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## *Application guide: Codification of lines, freight wagons and intermodal loading units for combined transport*

*Released by European Union Agency for Railways*

*This guide does not contain any legally binding advice. It may serve as a clarification tool without however dictating in any manner compulsory procedures to be followed and without establishing any legally binding practice. The guide provides explanations on the provisions contained in the TSIs and should be helpful for understanding the approaches and rules described therein. However, it does not substitute for them.*

*The guide is publicly available and it will be regularly updated to reflect progress with European standards and changes to the TSIs.*

*The reader should refer to the website of the European Union Agency for Railways for information about its latest available edition.*

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## 1 INTRODUCTION

### 1.1 Scope

This document is a transversal guide about the application of the TSI requirements relevant for Combined Transport expressed in the TSIs and the associated ERA Technical Document. It also provides guidance on how to fill in several parameters of the Register of Infrastructure.

The guide needs to be read and used in conjunction with the TSIs (ref. documents [1] to [3]), the Regulation about the Register of Infrastructure [4] and the Technical Document on the Codification of lines and wagons for combined transport and associated operational procedures [5]. It is intended to facilitate their application in the field of combined transport, but it does not substitute for them.

### 1.2 References documents

|     |                                       |   |
|-----|---------------------------------------|---|
| [1] | TSI INF                               | Commission Regulation (EU) No 1299/2014 of 18 November 2014 on the technical specifications for interoperability relating to the 'infrastructure' subsystem of the rail system in the European Union                        |
| [2] | TSI OPE                               | Commission Implementing Regulation (EU) 2019/773 of 16 May 2019 on the technical specification for interoperability relating to the operation and traffic management subsystem of the rail system within the European Union |
| [3] | TSI WAG                               | Commission Regulation (EU) No 321/2013 of 13 March 2013 concerning the technical specification for interoperability relating to the subsystem rolling stock — freight wagons of the rail system in the European Union       |
| [4] | Regulation RINF                       | Commission Implementing Regulation (EU) 2019/777 of 16 May 2019 on the common specifications for the register of railway infrastructure   |
| [5] | Technical document ERA/TD/2023-01/CCT | Codification of lines and wagons for combined transport and associated operational procedures   |

## 2 GUIDANCE ON THE APPLICATION OF REQUIREMENTS ON CODIFICATION

### 2.1 Introduction

In the following sections of this document, extracts of the original text of the TSIs [1] to [3] or of the Technical Document [5] are provided, shown in a shaded text box and these are followed by a text that gives guidance.

Guidance is provided only for the clause relevant for combined transport. TSI-specific guides are also available on ERA website to cover other clauses.

Guidance is of voluntary application. It does not mandate any requirement in addition to those set out in the TSIs and in the Technical Document.

Guidance is given by means of further explanatory text and where relevant by reference to standards that are means of demonstrating compliance with the TSI.

## 2.2 Codification of lines

### 2.2.1 How to codify a line

The TSI INF [1] states the following:

#### 2.6 Relation to the codification of Combined Transport

- (1) The provisions for structure gauge are laid down in point 4.2.3.1
- (2) The codification system used for the conveyance of intermodal loading units in combined transport shall be in accordance with the specification referenced in Appendix T, index [A]. It can be based on:
  - a. the characteristics of the line and the exact position of the obstacles;
  - b. the reference profile of the structure gauge of that line;
  - c. a combination of the methods referred to in points (a) and (b).

The Technical Document [5], that is the specification referenced in Appendix T, index [A] of the INF TSI, precises:

#### 2.1 Codification of lines – RINF parameters 1.1.1.1.3.4, 1.1.1.1.3.5, 1.1.1.1.3.8 and 1.1.1.1.3.9

When the codification is based on the structure gauge, it shall be determined according to point 4.2.3.1 of the TSI INF (referring to EN 15273-3:2013+A1:2016) or according to other standards when this would result in a better CTP.

### 2.2.2 When to codify a line: requirements of the RINF

Table 1 of the RINF [4] includes the following items to register:

| Number      | Title  | Definition  | Deadline to provide the parameter   |
|-------------|--|---|---|
| 1.1.1.1.3.4 | Standard combined transport profile number for swap bodies | Coding for combined transport with swap bodies (for all freight and mixed-traffic lines) in accordance with the specification referenced in Appendix A-1, index [B] | by 16 March 2019 at the latest for lines belonging to the TEN (1.1.1.1.2.1)<br>For lines Off-TEN (1.1.1.1.2.1), when data not yet provided, upon justified request:<br>- When data available, publication of the codification one month after the request<br>- When data is not available and field measurements are needed, publication of the codification one year after the request |

| Number      | Title  | Definition   | Deadline to provide the parameter  |
|-------------|--|--|--|
| 1.1.1.1.3.5 | Standard combined transport profile number for semi-trailers | Coding for combined transport for semi-trailers (for all freight and mixed-traffic lines) in accordance with the specification referenced in Appendix A-1, index [B] | by 16 March 2019 at the latest for lines belonging to the TEN (1.1.1.1.2.1)<br>For lines Off-TEN (1.1.1.1.2.1), when data not yet provided, upon justified request:<br>- When data available, publication of the codification one month after the request<br>- When data is not available and field measurements are needed, publication of the codification one year after the request                      |
| 1.1.1.1.3.8 | Standard combined transport profile number for containers    | Coding for combined transport for containers (for all freight and mixed-traffic lines) in accordance with the specification referenced in Appendix A-1, index [B]    | 12 months after the adoption of the Article 7 Guide for lines belonging to the TEN (1.1.1.1.2.1)<br>For lines Off-TEN (1.1.1.1.2.1), When data not yet provided, upon justified request:<br>- When data available, publication of the codification one month after the request<br>- When data is not available and field measurements are needed, publication of the codification one year after the request |
| 1.1.1.1.3.9 | Standard combined transport profile number for roller units  | Coding for combined transport for roller units (for all freight and mixed-traffic lines) in accordance with the specification referenced in Appendix A-1, index [B]  | 12 months after the adoption of the Article 7 Guide for lines belonging to the TEN (1.1.1.1.2.1)<br>For lines Off-TEN (1.1.1.1.2.1), When data not yet provided, upon justified request:<br>- When data available, publication of the codification one month after the request<br>- When data is not available and field measurements are needed, publication of the codification one year after the request |

For the lines that don't belong to the TEN and for which data aren't available in RINF, the Infrastructure Manager is required to provide the information upon justified request.

The request should be addressed to the infrastructure manager following the “*procedures according to which applicants may request capacity from the infrastructure manager*”, as required in Annex IV of Directive 2012/34.

When the gauge of the line for which the request is addressed does not allow to apply the process described in section 3.2.1.1 above, the corresponding RINF parameters should be populated as ‘Not Applicable’ (‘NA’). A section of line for which the codification is registered as ‘Not Applicable’ should be considered as “not codified” in point 4.2.2.5.1(D) of TSI OPE (see section 3.5.2 below).

When the codification is performed based on the gauge of the line (see Technical Document [5], point 2.1), the line code should be published one month after the request.

When the codification is performed based on the exact position of the obstacles (see Technical Document [5], point 2.1), the line code should be published one year after the request.

The requester should be informed of the codification methodology, and when the data are available in RINF.

## 2.3 Codification of freight wagons

### 2.3.1 Requirements on codification (TSI WAG – appendix H)

#### 2.3.1.1 Attribution of wagon compatibility code and correction digits during the authorisation

The attribution of the Wagon Compatibility Code is always part of the authorisation of the freight wagon. The WAG TSI [3] specifies in its point 4.2.3.1 and its Appendix H:

*Units intended to be used for combined transport shall be codified in accordance with the requirements of Appendix H and the specification referenced in Appendix D.2, index [B].*

*(...)*

#### *H.1 Wagon Compatibility Code*

*(1) The Wagon Compatibility Code (WCC) specifies the type of Intermodal Loading Unit that can be loaded on the unit.*

*(2) The WCC shall be determined for all units and assessed by a Notified Body.*

How to determine the WCC is specified in the Technical Document [5] point 2.2.1.

The attribution of the Wagon Correction Digit (WCD) is specified in the WAG TSI [3] Appendix H:

#### *H.2 Wagon Correction Digit*

*(1) The Wagon Correction Digit (WCD) is the result of a comparison between the geometric characteristics of the unit under assessment and the characteristics of the reference wagons defined in point H.3.*

*(2) This comparison shall be performed for all units and assessed by a Notified Body. The result of the assessment shall be included in the report of the Notified Body.*

*(3) On the basis of the assessment:*

*For units having equivalent or more favourable geometric characteristics than the reference wagon, the WCD may be calculated if requested by the applicant.*

*For units having less favourable geometric characteristics than the reference wagon, the calculation of the WCD is not required by this TSI.*

The Technical Document [5] point 2.2.2 provides information on the attribution of wagon correction digits before the authorisation.

### 2.3.1.2 Attribution of wagon correction digits in case it isn't delivered during the authorisation

When the wagon correction digit can't be delivered during the authorisation, or when a requester wants to get the best possible positive correction digit for a given network, the request for codification should be addressed to the National Competent Body for each network where the wagon is intended to operate.

Chapter 4 of the UIC IRS 50596-7:2021 provides the criteria and required competences for a National Competent Body in charge of the codification of wagons.

Based on those criteria, National Safety Authorities inform the UIC about the designated National Competent Body(ies) in charge of the codification of wagons to be further listed in the Appendix H of the UIC IRS 50596-6:2021 published on the UIC website ([Microsoft Word - IRS 50596x6 Appendix H1 26 03 2020 en.docx \(uic.org\)](#)) and receive corresponding unique UIC identification code(s).

Any request should be addressed by the manufacturer or the Wagon Keeper to each of the National Competent Bodies of the Member States where the wagon is intended to be used.

The request should contain the technical information and loading diagram described in the chapter 1.5 of the UIC IRS 50571-4:2020.

The allocation of a correction digit to a freight wagon for each type of transported Intermodal Loading Unit is based on one of the following principles:

- When the lines are codified according to the position of obstacles: comparison of the characteristics of the wagon with those of the reference wagon as described in Appendix H.3 of the WAG TSI [3] ('P' profile for wagons for the conveyance of semi-trailers and 'C' and ISO profiles for wagons for the conveyance of swap bodies).
- When the lines are codified according to the gauge: comparison of the Combined Transport Profiles as described in the Annexes B, C, D and E of the Technical Document [5] with the characteristics of the wagon and one of references wagon as described in Appendix H.3 of the WAG TSI [3] ('P' profile for wagons for the conveyance of semi-trailers and 'C' and ISO profiles for wagons for the conveyance of swap bodies).

According to the principle retained in the Member State where the freight wagon is intended to be used, the National Competent Body may assess the calculation included in the request or perform the calculation based on the information included in the request.

## 2.4 Codification of intermodal loading units

The Technical Document [5] indicates in its introduction:

### 1.1 General

(...)

- *the codification of ILUs isn't specified in this document; ILUs are considered codified, identified by marking according to ISO 6346:2022 or EN 13044-1:2011 and suitable for wagons with an appropriate compatibility code.*

The codification of ILUs isn't specified in the Technical Document [5] because there is no requirement on ILUs in railway regulation. However, this section is included in this document to explain what is understood by "ILUs are considered codified, identified by marking according to ISO 6346:2022 or EN 13044-1:2011 and

*suitable for wagons with an appropriate compatibility code*" and to provide guidance on the harmonised application of the codification system specified in UIC IRS 50596-6.

#### 2.4.1 General information

Chapter 3 of the UIC IRS 50596-7:2021 provides the criteria and required competences for a National Competent Body in charge of the codification of Intermodal Loading Units (ILUs).

Based on the criteria above referenced, National Safety Authorities inform the UIC about the designated National Competent Body(ies) in charge of the codification of ILUs to be further listed in the Appendix H of the UIC IRS 50596-6:2021 published on the UIC website ([Microsoft Word - IRS 50596x6 Appendix H1 26 03 2020 en.docx \(uic.org\)](#)) and receive corresponding unique UIC identification code(s).

All ILUs should be marked according to EN 13044-1 (ILU-codes) or ISO 6346 (BIC-code).

#### 2.4.2 Methodology

The codification of an ILU for combined transport consists in a Technical Number comprising the wagon compatibility code (1 letter) and the standard Combined Transport profile number (2 or 3 digits depending on the width of the ILU).

Any of the National Competent Body defined in 2.4.1 may allocate the Technical Number, which is valid for the whole Union rail system.

The Technical Number is allocated to ILUs designed and built in accordance with UIC IRS 50591:2020 (roller unit), UIC IRS 50592:2020 (intermodal loading unit for vertical transshipment, e.g. container or swap body), UIC IRS 50596-5:2020 (craneable semi-trailers).

The applicant requesting a technical number for an ILU may be the manufacturer of the ILU or its servant provided that the keeper or the owner of the ILU is identified in the ILU register or in the BIC register.

The Competent Body should allocate a Technical Number in accordance with the methodology described in point 2.2 of the UIC IRS 50596-6:2021.

Upon calculation of the Technical Number, a coding plate providing information on codification and approval of the ILUs for railway transport should be affixed on the ILU by the applicant. The coding plate should comply with EN13044-2:2011 and EN13044-3:2011.

The Technical Number provides the required information to perform the route compatibility. Its purpose is to code the key characteristics of the ILUs for rail conveyance. By reading the Technical Number, the shipper and RU inspection staff can ascertain on which type of carrier wagon and which combined transport routes the ILU, thus identified, can be conveyed in compliance with any specified operating conditions.