the feedback after consultation with the IM</p>
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> Decree No. 351/2010 Coll. Annex 2, third part, section B, point 17</p>	<p>Agency: The Decree No. 351/2010 Coll. Annex 2, third part, section B, point 17 is already covered by CCS TSI interface document § 3.1.9 where the value is 0.05 Ohm. Specific case is needed as in SK it is 0.01 Ohm - please confirm the necessity.</p> <p>NSA SK: To be discussed with our infrastructure manager.</p>	<p>Not accepted to be modified NSA SK to provide the feedback after consultation with the IM</p>

5.27.3 CCS onboard Subsystem

5.27.3.1 Requirements covering open points for Baselines 2 and 3

No requirements

5.27.3.2 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature: Excel table RDD: ready for upload in RDD

Availability and status of remaining national rules			
	LoP version : New list as in Decision 2015/2299/EU		
	-		
Assessment status	Ongoing Taken into account by MS: see assessment below		
Amount of remaining NRs in addition to latest TSIs	3		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	2 parameters: 12.1.1-Non-GSM-R radio system 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	1 parameter: 12.1.2.2-Other GSM-R requirements	

5.27.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.1.1-Non-GSM-R radio system</u> Act No. 513/2009 Coll. Art. 16 Decree No. 205/2010 Coll. Art. 4 Decree No. 351/2010 Coll. Art. 96	<p>Agency:</p> <p>There is no specific technical information in the documents provided as reference. The documents describe the national mechanisms for the authorisation of vehicles. There is a description in "Decree No. 351/2010 Coll. Art. 96" related to the radio system, however, there is no clear specification of what is required.</p> <p>There is a mention of the need to have a radio system to communicate with the trackside (including with some devices, not specified), the need of keeping a record of the communication during 24 hours and the need to stop the train.</p> <p>The rule shall identify the Class B radio system and what is checked for authorisation. Please also indicate if installation on-board is mandatory for authorisation.</p> <p>The Decree No. 351/2010 Coll. Art. 96 is acceptable when complemented with missing information identified above.</p> <p>The Act No. 513/2009 Coll. Art. 16 and Decree No. 205/2010 Coll. Art. 4 are not relevant for this parameter.</p> <p>NSA SK:</p> <p>We are going to discuss it with the Infrastructure Manager and will come back with an appropriate answer.</p>	<p>Not accepted, should be modified</p> <p>NSA SK to provide the feedback after consultation with the IM</p>

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.1-National on-board signalling systems</u> Decree No. 351/2010 Coll. Art. 10 Decree No. 351/2010 Coll. Annex 2, third part, section B, point 5 National on-board system LS National on-board system MIREL VZ1</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI.</p> <p>Agency: Rule acceptable but please indicate if is mandatory to be installed on-board for authorisation. When possible, please provide (upload in RDD) the specification of the National on-board signalling system.</p> <p>NSA SK: A train protection system is to be installed on-board when the train speed is more than 120 km/h. If the train speed is more than 60 km/h and less than 120 km/h a simple train protection system shall be installed on-board (to stop the train when a train driver does not operate it); otherwise there shall be another person to be able to stop the train manually. Without any train protection system the train shall operate less than 60 km/h. The train protection systems as MIREL or LS are products with registered rights of their producers. We are no rights to distribute or publish their know-how.</p>	<p>Accepted</p> <p>ERA and NSA SK to further discuss.</p>

5.27.3.2.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.2.2-Other GSM-R requirements</u> Act No. 513/2009 Coll. Art. 16 Decree No. 205/2010 Coll. Art. 4 Decree No. 351/2010 Coll. Art. 96</p>	<p>Agency: There is no specific technical information in the documents provided as reference. The documents describe the national mechanisms for the authorisation of vehicles. There is a description in "Decree No. 351/2010 Coll. Art. 96" related to the radio system, however, there is no clear specification of what is required. There is a mention of the need to have a radio system to communicate with the trackside (including with some devices, not specified), the need of keeping a record of the communication during 24 hours and the need to stop the train. The technical requirements are not specified, which makes the rule obscure to the operators willing to fulfil it. This requirement applies to TSI compliant systems (GSM-R) but it is not described what the specific additional requirements to apply in Slovakia are. We are aware in the Agency of a function called "Radio Stop", which is against the operational</p>	<p>Not accepted, should be modified NSA SK to provide the feedback after consultation with the IM</p>

National rules	Agency evaluation	Agency evaluation status
	<p>harmonisation, where the train should be automatically stopping at the reception of a special signal. This is however not described in the rule, therefore, it is not possible to assess it any further.</p> <p>NSA SK: We are going to discuss it with the infrastructure manager and will come back with an appropriate answer a bit later.</p>	

5.28 Member state UK - GB

5.28.1 Summary of actions

Action	Responsible
Document GMRT2400 related to national rules for Ontrack machine is to be spreaded to relevant RDD parameters.	UK/ERA
UK to take into account the actions identified below as “Action UK”	NSA UK
Agency to take into account the actions identified below as “Action ERA”	ERA

5.28.2 Rolling Stock Subsystem

5.28.2.1 Summary table

Availability and status of remaining national rules	
Availability of data	Yes
	Nature : Excel table, RDD RDD : intermediate version published
	LoP version : New
	-
Assessment status	Taken into account by MS : on going
Amount of remaining NRs in addition to latest TSIs	53

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	1 parameter : 8.6-Diesel and other thermal traction system requirements	
Rules related to documentation	Parameters listed in section 3.2.4	0 parameters	
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameters	
Other rules related to compatibility with network / legacy system	See subsection 2 below	6 parameters : 3.3.2-Wheelset (complete) 4.5.3-Calculations related to thermal capacity 6.1.2.1-Crosswind effects 8.2.2.8-Pantograph lowering 8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line 9.6-Recording device	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	23 parameters : 2.1.2.2-Axle load and wheel load 3.2.4-Track loading compatibility parameters 3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius 4.5.1-Emergency braking performance	Detailed analysis per parameter provided in section 3 below

Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
		4.6.2-Wheel slide protection system (“WSP”) 4.9-Brake requirements for rescue purposes 5.2-Interior 5.2.1-Interior doors 5.2.2-Intercirculation doors 5.3-Handrails 5.4-Windows 6.1.1.2-Temperature 6.1.1.5-Snow, ice and hail 6.1.2.2-Maximum pressure variation in tunnels 7.2.1-Vehicle marking 8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line 8.2.2.5-Current capacity of pantograph including contact strip 8.2.2.7-Insulation of pantograph from the vehicle 8.3.4-Earthing 8.5-Protection against electrical hazards 9.3.3-Controls and indicators 9.5.3-On-board tools and portable equipment 10.2.3-Passenger alarm	
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	3 parameters: 8.4.2.1.1-Rail return current 8.4.2.3-Vehicle entrance impedance 12.2.4.5-Compatibility with fixed installations of CCS	Detailed analysis per parameter provided in section 4 below
Existence of non mandatory rules	-	0 parameters	

5.28.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.28.2.2.1 Requirements covering open points

National rules	Agency evaluation / related open points	Agency evaluation status
<u>3.3.8-Axle bearing condition monitoring</u> Main Line: GE/RT8014 Axlebox condition monitoring - hot axlebox detection Relevant requirements 2.3 addressing WAG TSI open point 4.2.3.4 for axle bearing condition monitoring Part 4 for compliance requirements	The national rule refers to open point 4.2.3.4 - Axle bearing condition monitoring - Option on board equipment in CR WAG TSI 321/2013.	Accepted
<u>4.7.3-Magnetic track brake</u> HS1: Magnetic track brakes are prohibited. Railway undertaking to state whether magnetic track braking is installed on rolling stock. If systems installed, submission in accordance with HS1 NSR C/06/09/1200 Assessment of Compatibility of Rolling Stock and Infrastructure	The national rule refers to open point 4.2.3.3.1.2 - Rolling stock characteristics for compatibility with train detection system based on axle counters – EMC in Loc&Pas TSI 2014	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
<p>to be made to demonstrate how the system is isolated whilst on HS 1 infrastructure. Note, any benefit from magnetic track braking can not be included in the brake performance stated.for the vehicle</p>		
<p><u>4.7.4-Eddy current track brake</u> HS1: Eddy current track brakes are prohibited Railway Undertaking to state whether eddy current track braking is installed on rolling stock. If systems installed, submission in accordance with HS1 NSR C/06/09/1200 Assessment of Compatibility of Rolling Stock and Infrastructure to be made to demonstrate how the system is isolated whilst on HS 1 infrastructure . Note, any benefit from eddy current track braking can not be included in the brake performance stated.for the vehicle.</p>	<p>The national rule refers to open points:</p> <ul style="list-style-type: none"> - 4.2.4.8.3 - Braking system independent of adhesion conditions: eddy current track brake - 4.2.3.3.1.2 - Rolling stock characteristics for compatibility with train detection system based on axle counters -EMC in Loc&Pas TSI 1302/2014. 	Accepted
<p><u>5.2-Interior</u> Main Line: GM/RT2100 Requirements for Railway Vehicle Structures Issue 5 June 2012 Relevant requirements set out in Part 6 to address LOC&PAS TSI open point 7.5.2.1 Part 10 for compliance requirements</p>	<p>The national rule refers to clause 7.5.2.1 in Loc&Pas TSI 1302/2014.</p>	Accepted
<p><u>5.2.1-Interior doors, 5.2.2-Intercirculation doors</u> Main Line: GM/RT2100 Requirements for Railway Vehicle Structures Issue 5 June 2012 Relevant requirements set out in 6.1 and 6.5 to address LOC&PAS TSI open point 7.5.2.1 Part 10 for compliance requirements</p>	<p>The national rule refers to clause 7.5.2.1 in Loc&Pas TSI 1302/2014.</p>	Accepted
<p><u>5.3-Handrails</u> Main Line: GM/RT2100 Requirements for Railway Vehicle Structures Issue 5 June 2012 Relevant requirements set out in 5.5 6.1 and 6.6 to address LOC&PAS TSI open point 7.5.2.1 Part 10 for compliance requirements</p>	<p>The national rule refers to clause 7.5.2.1 in Loc&Pas TSI 1302/2014.</p>	Accepted
<p><u>5.4-Windows</u> Main Line: GM/RT2100 Requirements for Railway Vehicle Structures Issue 5 June 2012 Relevant requirements set out in Part 5.3 Part 10 for compliance requirements</p>	<p>The national rule refers to clause 7.5.2.1 in Loc&Pas TSI 1302/2014.</p>	Accepted
<p><u>8.3.1-Energy consumption measurement</u> Main Line: GE/RT2132 On-board Energy Metering for Billing Purposes Issue 1, September 2010 Relevant requirements in 2.5, 2.6 to address LOC&PAS TSI open point 4.2.8.2.8 Part 4 compliance requirements</p>	<p>The national rule refers to open point 4.2.8.2.8 & Appendix D - On-board energy measurement system in Loc&Pas TSI 1302/2014.</p>	Accepted
<p><u>12.2.4.5-Compatibility with fixed installations of CCS</u> Main Line: GMRT2477 Compatibility Requirements for Track Circuit Assisters (TCAs) on Rail Vehicles, issue 3, June 2018</p>	<p>The national rule refers to open point 4.2.3.3.1.1 - Compatibility with track circuits-EMC- EMC interference in Loc&Pas TSI 1302/2014</p>	See section : Analysis of rules related to compatibility with TDS

National rules	Agency evaluation / related open points	Agency evaluation status
Relevant requirements in Parts 2 and 3 Part 4 for compliance requirements		
<u>12.2.4.5-Compatibility with fixed installations of CCS:</u> Main Line: GM/RT2461 Sanding Equipment Fitted to Multiple Units and On-Track Machines Issue 2, June 2016 Requirement 2.1.1 and Appendices D and E 2.2 and Appendix D and 2.3 and Appendix E to address the open point 3.1.4.2 in the CCS TSI, Index 77 (ERA/ERTMS/033281) Requirements in 2.4 provides the alternative solution to CCS TSI, Annex A, Index 77 clause 3.1.4.1 as permitted by the LOC&PAS TSI Application Guide Part 3 compliance requirements	The national rule refers to open: 4.2.3.3.1.1 - Compatibility with train detection systems – Isolating emissions: sand characteristics, Open Point	See section : Analysis of rules related to compatibility with TDS

5.28.2.2.2 Requirements covering specific cases not described in TSIs

National rules	Agency evaluation / related open points	Agency evaluation status
<u>2.2.3-Conventional screw coupling and other non-automatic coupling systems</u> Main Line: GM/RT2100 Requirements for Railway Vehicle Structures Issue 5 June 2012 Relevant clause 8.1.2 for specific case 7.3.2.1 Part 10 for compliance requirements	The national rule refers to specific case 7.3.2.1 - Mechanical interfaces (4.2.2.2) in Loc&Pas TSI 1302/2014	Accepted
<u>3.1-Vehicle gauge</u> Main Line:GERT8073 Requirements for the Application of Standard Vehicle Gauges Relevant Part 3 and Appendices A to N (for LOC&PAS TSI specific case 7.3.2.2) Part 5 compliance requirements	The national rule refers to specific case 7.3.2.2. Gauging (4.2.3.1) in Loc&Pas TSI 1302/2014	Accepted
<u>3.3.2-Wheelset (complete)</u> GMRT2466 Railway Wheelsets Issue 4, December 2017 Relevant requirement: 2.1.3 supported by guidance (NTR for cast wheels) to address WAG TSI specific case 7.3.2.5 (for characteristics of wheelsets), LOC&PAS TSI 6.1.3.1 and WAG TSI 6.1.2.3 b) (for other types of wheels) Part 4 compliance requirements	The national rule refers to specific case 7.3.2.5 Characteristics of wheelsets (point 4.2.3.6.2) in CR WAG TSI 321/2013.	Accepted
<u>4.1-Functional requirements for braking at train level</u> Main Line: GM/RT2045 Braking Principles for Rail Vehicles Issue 4 part 2.2.4 Relevant requirement 2.2.1.1 Part 4 for compliance requirements	The national rule refers to specific case 7.3.2.19 Driver's desk – Ergonomics (4.2.9.1.6) in Loc&Pas TSI 1302/2014	Accepted
<u>4.4.2-Service braking command</u> Main Line: GM/RT2045 Braking Principles for Rail Vehicles Issue 4 Relevant requirements 2.2.1 and 2.2.4	The national rule refers to specific case 7.3.2.19 Driver's desk – Ergonomics (4.2.9.1.6) in Loc&Pas TSI 1302/2014	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
Part 4 compliance requirements		
<p><u>4.5.1-Emergency braking performance</u> Main Line: GM/RT2045 Braking Principles for Rail Vehicles Issue 4 All requirements in section 2.3.2 are relevant, except requirement 2.3.2.4 Relevant requirement 2.3.3.10 to address LOC&PAS TSI specific case 7.3.2.7 Part 4 for compliance requirements</p>	The national rule refers to specific case 7.3.2.7 Emergency braking (4.2.4.5.2) in Loc&Pas TSI 1302/2014	Accepted
<p><u>5.1.1-Exterior doors</u> Main Line: GM/RT2173 Requirements for the Size of Vehicles and Equipment, Issue 2 Relevant requirements set out in 3.2 and Appendix A to address PRM TSI specific case Part 5 for compliance requirements</p>	The national rule refers to specific case 7.3.2.6 Step position for vehicle access and egress (point 4.2.2.11) in PRM TSI 1300/2014	Accepted
<p><u>6.2.3.1-Head pressure pulses</u> Main Line: GM/RT2100 Requirements for Railway Vehicle Structures Issue 5 June 2012 Relevant requirements in 7.2 Part 10 for compliance requirements</p>	The national rule refers to specific case 7.3.2.8 Aerodynamic effects (4.2.6.2) - Head pressure pulse (4.2.6.2.2) in Loc&Pas TSI 1302/2014	Accepted
<p><u>8.2.1.1-Specific requirements for power supply</u> Main Line: GM/RT2113 Rolling Stock Subsystem and Interfaces to DC Energy Subsystem Issue 1 Relevant requirements are in 3.1 to address LOC&PAS TSI specific case 7.3.2.10 Part 5 for compliance requirements</p>	The national rule refers to specific case 7.3.2.10 Power supply – general (4.2.8.2) in Loc&Pas TSI 1302/2014	Accepted
<p><u>8.2.1.1-Specific requirements for power supply</u> HS1: Demonstrate compatibility in accordance with HS1 NSR C/06/09/1200 Assessment of Compatibility of Rolling Stock and Infrastructure, to the arrangements shown in the HS1 Infrastructure Registers R-SG-NC-00001-17-HSO and R-SG-NC-0002-17-HSO.</p>	The national rule refers to specific case 7.3.2.10 Power supply – general (4.2.8.2) in Loc&Pas TSI 1302/2014	Accepted
<p><u>8.2.1.2-Voltage and frequency of overhead contact line power supply</u> Main Line: GMRT2113 Rolling Stock Subsystem and Interfaces to DC Conductor Rail Energy Subsystem, issue 1 Relevant requirements in 3.1 to address LOC&PAS TSI specific case 7.3.2.10 Part 4 to address 3rd rail on DC current collector Part 5 compliance requirements</p>	The national rule refers to specific case 7.3.2.10 Power supply – general (4.2.8.2) in Loc&Pas TSI 1302/2014	Accepted
<p><u>8.2.1.3-Regenerative braking</u> Main Line: Compliance with applicable TSIs, no additional requirements GMRT2113 Rolling Stock Subsystem and Interfaces to DC Conductor Rail Energy Subsystem, issue 1 Relevant requirements in 3.6 Part 5 compliance requirements</p>	The national rule refers to specific case 7.3.2.11 Operation within range of voltages and frequencies (4.2.8.2.2) in Loc&Pas TSI 1302/2014	Accepted

National rules	Agency evaluation / related open points	Agency evaluation status
<p><u>11.2.3-Further supply facilities</u> Main Line: GMRT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem, Issue 1, December 2014 Relevant requirement 2.4.2 to address LOC&PAS TSI specific case 7.3.2.24 Part 5 for compliance requirements</p>	<p>The national rule refers to specific case 7.3.2.24 Special requirements for stabling of trains (4.2.11.6)) in Loc&Pas TSI 1302/2014</p>	Accepted
<p><u>12.2.5.5-Ergonomic aspects of DMI</u> Main Line: GE/RT8402 ERTMS/ETCS DMI National Requirements Issue 1, March 2012 Relevant requirements in Parts 2 and 3 to address CCS TSI specific case 7.6.2.2 Part 4 for compliance requirements</p>		

5.28.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>3.3.2-Wheelset (complete)</u> GMRT2466 Railway Wheelsets Issue 4, December 2017 Relevant requirement: 2.1.3 supported by guidance (NTR for cast wheels) to address WAG TSI specific case 7.3.2.5 (for characteristics of wheelsets), LOC&PAS TSI 6.1.3.1 and WAG TSI 6.1.2.3 b) (for other types of wheels) Part 4 compliance requirements</p>	<p>The requirements relate to clause 6.1.3.1 of Loc&Pas TSI 1302/2014 and 6.1.2.3(b) of WAG TSI Agency : the rules cover other types of wheels not defined by TSI.</p>	Accepted
<p><u>4.5.3-Calculations related to thermal capacity</u> Main Line: GM/RT2045 Braking Principles for Rail Vehicles Issue 4 Relevant requirement 2.3.4 Part 4 for compliance requirements</p>	<p>The requirements relate to clause 4.2.4.5.4 of Loc&Pas TSI 1302/2014. UK indicates that the reference case in TSI is voluntary and it is not an obligation from the applicant to fulfil this reference case, only to define the braking power of the unit and express it in terms of speed and brake application time. It is then the obligation of the RU in the framework of the SMS to ensure the safe operation of the wagon. Therefore, the UK equivalent reference case (22 miles at 60 mile/h (96 km/h) on a 1 in 70 (15o/oo) falling gradient) should be, as that of the TSI, voluntary. Agency: The reference case proposed by UK should remain as voluntary rule that can be used by applicant as a reference case to be mentioned in the technical file compiled.</p>	<p>Accepted pending revision of the rule to make it voluntary National rule should be modified Action UK : RSSB will review the requirements and make appropriate changes in a future revision of the standard.</p>
<p><u>6.1.2.1-Crosswind effects</u> HS1: Freight TSI -Crosswind is an Open point . Vehicles to be compliant with GM/RT2142 Resistance of Railway Vehicles to Roll-Over in Gales Issue 2, Part B, sections 4, 5 and 6. Note that the railway is designed with the following wind speed characteristics:</p>	<p>The requirements relate to clause 4.2.6.2.4 of Loc&Pas TSI 1302/2014. UK justified the rule to ensure compatibility with HS1 network. Agency : No open point in the TSI loc&Pas 1302/2014, rule to be discussed with UK</p>	<p>Not accepted National rule should be repealed Action UK/ERA : rule to be discussed RSSB comment:</p>

National rules	Agency evaluation	Agency evaluation status
<p>Mean Hourly Wind Speed (50 year return cycle) 28m/s Maximum 3 second gust (50 year return cycle) 38.5m/s Maximum Design Crosswind Speed 50m/s Section 2 OCS in the tunnels has been designed for Mean Hourly Speed of 40m/s</p>		<p>The current issue of GMRT2142 is issue 4, published December 2014. Incorrectly notified requirements for cross wind to address an open point in the LOC&PAS TSI (4.2.6.2.4) whereas they are required for technical compatibility for speeds of 140 km/h or less. This has been addressed.</p>
<p><u>8.2.2.8-Pantograph lowering</u> Main Line: GMRT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem, Issue 1 Relevant requirements in 4.10 Part 5 for compliance requirements</p>	<p>The requirements relate to clause 4.2.8.2.9.10 of Loc&Pas TSI 1302/2014. UK indicates that:</p> <ul style="list-style-type: none"> - the rule is maintained for existing non TSI lines pending a specific case will be required. - GMRT2111 will be reviewed to be aligned with TSI Loc&Pas and ENE TSI and to cover existing network. <p>Agency : The rules require installation of Automatic Dropping Device to all vehicle not specifying a speed and require more than the TSI. The Agency is in opinion that the rule is not related to vehicle authorisation but should be a performance parameter used by Infrastructure Manager to calculate track access charges. If UK maintain the NR a specific case should be required.</p>	<p>Accepted pending RSSB review of the standard National rule should be modified</p> <p>Action UK : RSSB will review the requirements and make appropriate changes in a future revision of the standard or request a specific case.</p>
<p><u>8.4.2.1.4-Harmonic characteristics and related overvoltages on the overhead contact line</u> Main Line: GM/RT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem Issue 1 Relevant requirements in 3.14 Part 5 for compliance requirements</p>	<p>The requirement relates to clause 4.2.8.2.7 of Loc&Pas TSI 1302/2014.</p> <p>Agency : Valid rule</p>	<p>Accepted</p>
<p><u>8.4.2.1.5 Effects of DC content in AC supply:</u> Main Line: GM/RT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem Issue 1 Relevant requirements in 3.14 Part 5 for compliance requirements</p>	<p>The requirement relates to clause 4.2.8.2.7 of Loc&Pas TSI 1302/2014.</p> <p>Agency: Main Line: GM/RT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem Issue 1 § 3.14 to be placed under parameter 8.4.2.1.4. No requirements under parameter 8.4.2.1.5. as GM/RT2111 has no requirements related to DC content in AC power supply...</p>	<p>Not accepted RSSB comment: Agree there is no NTR to notify against parameter 8.4.2.1.5.</p>
<p><u>9.6-Recording device</u> Main Line: GM/RT2472 Data Recorders on Trains - Design Requirements Issue 2</p>	<p>The requirement relates to clause 4.2.9.6 of Loc&Pas TSI 1302/2014.</p>	<p>Not accepted National rule should be modified</p>

National rules	Agency evaluation	Agency evaluation status
Relevant requirements Parts 2 and 3 Part A and Part B for compliance requirements	UK indicates that the rule is retained until GMRT2472 is converted into a non-mandatory rule. Agency ; Part 2 cover information to be recorded, The information to be recorded are defined in the TSI OPE 4.2.3.5 Part 3 cover requirement of the data recorder equipments already covered by clause 4.2.9.6 of Loc&Pas TSI	Action UK: RSSB will review the requirements and make appropriate changes in a future revision of the standard.
<u>10.2.3-Passenger alarm</u> Main Line: GM/RT2045 Braking Principles for Rail Vehicles Issue 4 Relevant requirement 2.11.1 Part 4 for compliance requirements	The requirements relate to clause 4.2.5.3.3 of Loc&Pas TSI 1302/2014. Agency : The cause 2.11.1 is covered by TSI Loc&Pas clause 4.2.5.3.3, the revised TSI application guide refers to the EN 16334 that gives a presumption of conformity.	Not accepted National rule should be modified Action UK: RSSB will review the requirements and make appropriate changes in a future revision of the standard.

5.28.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<u>2.1.2.2-Axle load and wheel load</u> Main Line: GE/RT8006 Assessment of Compatibility of Rail Vehicle Weights and Underline Bridges, Part 3, Appendix A Relevant requirements are in Part 3 and Appendix A Part 5 compliance requirements	The rules relate to the route compatibility check with bridges performed after vehicle authorisation. Agency : The requirements are relevant for route compatibility check performed by Railway undertaking (article 23 of directive(EU) 2016/797) and is covered by TSI OPE revision (4.2.2.5 and appendix D : Traffic loads and load carrying capacity of infrastructure).	Accepted pending revision of TSI on route compatibility check. Action UK : RSSB will review the requirements and make appropriate changes in a future revision of the standard.
<u>3.2.4-Track loading compatibility parameters</u> Main Line: GM/TT0088 Permissible Track Forces for Railway Vehicles Issue 1, October 1993 Relevant requirements in Parts 5.2, 5.3, 5.4, 5.5, 6.2, 7.2, 7.3, 7.4, 8.2, 8.3 Part 2 and Part B compliance requirements	The rules relate to the route compatibility check performed after vehicle authorisation. Agency : The requirements provide line characteristics that are relevant for route compatibility check performed by Railway undertaking (article 23 of directive(EU) 2016/797) and is covered by TSI OPE revision (4.2.2.5 and appendix D)	Accepted pending revision of TSI on route compatibility check. Action UK : RSSB will review the requirements and make appropriate changes in a future revision of the standard.
<u>3.2.5-Minimum horizontal curve radius, vertical concave curve radius, convex curve radius</u> Main Line: GM/RT2100 Requirements for Railway Vehicle Structures Issue 5 June 2012 Relevant requirement 8.1.6	The rules relate to the route compatibility check performed after vehicle authorisation. Agency : The requirements cover limits and conditions for route compatibility check relevant (article 23 of	Accepted pending revision of TSI on route compatibility check. Action UK :

National rules	Agency evaluation	Agency evaluation status
Part 10 for compliance requirements	directive(EU) 2016/797) and is covered by TSI OPE revision (4.2.2.5 and appendix D)	RSSB will review the requirements and make appropriate changes in a future revision of the standard.
<p><u>4.5.1-Emergency braking performance</u> Main Line: GM/RT2045 Braking Principles for Rail Vehicles Issue 4 All requirements in section 2.3.2 are relevant, except requirement 2.3.2.4 Relevant requirement 2.3.3.10 to address LOC&PAS TSI specific case 7.3.2.7 Part 4 for compliance requirements</p>	<p>The clause 2.3.3.10 relates to specific case 7.3.2.7 of Loc&Pas TSI 1302/2014. The clause 2.3.2 relates to the route compatibility check performed after vehicle authorisation. Agency : The requirement 2.3.2 is related to Route compatibility check (article 23 of directive(EU) 2016/797) and is covered by TSI OPE revision (4.2.2.5 and appendix D:” Braking”)</p>	<p>Accepted pending revision of TSI on route compatibility check. Action UK: RSSB will review the requirements and make appropriate changes in a future revision of the standard.</p>
<p><u>4.6.2-Wheel slide protection system (“WSP”)</u> Main Line: GM/RT2045 Braking Principles for Rail Vehicles Issue 4 Relevant requirementt 2.4 Part 4 for compliance requirements"</p>	<p>The requirements relate to clause 4.2.4.6.2 of Loc&Pas TSI 1302/2014. UK indicates that the rule provide further guidance for assessing WSP systems for operation in GB, adhesion conditions is given in GMGN2695. Agency : ERA to check the guidance document, if deficiency it should be discussed in TSI Working party.</p>	<p>Accepted pending discussion at WP Action UK: RSSB will review the requirements and make appropriate changes in a future revision of the standard. Action ERA : to check the guidance document.</p>
<p><u>4.9-Brake requirements for rescue purposes</u> Main Line: GMRT2045 Compatibility Requirements for Braking Systems of Rail Vehicles issue 4 Relevant requirements set out in Part 2.5 Part 4 for compliance requirements</p>	<p>The requirements relate to clause 4.2.2.2.4, 4.2.4.4.5 of Loc&Pas TSI 1302/2014. UK indicates that the document GMRT2045 will be reviewed. Agency : Part 2.5 refers to EN 15807 which is already in the TSI application guide. Other requirements are covered by clause 4.2.4.4.5 of TSI Loc&Pas 1302/2014. More operational issue not to be covered at vehicle authorisation.</p>	<p>Not accepted National rule should be repealed Action UK : RSSB will review the requirements and make appropriate changes in a future revision of the standard.</p>
<p><u>5.2-Interior, 5.2.1-Interior doors, 5.2.2-Intercirculation doors, 5.3-Handrails, 5.4-Windows</u> Main Line: GM/RT2100 Requirements for Railway Vehicle Structures Issue 5 June 2012 Relevant requirements set out in Part 6 to address LOC&PAS TSI open point 7.5.2.1</p>	<p>The requirements relate to clause 7.5.2.1 of Loc&Pas TSI 1302/2014. Agency : The rules address interior passiv safety not specified in TSI.</p>	Accepted

National rules	Agency evaluation	Agency evaluation status
Part 10 for compliance requirements		
<p><u>6.1.1.2-Temperature, 6.1.1.5-Snow, ice and hail</u> Main Line: GM/RT2045 Braking Principles for Rail Vehicles Issue 4 Relevant requirements are set out in 2.6 Part 10 for compliance requirements</p>	<p>The requirement relates to clause 4.2.6.1 of Loc&Pas TSI 1302/2014. UK indicates that the document GMRT2045 will be reviewed. Agency: Clause 2.6 is covered by clause 4.2.6.1 of Loc&Pas TSI 1302/2014.</p>	<p>Not accepted National rule should be repealed Action UK : RSSB will review the requirements and make appropriate changes in a future revision of the standard.</p>
<p><u>6.1.2.2-Maximum pressure variation in tunnels</u> Main Line: GM/RT2100 Requirements for Railway Vehicle Structures Issue 5 June 2012 Relevant requirements in 7.3 Part 10 for compliance requirements</p>	<p>The requirements relate to clause 4.2.6.2.3 of Loc&Pas TSI 1302/2014. UK indicates that the document GMRT2100 will be reviewed. Agency : It was decided in TSI WP to not cover aerodynamic loads inside the vehicle.The requirements cover passenger confort and not essential requirement. This could be a requirement from the user of the vehicle through contract arrangements.</p>	<p>Not accepted National rule should be repealed Action UK: RSSB will review the requirements and make appropriate changes in a future revision of the standard.</p>
<p><u>6.1.2.2-Maximum pressure variation in tunnels</u> HS1: HS1 has a derogation against the TSI for maximum pressure variation. Reference L-SA-SR-00002-08-UNO(200156/201-01/9.2.1.1 Works below ground level such as tunnels and cut and cover. HS1 tunnels are designed to limit the maximum pressure differential to 2.5 kPa in 4 seconds.</p>	<p>The requirement relates to clause 4.2.6.2.3 of Loc&Pas TSI 1302/2014. Agency : Is there a specific case in TSI INF, Loc&Pas? TSI deficiency?</p>	<p>Accepted/Not accepted Action UK: to check status of derogation.</p>
<p><u>7.2.1-Vehicle marking</u> Main Line: GMRT2111, Issue 1, Rolling Stock Subsystem and Interfaces to AC Energy Subsystem Relevant requirements in 2.3 Part 5 for compliance requirements</p>	<p>The requirements relate to clause 4.2.8.4 of Loc&Pas TSI 1302/2014. UK indicates that it is needed for safe operation and will check if the rule is kept for authorisation Agency : The requirement is covered by clause 4.2.8.4 of loca&Pas TSI 1302/2014 Protection against electrical hazards that refers to EN 50153.</p>	<p>Not accepted National rule should be repealed Action UK : RSSB will review the requirements and make appropriate changes in a future revision of the standard.</p>
<p><u>8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line</u> Main Line: GM/RT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem Issue 1 Relevant requirements in 3.4 Part 5 compliance requirements</p>	<p>The clause 3.4 of GM/RT2111 relates to clause 4.2.8.4 of Loc&Pas TSI 1302/2014. The clause 3.2.1 of GMRT2113 relates to the route compatibility check performed after vehicle authorisation. UK indicates that the document GMRT2111 will be reviewed. Agency: clause 3.4 of RT2111 is covered by TSI 4.2.8.2.4.</p>	<p>Not accepted National rule should be repealed Action UK : RSSB will review the requirements and make appropriate changes in a future</p>

National rules	Agency evaluation	Agency evaluation status
<p>GMRT2113 Rolling Stock Subsystem and Interfaces to DC Conductor Rail Energy Subsystem, issue 1 Relevant requirement 3.2.1 Part 5 compliance requirements</p>	<p>clause 3.2.1 of RT 2113 is related to RINF and route compatibility check.</p>	<p>revision of the standard.</p>
<p><u>8.2.1.4-Maximum power and maximum train current that is permissible to draw from the overhead contact line, 8.2.2.5-Current capacity of pantograph including contact strip</u> HS1: The maximum allowable train current is 1250A.</p>	<p>The rule relates to the route compatibility check performed after vehicle authorisation. Agency : The requirement is relevant for route compatibility check (article 23 of directive(EU) 2016/797) and is covered by TSI OPE revision (4.2.2.5 and appendix D : Pantograph).</p>	<p>Accepted pending revision of TSI on route compatibility check. Action UK : to transfer to OPE for route compatibility check.</p>
<p><u>8.2.2.7-Insulation of pantograph from the vehicle</u> Main Line: GMRT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem, Issue 1 Relevant requirement 4.1 Part 5 for compliance requirements</p>	<p>The requirement relates to clause 4.2.8.4 of Loc&Pas TSI 1302/2014. UK indicates that the document GMRT2111 will be reviewed. Agency : Clause 4.1 is covered by TSI loc&Pas clause 4.2.8.4 Protection against electrical hazards that refer to EN 50153.</p>	<p>Not accepted National rule should be repealed Action UK : RSSB will review the requirements and make appropriate changes in a future revision of the standard.</p>
<p><u>8.3.4-Earthing</u> Main Line: GMRT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem, Issue 1, December 2014 Relevant requirements in 2.1 and 4.1 Part 5 for compliance requirements GMRT2113 Rolling Stock Subsystem and Interfaces to DC Conductor Rail Energy Subsystem, Issue 1, September 2015 Relevant requirements in 2.1 Part 5 for compliance requirements <u>8.5-Protection against electrical hazards:</u> Main Line: GMRT2113 Rolling Stock Subsystem and Interfaces to DC Conductor Rail Energy Subsystem, issue 1, September 2015 Relevant requirements in 2.1 Part 5 for compliance requirements"</p>	<p>The requirements relate to clauses 4.2.8.2.10 and 4.2.8.4 of Loc&Pas TSI 1302/2014. UK indicates that the document GMRT2111 will be reviewed. Agency : The rules are already covered by clauses 4.2.8.2.10 and 4.2.8.4 of TSI LOC&PAS 1302/2014.</p>	<p>Not accepted National rule should be repealed Action UK : RSSB will review the requirements and make appropriate changes in a future revision of the standard.</p>
<p><u>9.3.3-Controls and indicators</u> Main Line: GM/RT2185 Train Safety Systems Issue 2, December 2001 Part Relevant requirements in B5.1, B5.2, B5.3 Part B2 for compliance requirements</p>	<p>UK indicates that the document GMRT2185 will be reviewed. Agency : The rules are not related to vehicle authorisation but to Operational that is covered by the driver manual, and if the user want specific design this is should be specified in a contract.</p>	<p>Not accepted National rule should be repealed Action UK: RSSB will review the requirements</p>

National rules	Agency evaluation	Agency evaluation status
		and make appropriate changes in a future revision of the standard.
<p><u>9.5.3-On-board tools and portable equipment</u> Main Line: GM/RT2130 Vehicle Fire, Safety and Evacuation Issue 4 Relevant requirements in 5.1 and 5.2 Part 8 for compliance requirements</p>	<p>The requirements relate to clauses 4.2.9.4 of Loc&Pas TSI 1302/2014. UK indicates that the document GMRT2130 will be reviewed. Agency : The rules duplicate the clause 4.2.9.4 of Loc&Pas TSI and demand additional onboard equipments.</p>	<p>Not accepted National rule should be repealed Action UK: RSSB will review the requirements and make appropriate changes in a future revision of the standard.</p>

5.28.2.4 Analysis of rules related to compatibility with TDS

National rules	Agency evaluation	Agency evaluation status
<p><u>8.4.2.1.1-Rail return current, 8.4.2.1.2-Heating cable interference current, 8.4.2.1.3-Interference current under the vehicle</u> Main Line: GE/RT8015 Electromagnetic Compatibility between Railway Infrastructure and Trains Issue 1, October 2002 B5.1, 5.2</p>	<p>UK indicates that GERT8015 is withdrawn,RSSB will provide text and justification Agency: UK should provide limits and test/evaluation method</p>	<p>Not accepted, NR should be provided RSSB comment: UK will consider appropriate rules and standards. Note GERT8015 did not specific limits it contained a compatibility assessment process that related to GERT8270.</p>
<p><u>8.4.2.1.1-Rail return current</u> Main Line: GM/RT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem Issue 1 Relevant requirements in 3.13 Part 5 for compliance requirements</p>	<p>The requirement relates to clause 4.2.8.2.7 of Loc&Pas TSI 1302/2014. Agency : valid rule</p>	<p>Accepted</p>
<p><u>8.4.2.3-Vehicle entrance impedance</u> HS1: The impedance between pantograph and wheels must be such that when combined with the roof mounted VCB characteristic that the maximum fault level of 12kA (6kA in St Pancras area) shall not be exceeded. (A description of the electrical protection arrangements is given in the HS1 Infrastructure</p>	<p>The requirement relates to clauses 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency : What is meant with maximum fault level? To be placed under § 8.2.1.4 Maximum power and maximum train current that is permissible to draw from the overhead contact line</p>	<p>Not accepted To be discussed with UK</p>

Registers R-SG-NC-00001-17-HSO and R-SG-NC-0002-17-HSO.)		
<u>12.2.4.5-Compatibility with fixed installations of CCS</u> Main Line: GM/RT2461 Sanding Equipment Fitted to Multiple Units and On-Track Machines Issue 2, June 2016 Requirement 2.1,2.2 and Appendices D and E to address the open point 3.1.4.2 in the CCS TSI, Index 77 (ERA/ERTMS/033281) Requirements in 2.4 provides the alternative solution to CCS TSI, Annex A, Index 77 clause 3.1.4.1 as permitted by the LOC&PAS TSI Application Guide Part 3 compliance requirements	The requirements relate to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: The rules address open point 3.1.4.2 of CCS TSI index 77	Accepted
<u>12.2.4.5-Compatibility with fixed installations of CCS</u> GMRT2477 Compatibility Requirements for Track Circuit Assistants (TCAs) on Rail Vehicles, issue 3, June 2018 Relevant requirements in Parts 2 and 3 Part 4 for compliance requirements	The requirements relate to clause 4.2.3.3.1.1 of Loc&Pas TSI 1302/2014. Agency: valid rule	Accepted

5.28.3 CCS onboard Subsystem

The parameters below contain national rules to cover the open points:

- 12.2.5.5 B2 “ETCS DMI” To be confirmed

The parameters below do not contain national rules to cover the open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.2, 12.2.5.6 B2 “braking aspects”
- 12.2.5.4 B2 “ETCS DMI”

1.1.1.1.3 Requirements covering open points for Baselines 2 and 3

5.28.3.1 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature : Excel table RDD : intermediate version published		
	LoP version : New		
	-		
Assessment status	Taken into account by MS : on going Assessed by ERA		
Amount of remaining NRs in addition to latest TSIs	6		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information

Availability and status of remaining national rules		
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	12.2.1-National on-board signalling systems 12.1.1.Non GSM-R radio system
ETCS and GSM-R	Parameters listed in section 3.2.1	12.1.2.2-Other GSM-R requirements (Rule to be moved to 12.1.1.) <u>12.2.5.7 Other ETCS requirements</u>

5.28.3.1.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<p><u>12.2.1-National on-board signalling systems</u> Main Line: GE/RT8018 Mechanical Trainstop System Interface Issue 2, September 2012 Relevant requirements 3.2.1 and 3.2.2 Part 5 for compliance requirements Main Line: GE/RT8075 AWS and TPWS Interface Requirements Issue 3, March 2018 Relevant requirements in Part 3 Part 4 for compliance requirements Main Line: GKRT0055 Block System Interface Requirements Issue 1, September 2013) Relevant requirement 2.4.2.1. Part 3 for compliance requirements Main Line: BR1654 Radio Electronic Token Block System Issue 1 December 1986 Relevant requirements in Parts 3 to 13 Part 2 for compliance requirements HS1: Traction units are to be fitted with TVM 430 and KVB (where operational limits require) systems parameterised for HS 1 infrastructure. Main Line: GM/RT2045 Braking Principles for Rail Vehicles Issue 4, March 2016 Relevant requirements in 2.10.3 Part 4 for compliance requirements</p>	<p>The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency : They are related to class B system train protection system.</p>	Accepted
<p><u>12.1.2.2 Other GSM-R requirements:</u> <u>12.1.1 Non GSM-R radio system</u> HS1: When the GSM-R Radio system is commissioned, it will be in compliance with GB MainLine NR GK/RT/0094 Issue 1 Train Voice Radio Systems Part 3 to 7</p>	<p>The national rules refers to clauses 4.2.5.1 (Radio communication with the train) of CCS TSI. UK need to keep the rule until the GSM-R is installed. NSA UK will indicate which rule is applied Agency : rule to be transferred from parameter 12.1.2.2 to parameter 12.1.1</p>	<p>Not accepted, NRs should be modified Action UK: Rule to be transferred to parameter 12.1.1 (outcome from the last meeting) Requirement is still not clear. Did it describe the class B radio system which will disappear when GSM-R is installed or did it describe</p>

National rules	Agency evaluation	Agency evaluation status
		the future GSM-R installation or what? Or is this an information only? Action UK: Clarify

5.28.3.1.2 Analysis of rules for ETCS and GSM-R

National rules	Agency evaluation	Agency evaluation status
<p><u>12.1.2.2 Other GSM-R requirements:</u> HS1: When the GSM-R Radio system is commissioned, it will be in compliance with GB MainLine NR GK/RT/0094 Issue 1 Train Voice Radio Systems Part 3 to 7</p>	<p>The national rules refers to clauses 4.2.5.1 (Radio communication with the train) of CCS TSI. UK need to keep the rule until the GSM-R is installed. NSA UK will indicate which rule is applied Agency: rule to be transferred from parameter 12.1.2.2 to parameter 12.1.1</p>	<p>Accepted Action UK: rule to be transferred to parameter 12.1.1</p>
<p><u>12.2.5.5 Ergonomic aspects of DMI:</u> <u>12.2.5.7 Other ETCS requirements</u> Main Line: GE/RT8402 ERTMS/ETCS DMI National Requirements Issue 1, March 2012 Relevant requirements in Parts 2 and 3 to address CCS TSI specific case 7.6.2.2 Part 4 for compliance requirements</p>	<p>Agency : NTR ok Requirement complements the UK specific cases (TSI CCS 7.6.2.2) related to TSI CCS 4.2.12. Requirement is valid for all ETCS baselines and should be therefore moved to 12.2.5.7</p>	<p>Accepted Action UK: Rule to be transferred to 12.2.5.7 GE/RT8402 makes reference to B3 DMI document. Not clear if for baseline 2 B3 DMI document to be applied too. In this case another NTR is needed to close the open point for B2. RSSB comment: Standard has been revised and issue 2 was published in June 2016. Agree that the rule be transferred to parameter 12.2.5.7. GERT8402 is addressing the specific cases relating to the ETCS DMI only. It is not specifying that for B2 the B3 specifications apply.</p>

National rules	Agency evaluation	Agency evaluation status
		<p>Open point in B3 was closed when the ERTMS/ETCS DMI specification (ERA_ERTMS_0155 60, Index 6 in Annex A of the 2016 CCS TSI was issued) and still exists for B2. We do not have an NTR to close the open point in B2 and as we are not planning to implement B2 on-board and the CCS TSI 7.4.2.1 (3) does not permit implementation of B2 on-board effective from 01 Jan 2019 – we do not need an NTR.</p> <p>The current version of the CCS TSI 7.6.2.2 under 4.2.12 ETCS DMI still references spec 2 but it should reference specs 2 and 3 and it should also apply to spec 1.</p> <p>See proposed wording change to Notes in email to Hans Beirlein from Tom Lee dated 23 March 2016.</p>

5.29 Member state Channel Tunnel

5.29.1 Summary of actions

Action	Responsible
CT to take into account the actions identified below as “Action CT”	CT
Agency to take into account the actions identified below as “Action ERA”	ERA
RDD to be modified with last version of Channel Tunnel rules	CT/ERA

5.29.2 Rolling Stock Subsystem

5.29.2.1 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature : Word document “ Channel Tunnel Reference Document for cross-acceptance of rail vehicles Unified (national) rules relating to authorisation of rail vehicles, Approved version 9 January 2018.”		
	RDD : to be uploaded in RDD		
	LoP version : New		
	-		
Assessment status	Taken into account by MS : Yes/No		
Amount of remaining NRs in addition to latest TSIs	7		
Distribution of remaining rules in the List of parameters			
Group of rules	Corresponding parameters in RDD	Parameters for which one or more rules exist	Additional information
Rules related to other directives	Parameters listed in section 3.2.3	0 parameter	
Rules related to documentation	Parameters listed in section 3.2.4	0 parameter	
Rules not retained in TSIs	Parameters listed in section 3.2.5	0 parameter	
Other rules related to compatibility with network / legacy system	See subsection 2 below	2 parameter: 5.1.2-Boarding aids 5.6-Heating, ventilation and air conditioning systems	Detailed analysis per parameter provided in section 2 below
Other rules not covered above (e.g potential TSI deficiency)	See subsection 3 below	4 parameters: 4.5.1-Emergency braking performance 4.5.4-Parking brake performance 5.2-Interior 6.1.2.2-Maximum pressure variation in tunnels	Detailed analysis per parameter provided in section 3 below
Rules related to compatibility with TDS	Parameters listed in section 3.2.2	0 parameter	Detailed analysis per parameter provided in section 4 below

Existence of non mandatory rules	-	0 parameter	
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5.29.2.2 Analysis of other rules related to compatibility with existing network/legacy system:

5.29.2.2.1 Requirements covering open points

No requirement

5.29.2.2.2 Requirements covering specific cases not described in TSIs

No requirement

5.29.2.2.3 Other rules related to compatibility with existing network/legacy system

National rules	Agency evaluation	Agency evaluation status
<p><u>5.1.2-Boarding aids</u> Passenger vehicles: For the purpose of ensuring steps and ramps are suitable for an in-tunnel evacuation, passenger trains must respect the dimensions of the channel tunnel evacuation step and walkway relative to the running line as follows: Height from rail head:</p> <ul style="list-style-type: none"> - To evacuation step : 530 mm - To evacuation walkway: 810 mm <p>Horizontal distance from track centre:</p> <ul style="list-style-type: none"> - To evacuation step : 1861 mm - To evacuation walkway: 2197 mm 	<p>The national rule refers to clause 4.2.2.3.2 of PRM TSI 1300/2014.</p> <p>Agency: Platform height is already covered by TSI PRM 1300/2014 that refer to TSI INF 1299/2014.</p>	<p>Not accepted National rule should be repealed</p>
<p><u>5.6-Heating, ventilation and air conditioning systems</u> Passenger vehicles: To ensure a sufficient level of safety on board, passenger trains must have systems in place to provide ventilation capable of ensuring CO2 levels remain under 10,000ppm for at least 90 minutes in the event of a failure of traction systems</p>	<p>The national rule refers to clause 4.2.5.8 of LOC&PAS TSI 1302/2014.</p> <p>CT indicates that the intention of the national rule was to set out parameters in terms of air quality required for the length of time it might take to evacuate a passenger vehicle in non-emergency conditions (90 minutes), whereas the Loc&Pas rule relates to lighting issues.</p> <p>Agency : CT should address a specific case, rule maintained pending a specific case is required in Loc&Pas TSI</p>	<p>Accepted pending a specific case is required by CT Action CT : to request a specific case</p>

5.29.2.3 Analysis of other rules not covered above (e.g potential TSI deficiency)

National rules	Agency evaluation	Agency evaluation status
<p><u>4.5.1-Emergency braking performance</u> Passenger vehicles: With all braking equipment operational, a normally laden train running at 160 km/h which makes an emergency brake application must be able to stop within a distance of 900 m on dry rail without activating the wheel slide protection.</p>	<p>The national rule refers to clause 4.2.4.5.2 of LOC&PAS TSI 1302/2014.</p> <p>Agency : Stopping distances are covered by TSI OPE and cannot be a criteria to deliver or not an authorisation. During authorisation the stopping distances are verified following TSI requirements</p>	<p>Not accepted National rule should be repealed</p>

National rules	Agency evaluation	Agency evaluation status
<p>Freight vehicles: With all braking equipment operational, a train running as MA100/ME100/ME120 which makes an emergency brake application must be able to stop within a distance of (respectively) 1040m/900 m/1070m on dry rail without activating the wheel slide protection.</p>	<p>and are indicated in the Technical File by the applicant. The rule should transferred to Infrastructure Manager as "braking distance table" (clause 4.2.2.6 of OPE TSI).</p>	
<p><u>4.5.4-Parking brake performance</u> All vehicles: Immobilise the train on an 11‰ gradient with an adverse 70m/s wind (piston effect) in the Tunnel and 45m/s wind gusts on Terminals.</p>	<p>The national rule refers to clause 4.2.4.5.5 of LOC&PAS TSI 1302/2014. Agency : The rule is covered by TSI loc&Pas 4.2.4.5.5 Parking brake Performance: <i>(1) A unit (train or vehicle) in load condition 'design mass in working order' without any power supply available, and stationary permanently on a 40 ‰ gradient, shall be kept immobilised.</i> <i>(2) Immobilisation shall be achieved by means of the parking brake function, and additional means (e.g.scotches) in case where the parking brake is unable to achieve the performance on its own; the required additional means shall be available on board the train.</i></p>	<p>Not accepted National rule should be repealed</p>
<p><u>5.2-Interior</u> Passenger vehicles: For evacuation purposes, evacuation wheelchairs adapted to the specificities of the Tunnel evacuation routes must be present on board in sufficient number to allow evacuation of all PRMs on board. Volume G of Eurotunnel Safety Arrangements: the Running Tunnel walkway is 800mm wide (at its narrowest point).</p>	<p>The rule cover clause 4.2.10.5.1 (12) of the Loc&Pas TSI 1302/2014. Agency : The rule can remain for TSI vehicle pending discussion in TSI Working party.</p>	<p>Accepted pending discussion at TSI WP Action ERA</p>
<p><u>6.1.2.2-Maximum pressure variation in tunnels</u> Freight vehicles: Wagons must be designed to withstand peak pressure of ±1000 pascals without sustaining damage. For the purpose of design, this should be taken over the full height of the wagon and over any 3m length.</p>	<p>The rule cover clause 4.2.6.2.3 of the Loc&Pas TSI 1302/2014. CT indicates that the intention of this national rule was to mitigate the effect of two high-speed trains crossing the piston relief ducts in the tunnel at the same time and the increase in air pressure on a running tunnel that this Agency : The national rule covers case of mixed traffic? If yes this shall be managed at operation level with measure as speed limitation. The rule is be further clarified by CT, does the same type of rules apply to lorries loaded on shuttle?</p>	<p>Not accepted Action CT :To be clarified by CT</p>

5.29.2.4 Analysis of rules related to compatibility with TDS

No rules published from vehicle authorisation compatibility point of view, the Agency demand to Channel tunnel if and what are the rules related to train detection systems.

Action CT : to provide, if any, rules related to TDS for vehicle authorisation

5.29.3 CCS onboard Subsystem

5.29.3.1 Requirements covering open points for Baselines 2 and 3

The parameters below contain national rules to cover the open points:

None

The parameters below do not contain national rules to cover the open points:

- 12.2.5.3 B2 and B3 “Availability”
- 12.2.5.2, 12.2.5.6 B2 “braking aspects”
- 12.2.5.4; 12.2.5.5 B2 “ETCS DMI”

5.29.3.2 Summary table

Availability and status of remaining national rules			
Availability of data	Yes		
	Nature : Word document “ Channel Tunnel Reference Document for cross-acceptance of rail vehicles Unified (national) rules relating to authorisation of rail vehicles, Approved version 9 January 2018.”		
	RDD : to be uploaded in RDD		
	LoP version : New		
	If no, forecast		
Assessment status	Taken into account by MS : Yes/No		
Amount of remaining NRs in addition to latest TSIs	1		
Distribution of remaining rules			
Group of rules	Corresponding parameters in RDD	Number of parameters for which a rule exists	Additional information
CCS and Radio class B systems (legacy systems)	Parameters listed in section 3.2.1	<u>1 parameter</u> : 12.2.1-National on-board signalling systems	
ETCS and GSM-R	Parameters listed in section 3.2.1	No rule	

5.29.3.2.1 Analysis of rules covering CCS and Radio class B systems (legacy systems)

National rules	Agency evaluation	Agency evaluation status
<u>12.2.1-National on-board signalling systems:</u> All vehicles: Traction units are to be fitted with TVM 430 system parameterised for Channel Tunnel infrastructure	The national rules refers to clauses 4.2.6.1 (ETCS and Class B train protection) of CCS TSI. Agency : They are related to class B system train protection system.	Accepted

5.29.3.2.2 Analysis of rules for ETCS and GSM-R

No requirement

5.30 Member state UK (for Northern Ireland)

5.30.1 Summary of actions

N°	Action	Responsible
	UK to provide the remaining national rules on top of TSIs	NSA UK