

Exceptional Consignments (EC) - Applications Guide

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Applications



Goods



Wagons



Routes



Conditions

CONTENTS

EC Introduction	4
Exceptional Consignments	4
The User Guide	4
EC Participants	5
EC Documents	7
Exceptional Transport Application	10
Goods Data	12
Wagon Data	16
Route Data	23
Conditions	27
EC Definition	32
Introduction	32
Definition of Exceptional Consignment for the Project	33
Other Definitions	33
Out-of-Gauge Load	35
Heavy	38
Other Exceptional Consignments	39
Handy Information	40
FAQs	41
Glossary	46
Company Codes	53

Country Codes	57
Sources	59

EC Introduction

Exceptional Consignments

In rail, **Exceptional Transports** represent the rail industry in a nutshell. Under certain circumstances, a loaded wagon or any type of rolling stock may become an **Exceptional Consignment (EC¹)**. To deal competently with customers ordering exceptional consignments and to efficiently declare transport parameters to the infrastructure managers, you need to be familiar with the numerous aspects of rail transport.

The User Guide

A **Railway Undertaking (RU²)** intending to move an exceptional consignment applies to the **Infrastructure Manager (IM)³** for a transport authorisation. The format of the transport authorisation request uses the UIC template with 38 codes, which have been adopted by the vast majority of RUs and IMs.

This guide is meant to be your handy source of information required for the competent handling of authorisation requests. It is primarily meant to be accessed online

¹Exceptional Consignment

²Railway Undertaking

³Infrastructure Manager

via computer, notepad or mobile phone. The vast majority of information here is provided through online (HTML5) output. In addition, for specific use-cases in the application, see also the **pdf. file**, which you will find in the [Handy chapter](#).

EC Participants

Administration Manager*

"A **railway undertaking** (**RU**¹) under whose responsibility the transport of an exceptional consignment begins and which is in charge of the administration with other participating RUs."

Applicant*

"The party applying for organization of an exceptional consignment."

Consignee

The organization or person who is the receiver of the shipment.

The consignee is named in the consignment note, and the goods are delivered to the consignee.

Consignor*

"The organization or person declared in the consignment note, who gives the forwarding papers to the transport manager."

Freight Payer

The party that concludes a freight contract with an RU for the carriage of a consignment.

¹Railway Undertaking

Infrastructure Manager (IM¹)

Any public entity or private firm that holds authorization to supply railway infrastructure for freight or passenger rail services operations, and commits to overseeing the construction and upkeep of said infrastructure. Additionally, the infrastructure manager is responsible for operating the related train control and signalling systems, and managing the equipment necessary to supply traction power along each route.

Railway Undertaking (RU)*

"Any public undertaking or private company that is authorized to perform freight or passenger rail services on railway infrastructure."

Transport Manager

A railway undertaking that is responsible for the carriage of the exceptional consignment under the conditions set down in the concluded freight contract. Transport manager leads the carriage, and begins the approval and authorisation procedure with the administration manager.

***Cited definitions** source: UIC IRS 50502:2021

¹Infrastructure Manager

EC Documents

Applicant's Application

The customer's application shall be made in writing by the consignor to the administration manager or transport manager. The application must contain the minimum specified information. In addition, a sketch of the consignment with the position of the centre of gravity, and/or with load dispersion or weighing report for individual axes and their spacing, may be required.

Consignment Note

Depending on the communication type the consignment note can be national, CIM, SMGS, or CIM-SMGS. These document types vary slightly, depending on communication type. However, they do have several features in common, such as:

- Used for freight contract.
- Filled in by the consignor of the goods.
- Accompanies the consignment(s) through the route.
- Provides information about the key data of the consignment(s) for the customer / RU / authorities and other participating entities.
- Serves as an accounting document at the end of the transport operation.

CIM consignment note is exchanged electronically or in paper between UIC member railways or RUs.

Forwarding Instruction

"(Timetable instruction)

The timetable instruction is used to announce changes and additions to the network timetable with short-term and /or temporary validity. Timetable instructions for exceptional consignments are called "forwarding instructions". The Forwarding instruction is used to announce information such as the forwarding date, the trains to be used, and the operational forwarding conditions."

IM Handover Approval (Permit)

A report by means of which an IM notifies the applicant RU of the conditions governing the carriage of the exceptional consignment on its infrastructure.

IM Transport Order

This instruction authorizes the IM's signallers to allow the rail network the exceptional consignments, exceptional vehicles and exceptional trains on the rail network. Some IM authorisations are issued at once with the transport order. Authorisations and transport orders for the goods and vehicles fouling gauge are issued separately. For frequently occurring exceptional consignments or exceptional vehicles with the same transport conditions, an IM may issue a permanent transport order. Each regional office of an IM issues transport orders for its own area of responsibility.

Label U

Label for exceptional consignments.

This is a label which when affixed to the wagon confirms acceptance of the exceptional consignment. The label should be inserted into the paper holder on each side of the wagon.

Label O

Label for direction-sensitive exceptional consignments.

This applies to consignments which have to be arranged in a specified manner.

Information on direction-sensitivity shall be indicated in the transport authorization.

Attaching the Label O to a board which should be fastened to the goods in a manner suitable for transport is allowed when Label O cannot be affixed to the goods directly.

RU Application for Handover Approval

A report by means of which an RU notifies all other RUs involved in the transport operation that it accepts the exceptional consignment under the stipulated conditions.

RU Handover Approval with Transport Conditions

RU notifies applicant on the permit numbers and conditions governing the carriage of exceptional consignment on national and other involved IMs, and RUs if applicable.

RU Commission's Report from Consignment Measurement

This document is used for control measurement of the out of gauge consignments.

Consignment check by the commission and acceptance for carriage must ensure that the consignment carriage does not pose a risk to rail traffic. Some oversize consignments and vehicles are exempted from the report's obligation, subject to exemptions defined by the national IM.

Exceptional Transport Application

Before exceptional transport takes place:

1. A consignment is checked for exceptional consignment characteristic.
2. The consignment with exceptional characteristics requires a transport authorisation.
3. The consignee sends to the railway undertaking an order for an exceptional consignment authorisation with conditions of carriage.
4. The railway undertaking obtains an authorisation with transport conditions from the infrastructure manager.
5. In international transports, the authorisation conditions are shared with all other participating railway undertaking.
6. In national transports, the authorisation conditions are shared with consignee.

Communication between the railway undertakings and infrastructure managers is carried out in a standardized form, which derives from the rules set in the

UIC document IRS 50502 "Exceptional Consignments – Regulations concerning the preparation and management of exceptional consignments".

These rules are binding for all UIC railway undertakings involved in the international transports of exceptional consignments.

Appendix B of the UIC IRS 50502 document contains a template of a form of written communication, with 38 codes.

the infrastructure manager sends the permit with some of these 32 codes. In Appendix B of the UIC IRS 50502 there is guidance regarding which codes are obligatory for each entity in the approval process.

International written communication is conducted in one of the three **official UIC languages**:

- English.
- French.
- German.

In urgent cases sending approval applications in other non-official languages is accepted. In countries where the official UIC languages are not national languages, it is the responsibility of the railway undertaking to translate the content of the application into the national language.

This project describes each one of the four application elements, with the focus on the application codes which describe goods, wagons, and route data.

Goods Data

The check of goods data provided by the consignee is crucial to ensure the safe and efficient movement of cargo. When goods are transported as exceptional consignment the declaration in these three points is mandatory for all types of transported commodities.

#1a **Type of goods and NHM code***

Declare the type of the transported goods and add the NHM harmonized commodity code.

For example: Containers HC ISO Type 1, NHM: 9931, 9941 (empty and loaded).

#8 **Weight of payload* [t]**

Enter the actual dead weight of the cargo. Check whether the weight declaration should include the securing of the load. In the absence of an exact dead-weight value, state the maximum payload limit for the desired line class of the path.

For example: 87, 45 (including 2 tonnes of load securing devices), max. load limit for class C3.

#11 **Length of payload* [mm]**

Indicate the total length of the cargo. For multiple cargo units on the wagon indicate the length of each unit. Only declare maximum loading length for cargo units which do not exceed this length and the required distance from fixed wagon parts is maintained.

For example: 11000, 12400 (2x 6200), max. available loading length.

The **dimensions of the consignment's critical points** are declared in the application's codes #12–#15. Critical points declaration is mandatory for all cargo units

which while loaded on the wagon, and after applying narrowing reductions, foul the loading gauge. Declaration of these points may be also required for the wagons which are oversized. While describing critical points keep in mind that:

- A **capital letter in alphabetical order** is assigned for each next cargo contour point which is declared.
- Their parameters declared in codes #12–#15 (plus optional codes #16–#18) should be **presented in the form of a table**.
- They should be **declared for the smallest loading gauge** on the entire planned route.

These dimensions are always declared by the consignee, but they are used in the application form only for the oversized cargo. The two parameters below describe the consignment's dimensions while viewing the cargo unit on the wagon in the frontal projection.

#12 Half-width of the payload [mm]

Declare cargo widths separately for the left-half in (12a) and for the right-half in 12(b).

For example: (a/b) 1620 / 1620 (symmetrical), (a/b) 1450 / 520 (asymmetrical), (a/b) 952 / 0 (asymmetrical).

#13 Height above top of rail [mm]

Declare the height of the wagon with cargo as a fixed value or as a height range for dedicated cargo width.

For example: 3250, 1155–3200.

These two points describe a consignment's dimensions while viewing the wagon with cargo unit from the side projection.

#14 **Longitudinal distance n_i^1 [mm]**

Describe lengthwise how far towards the centre of the wagon the critical point of the cargo unit is located, that is from the end axle of a wagon not fitted with bogies or from the bogie centre. The value in this point cannot be higher than half of the distance value which describes the distance between the end axles of vehicles not fitted with bogies or between bogie centre.

For example: 6500, 7200.

#15 **Longitudinal distance n_a^2 [mm]**

Describe lengthwise how far towards the end of the wagon, the critical point of the cargo unit is located, that is from the end axle of a wagon not fitted with bogies or from the bogie center. The value in the majority of cases does not exceed the distance value from the end axles of wagons not fitted with bogies or bogie centres to the end of the maximum loading length. Observe that some cargo units are loaded only between the end axles or bogie centres (then declare 0 for his parameter).

For example: 0, 1900, 2250, 3015.

For more information on critical points read online about [critical points](#) and about [comments on the critical points](#).

¹Distance of the section, for sections located between the axles or bogie pivots.

²Distance of the section for the sections located outside the axles or bogie pivots.

The codes #16–#18, although referring to critical points of the goods, are currently only required and used by some infrastructure managers. The description of these three codes you will find on the page about the "[Conditions](#)" on page 27.

Remarks on the cargo unit dimensions are always declared. These remarks may contain information related to the critical points or state that the cargo unit does not exceed the loading gauge.

#19 **Remarks on the critical points**

For critical points the declaration will describe the way the critical points can be connected to create a contour. In addition, it may provide information on the included value of the loading tolerance, and on the location of the centre of gravity. For cargo units which are not oversized but have other properties of an exceptional consignment, the declaration states that it is not oversized.

For example: Points A with B and C connect with a straight line. The consignment does not exceed the loading gauge.

Wagon Data

The majority of railway undertakings run trains composed of wagons from their own wagon park. In such cases the railway undertaking holds the role of the owner, the keeper and the entity in charge of maintenance of the wagons. Wagon check of the obligatory (with asterisk) and optional (if required) parameters is run briefly since all parameters and wagon interoperability status are known.

CONTENTS

- 17



Wagons and Vehicles are to be declared as a type of good when they are subject to commercial contract, or are newly constructed and are in the tests phase. Some vehicles are exempted from the requirement of interoperability and in international transports they run on an exceptional transport basis (for example historical vehicles).

#1a Wagon or vehicle type

Declare wagon construction type, series, serial numbers, specify whether empty or loaded, and any other important traits as applicable. For vehicles state construction type, number of units (for vehicles with multiple units), respectively manufacturer's number or vehicle's **EVN**¹. Advise **EVN status**², whether reserved or already assigned. For wagon groups or multiple vehicles declare just the first six digits of the EVN number in code #1a, and consider adding a more detailed list in code #28 (in the case of a few vehicles) or as an appendix with a separate list to the application, when several wagons are to be declared.

For example: newly built Tank wagon Zacns / GATX type 3500, EVN 37 84

¹The unique number consists of 12-digits which identify technical characteristics of the railway vehicle. EVNs are managed in the European Vehicle Register (EVR).

²Reserved Status: The status is assigned during the testing phase of a vehicle. The number is allocated but not yet officially assigned to the vehicle. The number may be already marked on the vehicle. The number remains in a reserved state until the vehicle is ready for market introduction. Active Status: When a vehicle is ready to be introduced to the market, the reserved EVN becomes active. It signifies that the vehicle is officially registered and operational. Deleted Status: The status indicates that the EVN is no longer valid. The reason for EVN deletion can be for any reason, for example the vehicle is no longer in service or if the registration needs to be revoked.

**** *-* (reserved).

The points below describe basic and crucial parameters of wagons and vehicles which are required for exceptional consignment permit application. These points are declared with simplified examples.

#2a **Type of wagon***

Describe the class of wagon and type number as specified in the standard marking.

For example: Laaps 1260, Zacns 292, Sggrs 80'.

#2b **International usability**

Declare for international transportation, and for national transport of non-interoperable wagons.

For example: RIV or TEN GE.

#3 **Wheelbase / bogie pivot pin pitch* [mm]**

Indicate the distance (a) between end axles of vehicles not fitted with bogies or between bogie centres.

For example: (a) 8600, (a) 10100, (a) 2x 10375.

#4 **Bogie wheelbase* [mm]**

Add the distance (p) between the outermost axles for wagons on bogies.

For example: (p) -, (p) 1800.

#5dd **Number of axles***

Declaration depends on the construction of a wagon. Describe in detail the axle layout of the wagon.

For example: 2, 4 (2x 2), 6 (3x 2), 8 (2x (2x 2)).

#6a **Length over buffers* [mm]**

For articulated wagons (short coupled), additional annotation is accepted.

For example: 27000 (2x 13000), 15140, 26390 (2x 13195).

#6b **Floor height above Top of Rail* [mm]**

The parameter applies only to open wagons transporting goods which while placed on the wagon may foul the loading gauge.

For example: 1260, -, 1150.

#7dd **Tare weight of wagon* [t]**

Tare weight value from the wagon data sheet indicates the maximum of the tare weight for the particular wagon class and type number. Tare weight value from a photo indicates the actual wagon tare weight.

For example: 26.6, 21.5 t \pm 2%, +/-26.0.

#7+8 **Total weight* [t]**

The sum of a good's mass plus its securing components and the wagon tare. Declare it with actual sum values or state the maximum weight in relation to the requested line load class. Observe the relationship between the total weight and the wagon speed.

For example: max. 79,6; 90,0; 120 or max. allowed for lines class C3 (with v_{\max} 120 km/h).

#9 **Load per meter* [$\frac{t}{m}$]**

Declare the value indicated by the wagon manufacturer or calculate the actual value of load per meter by dividing the total of the wagon's dead weight plus the cargo weight by the wagon's length in meters. Alternatively state the maximum value of load per metre associated with the line class reference value. For wagons with load grid, it is sufficient to declare "normal" if allowed the total weight in code #8, is not exceeded for the line class.

For example: 3,0; 7,2 (max. C-class), normal D3.

#10 **Largest axle load* [t]**

Enter the value indicated by wagon manufacturer or the calculated actual value of load per meter. Alternatively, you may declare the maximum value of load per meter associated with the line class reference values. For wagons with a load grid, it is sufficient to declare "normal" if the allowed total weight for the line class is not exceeded.

For example: 20.0, normal D3.

The example below references vehicles whose sizes conform with the preferred route. For wagons and vehicles which do not conform with the preferred route gauge, explore the chapter on "Out-of-Gauge Load" on page 35.

#19 **Comments on critical points**

Declare the vehicle gauge profile with which the wagon conforms. Where applicable, declare the upper and lower reference profile conformity.

Determine compliance with the kinematic or static gauge profile by reference to UIC leaflet 505-1 or EN 15273-2 as appropriate.

For example: Wagon conforms with G1/GI1 reference profile, the wagon contour does not exceed the reference profile of the G2 kinematic gauge according to the EN standard.

Application declarations for code #28 greatly vary in the details included because they depend on the type of railway vehicle being transported. Therefore, this code contains summary descriptions which is sufficient to declare parameters of a wagon with the goods.

#28 **Miscellaneous - remarks on railway wagons and vehicles**

In miscellaneous remarks, declare breaks status (active / inactive), coupling and buffer status (when non-standard), wheel diameter dimension and type of suspension if these differ from the GCU and TSI regulations, minimum allowed curve radius of the wagon, and other technical details of the vehicle, and operating conditions which may affect carriage conditions.

For example: Vehicle accompanied by manufacturer's employee, brakes switched on, smallest radius of curvature R_{\min} 150 m, wheel diameter \varnothing 850

mm.

Route Data

The path data specifies the allocation of a railway train over a given route, the sender and receiver of a consignment, the railway undertakings involved, the chosen route, the type of transport organisation, and the party responsible for the transport costs.

While “route” and “path” might seem similar, they have distinct meanings in the context of railways. A “route” is the actual course or way taken. A “path” is more about the scheduling and allocation of a train on that route. When declaring route data in the application form, keep in mind that the quality of this data may directly affect the path allocation for a train with an exceptional consignment.

An insufficiently checked ordered route will, for example, result in the train getting stuck on the route because the train may have to be split due to an unloading ramp being too short. Failure to check the parameters of the first or last mile, or the parameters of the siding to or from which the train set is to be delivered, may result as delays in the exceptional transport.

Any stoppage or delay of a train during the take-over or hand-over is an inconvenience not only for the transport organisers. It is also an inconvenience for other railway undertakings and their clients, due to blocked own resources and the network's capacity. It is worth keeping this in mind when ordering the terms of carriage for an exceptional consignment.

#20a **Consignor***

The consignor is the contractual party of the transport contract. Add the name and the address of a consignor. When consignor data is unknown, declare the consignor in descriptively, referring to data in the waybill.

For example: Maersk, in accordance with CIM.

#20b **RU executing the carriage***

In national transports it is usually one railway undertaking that runs the exceptional transport. In international transports more railway undertakings are involved. Occasionally two railway undertakings run a train on a single railway network. Add the country code at the front of the name of the operating railway undertakings.

For example: (AT) Rail Cargo Austria, (DE) DB Cargo.

#21 **Dispatch station***.

This is the station where cargo loaded on the wagon starts its journey. Indicate the station's name, the station DIUM code, and the infrastructure manager's code or county code. When the first mile starts on a private siding, add the name of the siding. For larger cities. make sure to name the station's exact operational name, since there may be a number of stations in the city.

For example: Villach Sued CCT [81-01990-1] (OeBB Infra).

#21 **Dispatch station***

This is the station where cargo loaded on the wagon starts its journey. Indicate the station's name, the station DIUM code, and the infrastructure manager's code or county code. When the first mile starts on a private siding, add the name of the siding. For larger cities, make sure to name the station's exact operational name, since there may be a number of stations in the city.

For example: Villach Sued CCT [81-01990-1] (OeBB Infra).

#22 **Destination station***

This is the station where cargo loaded on the wagon starts its journey. Indicate the station's name, the station DIUM code, and the infrastructure manager's code or county code. When the first mile starts on a private siding, add the name of the siding. For larger cities, make sure to name the station's exact operational name, since there may be a number of stations in the city.

For example: Villach Sued CCT [81-01990-1] (OeBB Infra).

#23 **Route requested by consignor***

Even if, as a railway undertaking, you only operate a train in the country of the train's launch, the full transport route must always be indicated for an exceptional consignment.

For example: Linz (ÖBB Infra) - Bernhardstahl /border crossing/ Breclav (SŽCZ) – Paskov, or Plaveč str. hr. (ŽSR) –Prešov – Košice – Čaňa str. hr

/border crossing/ Hidasnémeti (MÁV Zrt).

#24d **Carriage arrangement***

Declare if forwarding takes place in a block train or in a wagon group. In other words, if forwarding takes place in a special or normal train. Add maximum speed with which a wagon or a vehicle can be towed or run with own wheels under own power.

For example: normal freight train with $v_{\max.}$ 100 km/h, special freight train with $v_{\max.}$ 80 km/h.

#27a **Consignee***

The consignee is the entity to which goods are sent to be sold on commission (the buyer). Add the name and address of the consignee. When consignee data is unknown, declare the consignee descriptively, referring to data in the waybill.

For example: Maersk, in accordance with CIM.

#27b **Freight payer**

A freight payer is an entity that signed a contract with the railway undertaking for the transport of a train or a wagon group. Add the name of the freight payer and add the contract number. When freight payer data is unknown, declare the freight payer descriptively, referring to data in the waybill, or leave the box empty.

For example: Company AB & BA, contract no. ABC-11111-2423.

Conditions

Declaration of codes #16–#18 might be required by an Infrastructure manager in national permit applications for goods which while placed on the wagon foul the loading gauge. In applications for international transports these three codes are not mandatory since each infrastructure manager has their own rules on how to calculate oversized exceptional consignments.

#16 **Dynamical supplement [mm]**

The value of the supplement for deviations in the horizontal plane is set by an infrastructure manager. These values are published either as a table or calculated from the formula for set height. The value increases with the height of the calculated critical point.

For example: 102 (value set by PKP PLK S.A. for the height from 3801 till 3900 mm).

#17 **Allowance for curves R (250 m) and R (∞ m) [mm]**

The values of allowance for curves are declared for (a) the curves with radius $R = 250$ m and (b) with radius $R = \infty$, where ∞ is defined as radius > 1000 m. The tables with values are published by infrastructure managers, or can be calculated with formulas. The allowance for the curves is checked separately for the inner and for the outer point. The largest allowance value of the distance between the end axles of vehicles not fitted with bogies or between the bogie centres, or outside of them, is to be declared for the

infrastructure manager.

For example: (a/b) 185 (153 + 32) / 51 (43+8) (values set by PKP PLK S.A. for the wagon with bogie centres distance of 14200 mm).

#18 **Width of the needed space from the middle of the track for R (250 m) and R (∞ m) [mm]**

The value of the needed space is calculated as the sum of the values declared in codes #16 and #17, and is presented separately for (a) curves with radius $R = 250$ m and (b) curves with radius $R = \infty$, where ∞ is defined as radius > 1000 m.

For example: (a/b) 287 / 153 (calculation based on values binding for PKP PLK S.A infrastructure manager.

The next two codes are optional. They are only used in situations arising from the code description. In most applications they may be omitted. Some infrastructure managers, omit these codes in their application templates.

#25 **Customs station**

This is only required if customs are handled at neither the frontier station nor the destination station.

For example: State exact name of the station.

#26 Transhipment port - harbour loading quay

For larger ports make sure to direct the train to the right group of unloading tracks. Name the harbour loading quay where the train will be loaded or off-loaded.

For example: Gdansk Port Polnocny, Rudowy (ore) quay.

Application declarations for the code #29 greatly vary in included details because they depend on the type of railway vehicle and of goods being transported. Therefore, this code contains summary descriptions which are sufficient to declare parameters of a wagons with the goods.

#29 Forwarding conditions

The forwarding conditions remarks refer to the payload characteristics that affect how the consignment or a vehicle must be prepared for the transportation and how to examine the route so the transport can occur. For example, remarks may include information on payload earthing, on personnel with route knowledge or the knowledge of vehicle operation, on vehicle's or consignment's or both position in a train (behind the locomotive, or at the end of the train). Other restrictions may include a ban on wagon group separation or ban on propelling, hump shunting or passing over humps.

For example: include wagon at the end of the train, wagon group separation forbidden.

#30 Direction of travel - label O

Direction of travel matters in two situations. For road vehicles carried on wagons, it is important that they arrive at the station in the right direction of travel, so that they can drive off the wagon. In such a case the direction of travel is described here, and label O is not used. For goods that stick out more to one side of the wagon than the other, label O is used to mark the points on the cargo that stick out. Find out more on the sticking out points, namely the [Critical Points](#).

For example: Take over at the border in Arnoldstein (AT) / Tarvisio (IT) facing forward.

Although the next two codes are not required, we suggest declaring them. This facilitates the search for similar transport conditions and helps in the queuing of requests when multiple requests are being agreed at once.

#31 Previous forwarding numbers

If you prolong authorisation with carriage conditions for the same type of cargo and wagon set, and on the same route but for the next yearly schedule, then name the previously used approval numbers for the transport. This information can be helpful for the infrastructure managers.

For example: DB Bza _____, CZ MZ_____.

#32 Loading date, delivery date

Declare the loading date either as the exact date, or refer to the calendar week, or month when the transport is planned to begin. This information helps the infrastructure manager to better plan their work and allocate their resources. As practice shows, the delivery date is of less importance. When agreeing conditions for a wagon or a vehicle that is ready to be reinstated en route (after the detection of a faulty state), inform the IM accordingly.

For example: From 12.08.2024, from the 17/18 week 2024.

For example: Stopped at station____, ready to be reinstated.

Code 33, is recalled for information purposes only, as it is occasionally declared in exceptional consignment applications.

#33 Inspection requirement - trust based agreement

In the application, declare whether the transport is to be handed over or taken over in trains which are subject to a trust-based agreement (**ATTI**¹). Include information where the train inspection is required and by which entity.

For example: for yes – train is a subject to ATTI agreement, inspection conducted at station Paskov by PKP Cargo International; for no – at station Petrovice an inspection is required by CD Cargo.

¹Agreement on Train Transfer Inspection

EC Definition

Introduction

In the **ERA**¹ Report on Facilitation of Combined Transport from 2018 it was noted that currently there is no precise definition for exceptional transport. Two **main pillars** of exceptional consignments: "**out-of-gauge**" and "**heavy**" are recognised by all railways. The **third category "other"** contains some common definitions, and some additional definitions which differ in detail from one railway to another. What qualifies as exceptional transport on one railway network may be considered as regular transport on another.

Years passed, but in 2024 the concept of an exceptional consignment still has not been harmonized. For example in the out-of-gauge pillar, the specific requirements to operate combined transport trains exceeding the loading gauge but not exceeding the codification of the line are still open points in the **EU**² Regulation on **Technical Specifications for Interoperability (TSI)**³ relating to the operation and traffic management subsystem of the rail system within the European Union.

¹European Union Agency for Railways

²European Union

³Technical Specifications for Interoperability

Definition of Exceptional Consignment for the Project

TSI OPE¹ Working Party (2018)

In the above-mentioned report, there is a definition proposal which serves well for the purpose of this project.

An exceptional consignment is: “A vehicle and/or the load carried which because of construction/design, dimensions or weight does not meet the parameters of the route and requires special authority for the movement and may require special conditions over part or its entire journey”.

Other Definitions

International Rules (1435 mm) - UIC² IRS³ 50502:2021

Definition of exceptional consignments - summary:

"An exceptional consignment gives rise to particular technical and/or operating conditions in railway facilities or vehicles for at least one of the parties involved in the carriage of the consignment due to:

¹Operation and Traffic Management Subsystem

²(fr.) Union Internationale des Chemins de fer, (en.) International Union of Railways

³International Railways Solution - UIC document drawn up by consensus and applied on voluntary basis with aim to facilitate and harmonise railway operations.

- Its **dimensions**.
- Its **weight**.
- Its **properties**.

These conditions must be agreed in advance between all RUs and/or IMs involved"

This definition has in addition three sub-definitions:

- **1.1** "Out-of-Gauge Load" on the next page.
- **1.2** "Heavy" on page 38 Load.
- **1.3** "Other Exceptional Consignments" on page 39.

This sub-definition structure is reflected in the side menu of the project.

CIM¹/SMGS² Consignment Note Manual (2022)

Within the area in which the CIM applies, the definition below, based on **UIC leaflet 502-1³**, applies: "a consignment is considered as exceptional, if, because of its external dimensions, its mass or its nature, it gives rise to special difficulties for one of the carriers taking part in the movement taking account of railway installations and wagons and therefore can only be authorized under special technical or operating conditions."

¹Uniform Rules concerning the Contract of International Carriage of Goods by Rail (Appendix B to COTIF)

²Agreement on International Freight Traffic by Rail

³UIC code 502-1 (O - obligatory) -Exceptional consignments - Regulations concerning the preparation and management of exceptional consignments. The document in 2021 has been superseded by UIC IRS 50502.

Out-of-Gauge Load

When a wagon with goods exceeds the predefined dimensions of height and width of the loading gauge, or a vehicle on its own wheels exceeds the predefined vehicle's reference profile, then the railway undertaking is dealing with gauge fouling.

A wagon with cargo or a vehicle is considered as out-of-gauge when:

1. **Its contour** due to the **width or height (or both)** while positioned on a straight and level track, **does not fall within the applicable gauge contour** on at least one section of the transport route under consideration.
2. On straight and level track, the **contour falls within the gauge**, but once UIC Loading Guidelines **gauge restrictions** of the loading width are **applied it no longer complies** with the loading gauge.

The fouling of the loading gauge may occur due to the consignment's:

- Width, and the height from the level of the rail head
- Location on the wagon
- Relative position to the passing vehicle on the adjacent track

The manifestation of the incompatibility of the dimensions of a consignment with the permitted contour of the track corridor may occur in any of the four zones defined as:

1. **Bottom zone** (specific height ranges are defined individually by the infrastructure manager).
2. **Lateral zone** (one-sided or two-sided).

3. Conditional **common lateral and upper zone** (as defined by adjacent track occupancy status).
4. **Upper zone** (above the height of the loading gauge).

The conditional zone has been introduced to define the conditions for passing other consignments with exceeded gauge in the upper zone on double-track lines.

Exceeding the gauge on straight and level track depends only on the width and height of the load.

On curved track, the overrun of the gauge is further influenced by:

- Cargo length
- Geometrical characteristics of the wagon
- Radius size in the curve
- Curve's cant

In such a case the transport of such a wagon and cargo set, or a vehicle on its own wheels, might still be possible on the carriage conditions for an exceptional transport, on the route indicated and approved by an infrastructure manager.

For this to be the case, a railway undertaking:

- Determines the smallest loading gauge on the entire route from the departure station to the destination station.
- Identifies critical points of the consignment.
- Applies width-restrictions from the tables in the UIC Loading Guidelines.
- States the critical points of the consignment.
- Declares accordingly loading tolerances and wagon deflection values.

- Suggests the consignor's preferred route to the infrastructure manager.
- Applies one of the three approval methods for the oversized consignment.

The first method involves full process of authorisation and execution of out of gauge consignments where RU must apply to IM for transport conditions.

The other two methods offer the simplified authorisation process for out of gauge consignments, in which the RU does not need to apply to IM for authorisation. Instead, it is RU's role to examine the consignments compatibility with the conditions set and provided by IM for the specified route's profile. So, RU selects one out of the three scenarios:

1. Files an application form to the infrastructure manager for exceptional consignment.
2. Runs the consignment on [Combined Transport](#) conditions, when applicable.
3. Runs the consignment on the UIC [Outline Procedure](#) conditions – (currently applicable only in Austria).

The Infrastructure manager inspects the line conditions and approves the consignment on the paths with a set of restrictive conditions regarding neighbour track occupancy, speed restrictions and prohibition to run on specific tracks. These restrictions are sent to the railway undertaking in an authorisation with a forwarding number, and with limited validity period.

In extreme cases of gauge fouling, the infrastructure manager might issue a refusal for the transport of the oversized consignment. In such a case the infrastructure manager must clearly declare the refusal reason.

Heavy

In Europe, facilitating the movement of goods across countries efficiently includes the transport of heavy load consignments. Such transports present unique challenges, as they exceed the standard weights for rail transport.

In the context of European Rail with a standard gauge of 1435 mm, a consignment is typically considered "**heavy**" when it surpasses the **maximum load capacity of 22.5 tonnes per axle**.

Vehicles and loaded freight wagons are regarded as heavy load consignments when they:

- **Exceeded Line's Category**, the lowest permissible on the entire route.
- Are loaded in **Excess to Load Limit within Carrying Capacity** (circle symbol).
- Have **No details on Load Limits** marked on them.
- Are on wagons with **Load on Bogies With More Than Three Axles**.

For heavy load consignments, each application submitted for an exceptional consignment should contain a note on exceeded maximum approved axle load or meter load, together with reference to permissible line class.

Other Exceptional Consignments

While out-of-gauge and heavy exceptional consignments are well-defined and straightforward, the third category of **Other Exceptional Consignments** is, at first sight, more elusive. It encompasses a diverse range of goods and vehicle qualities that defy a single, meaningful common description.

Some of these consignments pose unique challenges due to the nature of the goods and the method of loading, arrangement and securing when on the wagons. Another distinct aspect focuses on the authorization conditions for a wide range of vehicles running or towed on their own wheels.

Explore the Other Exceptional Consignments in detail. Each topic provides you with a thorough understanding of the specific reasons for the **"other"** category and how to best deal with each case:

- **Rigid Load Units.**
- **Flexible Load Units.**
- **Transshipment to different track gauges.**
- **Handover to Ferry.**
- **Lack of Interoperability.**
- **Special Technical Vehicles.**
- **Other – National Rules.**

Handy Information

Learn more about exceptional consignments:

- Frequently Asked Questions ("FAQs" on the next page) topic for information and guidance on handling requests, and client's inquiries on exceptional consignments.
- "Glossary" on page 46 contains **A** with abbreviations, **C** with calculations symbols, **D** with definitions and **G** with gauges codes.
- "Company Codes" on page 53 for **RICS**¹ numbers of European infrastructure managers, and the link to the **UIC**² full and up-to-date list.
- "Company Codes" on page 53 for decoding from vehicle's **EVN**³ the registration country of the vehicle.
- "Sources" on page 59 for links to **ERA**⁴, **GCU**⁵ and UIC official source documents.
- [Exceptional Consignments \(EC\) - Applications Guide pdf file](#), in shortened version for quick reference.

¹Railway Interchange Coding System

²(fr.) Union Internationale des Chemins de fer, (en.) International Union of Railways

³The unique number consists of 12-digits which identify technical characteristics of the railway vehicle. EVNs are managed in the European Vehicle Register (EVR).

⁴European Union Agency for Railways

⁵General Contract of Use for Wagons

FAQs

Goods

Frequently asked questions related mainly to the loading unit

Is the container length code sufficient to determine the out-of-gauge encroachment?

Not really. Out-of-gauge size is determined based on, wagon height and the combination of the container width and height above the top of the rail.

Therefore, for loading gauge compatibility always check the declared dimensions of the set consisting of the container on the wagon. Otherwise, your application for the **EC**¹ permit will be returned to you with a request to fill in the missing parameters.

Is it sufficient to declare the container as **HC**² without indicating the wagon type?

Not really. High Cube describes the container's height 9.5 feet (2896 mm). It does not refer to the actual container width. When one container is loaded on wagons with different geometrical characteristics and loading plane heights, it will manifest fixed width but with various heights in the loading gauge profile. In addition, a HC container may have various widths. Therefore, it is crucial to declare both the container's height and width, along with

¹Exceptional Consignment

²High Cube

all wagon types intended for the transport.

How to declare the marking on the intermodal loading units for EC application?

For ISO Type 1 containers with 2438 mm, it is enough to declare the 4-character code of the type and size of loading unit. For wider containers, in addition to the type and size code declaration the maximum width declaration is also required. For **CT**¹ Trains additional information is required on yellow codification plate with C profile's number.

How to mark and declare dimensions of a loading unit on a drawing?

For a cuboid with constant width and height it is sufficient to mark just the maximum dimensions. For cuboid shapes of which the upper part is narrowed for the gauge compliance, additional declaration of the exact dimensions of the tapered corners is required.

Wagons with Goods

Frequently asked questions mainly related to loads on wagons

How to declare the interoperability marks on wagons?

The declaration of RIV or RIC signs without additional descriptions is sufficient. When declaring TEN signs, specify if the wagons also have GE or CW signs. In the case of CW wagons, ask in addition for the wagon gauge

¹Combined Transport

marking. For wagons with a derogation plate or an authorisation plate, ask for the content of these plates in order to determine compatibility with the rail networks to which you are directing the wagon.

How to declare multiple loading units on various series of wagons?

In one application form it is possible to declare more than one type of a consignment on one type of wagon. You enter the required parameters of all wagons intended for the transport, and name the consignment type. If the consignments are out-of-gauge, you create multiple tables with dimensions of the load and wagon in addition. Some IMs accept that the RU creates a common outline for all loads on all types of wagons in a train. Drawing up a train outline requires experience. If you are not sure how to do it, and do not know anyone who can help you, do not create an outline. Declare the dimensions individually.

Routes

Frequently asked questions mainly related to routes

Is it sufficient to indicate the DIUM station code to specify the destination station?

It helps to declare the DIUM station code in the application, but in the case of larger stations it might be challenging to determine which siding, terminal, or quay the consignment is destined for. In such a case specify the exact area at a larger station where the wagon with the consignment is destined.

What if the station to which the consignment is sent does not have a DIUM code?

This situation might be challenging for your commercial colleagues who do freight calculations. In such cases always contact them and make sure which station is preferred instead as a commercial destination. Advise other participating RUs accordingly on the situation.

When can I use the notation "to various destination stations"?

When you're sending a consignment that will only take one specific route on your manager's network, but will go to various stations on another network, it's useful to declare it as "to various destination stations". Also, list these stations under code #22. If you're unsure of the other stations, but presume the consignment has the potential to be sent to other foreign stations, you can also label it as "to various stations" without additional stations list. In this case, keep a separate record of any additional destination stations you add. Just make sure that your infrastructure manager allows this solution.

Do I always have to specify a preferred route?

In general, it is a good idea to declare a preferred route. Keep in mind that block trains might have different routes than regular trains. Declaring the preferred route assures that train drivers have the route knowledge. Preferred route for wagon groups must include routing through marshalling stations. Note that in the case of very large consignments, it is better not to specify the preferred route in the application, because in such a case the infrastructure manager decides the way the train can take.

How do I apply for two border crossings in one application?

When you apply to another RU abroad using an entire network permit, then in code #23 you list all commercially agreed border crossings in one application. Note that on some IM networks this option is limited to different border crossings within one regional area (e.g. DB InfraGO)

Other Questions

Frequently asked questions mainly related to miscellaneous

What if the shipment is exceptional only in the country of shipment?

In such a case you need to apply for an IM's permit only in the country of origin. You do not need to inform the other participating RUs before hand over takes place. Keep in mind that in case of a return path, more RUs will be involved in the EC application process, despite it being exceptional in just one IM's network.

What if I do not know the estimated date of shipment?

Our recommendation: add a fictive estimated time of departure. State the date two or three weeks in advance, so the IM can plan his work-load capacity accordingly.

Glossary

A

RICS

Railway Interchange Coding System

OSJD

(EN) Organization for Cooperation of Railways, (RU) Организация Сотрудничества Железных Дорог – ОСЖД

SMS

Safety Management System

CW

Compatible With

GCU

General Contract of Use for Wagons

ATTI

Agreement on Train Transfer Inspection

EC

Exceptional Consignment

HC

High Cube

DIUM

Uniform Distance Table for International Freight Traffic

NHM

Nomenclature harmonisée des marchandises - Harmonised Commodity Code

UIC

(fr.) Union Internationale des Chemins de fer, (en.) International Union of Railways

ILUs

Intermodal Loading Units

ECM

Entity in Charge of Maintenance

WCC

Wagon Compatibility Code

WCD

Wagon Correction Digit

CTP

Combined Transport Profiles (of lines)

COG

Centre of Gravity

ERA

European Union Agency for Railways

CIM

Uniform Rules concerning the Contract of International Carriage of Goods by Rail (Appendix B to COTIF)

SMGS

Agreement on International Freight Traffic by Rail

OPE

Operation and Traffic Management Subsystem

TSI

Technical Specifications for Interoperability

LOCA

Load Capacity

RINF

Register of Infrastructure

CT

Combined Transport

EVR

European Vehicle Register

EU

European Union

ERATV

European Register of Authorised Types of Vehicle

RU

Railway Undertaking

IM

Infrastructure Manager



na

Distance of the section for the sections located outside the axles or bogie pivots.

p

Bogie wheelbase.

a

Distance between the end axles of vehicles not fitted with bogies or between the pivots of bogie wagons.

ni

Distance of the section, for sections located between the axles or bogie pivots.

q

Lateral play between axle and bogie frame or between axle and vehicle body in the case of axle vehicles.

W

Lateral play between bogie and vehicle body.

S

Vehicle coefficient of flexibility.

D

European Vehicle Number (EVN) Status

Reserved Status: The status is assigned during the testing phase of a vehicle. The number is allocated but not yet officially assigned to the vehicle. The number may be already marked on the vehicle. The number remains in a reserved state until the vehicle is ready for market introduction. **Active Status:** When a vehicle is ready to be introduced to the market, the reserved EVN becomes active. It signifies that the vehicle is officially registered and operational. **Deleted Status:** The status indicates that the EVN is no longer valid. The reason for EVN deletion can be for any reason, for example the vehicle is no longer in service or if the registration needs to be revoked.

UIC Leaflet 502-1

UIC code 502-1 (O - obligatory) -Exceptional consignments - Regulations concerning the preparation and management of exceptional consignments. The document in 2021 has been superseded by UIC IRS 50502.

European Vehicle Number (EVN)

The unique number consists of 12-digits which identify technical characteristics of the railway vehicle. EVNs are managed in the European Vehicle Register (EVR).

Route compatibility check

As described in Appendix D1 of TSI OPE (Commission Implementing Regulation (EU) 2019/773).

IRS

International Railways Solution - UIC document drawn up by consensus and applied on voluntary basis with aim to facilitate and harmonise railway operations.

TEN GE

For wagons meeting all the requirements of the Wagons TSI WAG, the pictogram GE is used in conjunction with characters 2 or 3 of the wagon number and the "TEN" marking.

TEN CW

For wagons TSI WAG-compliant but which deviate in terms of their wheelbase or vehicle gauge, or which are subject to other operating restrictions when used in wagonload traffic. The marking used in conjunction with characters 4 or 8 of the wagon number, and the "TEN" marking.

standard gauge

Track gauge 1435 mm.

RIV

Regolamento Internazionale Veicoli - agreement on the reciprocal use of freight wagons in international transport.

RID

International Carriage of Dangerous Goods by Rail (RID).

RIC

Regolamento Internazionale delle Carrozze - the agreement governing the exchange and use of coaches.

Broad gauges

Track gauges in mm: 1520, 1524, 1600, 1668.

TEN

Trans-European Network - marking on new wagons (build since 2006) may appear alongside or additional markings indicating the vehicle gauge.

G

G2

Gauge G2

GB

Gaguge GB

GC

Gauge GC

DE3

Kinematic Gauge for passenger rolling stock

G1

Gauge G1

GA

Gauge GA

Company Codes

UIC assigns a 4-character code upon request of a company. The code identifies the company in rail data exchange in various applications. "The company code (also called **RICS**¹: "Railway Interchange Coding System" or railway code)". The UIC list contains more than 1000 company codes. "A complete and up-to-date list of codes is available [on the UIC website](#).

The list below contains a list of Infrastructure Managers in Europe.

Search for managers alphabetically by abbreviated name. Note that the abbreviated names do not contain national characters. Short names are simplified to make it easier to find the abbreviation in the search engine. In the description of the **IM**², you will find the:

- Four-digit RISC code of IM .
- Full name of the IM (written with national characters)
- Country code of the country where IM has a railway network.

ADIF

0071 ADIF Administrator de Infraestructuras Ferroviarias [ES]

Banedanmark

0086 Banedanmark (RailNet Denmark) [DK]

¹Railway Interchange Coding System

²Infrastructure Manager

BC

0021 Belarusian Railways [BY]

BLS N

0063 BLS Netz AG Infrastrukturmanager [CH]

BN

0076 Bane NOR SF [NO]

NRIC

0052 National Railway Infrastructure Company [BG]

CFL Infrastructure

0082 Societ  Nationale des Chemins de Fer Luxembourgeois [LU]

CFARYM-I

0065 Makedonski  eleznici Infrastructure-Skopje [MK]

CFM

0023 Calea Ferat  din Moldova [MD]

CFR SA

0053 Compania Na ional  de C i Ferate Rom ne [RO]

DB InfraGO

0080 DB InfraGO Aktiengesellschaft [DE]

EUROT

0069 EUROTUNNEL [FR]

EVR

0026 Aktsiaselts Eesti Raudtee [EE]

GySEV/Raaberbahn

0043 Győr-Sopron-Ebenfurti Vasút Zrt. [HU]

HZ-Infrastruktura

0078 HŽ-Infrastruktura d.o.o. [HR]

INFRABEL

0088 Infrabel [BE]

IP

0094 Infraestruturas de Portugal S.A. [PT]

LDZ

0025 Latvijas dzelzceļš [LV]

LTG

0024 AB 'Lietuvos geležinkeliai' [LT]

IZS

0072 Infrastruktura Železnice Srbije [RS]

MAV

0056 Magyar Államvasutak Zrt. [HU]

Network Rail

0070 Network Rail Limited [GB]

OA0 RZD

0020 Joint Stock Company 'Russian Railways [RU]

OBB

0081 ÖBB-Holding AG [AT]

OSE

0073 Organismos Sidirodromon Ellados [GR]

PKP PLK S.A.

0051 PKP Polskie Linie Kolejowe S.A. [PL]

ProRail

0084 ProRail [NL]

RFI

0083 Rete Ferroviaria Italiana SpA [IT]

SBB Infrastructure

0085 Swiss Federal Railways - Infrastructure [CH]

SNCF Réseau

0087 SNCF Réseau SA [FR]

SZ - Infrastruktura, d.o.o.

0079 Slovenske železnice - Infrastruktura, d.o.o. [SI]

SZCZ

0054 Správa železnic, statni organizace [CZ]

TCDD

0075 Türkiye Cumhuriyeti Devlet Demiryolları Taşımacılık Anonim Şirketi [TK]

TRAFIKVERKET

0074 Trafikverket [SE]

UZ

0022 Ukrainski Zaliznytsi [UA]

ZFBH

0050 J.P. Željeznice Federacije BiH d.o.o. [BA]

ZRS

0044 Željeznice Republike Srpske [BA]

ZSR

0056 Železnice Slovenskej Republiky [SK]

Country Codes

Codes below function for the international exchange of rail data between **UIC**¹ and **OSJD**² members. These codes:

¹(fr.) Union Internationale des Chemins de fer, (en.) International Union of Railways

²(EN) Organization for Cooperation of Railways, (RU) Организация Сотрудничества Железных Дорог – ОСЖД

- Are used as the **3rd** and **4th** digit of the **EVN**¹ of wagons of the **1435 mm** rail system, and inform about the country of the first registration of the wagon.
- Can be found as a component of the **RICS**² number, assigned to some national infrastructure managers or to a national railway.
- Describe respectively the ownership of broad-gauge wagons from the **1520 mm** rail system.

ISO 3166-1 alpha-2	UIC	Country
FI	10	Finland
RU	20	Russian Federation
BY	21	Belarus
UA	22	Ukraine
MD	23	Moldova, Republic of
LT	24	Lithuania
LV	25	Latvia
EE	26	Estonia
BA	44	Bosnia and Herzegovina, Serb Republic of
BA	49	Bosnia and Herzegovina
BA	50	Bosnia and Herzegovina, Muslim-Croat Federation of
PL	51	Poland
BG	52	Bulgaria
RO	53	Romania
CZ	54	Czech Republic
HU	55	Hungary

¹The unique number consists of 12-digits which identify technical characteristics of the railway vehicle. EVNs are managed in the European Vehicle Register (EVR).

²Railway Interchange Coding System

ISO 3166-1 alpha-2	UIC	Country
SK	56	Slovakia
MK	65	Macedonia, The former Yugoslav Republic of
GB	70	United Kingdom of Great Britain and Northern Ireland
ES	71	Spain
RS	72	Serbia
GR	73	Greece
SE	74	Sweden
TR	75	Turkey
NO	76	Norway
HR	78	Croatia
SI	79	Slovenia
DE	80	Germany
AT	81	Austria
LU	82	Luxemburg
IT	83	Italy
NL	84	Netherlands
CH	85	Switzerland
DK	86	Denmark
FR	87	France
BE	88	Belgium
PT	94	Portugal

Sources

European Union Agency for Railways (ERA)

- Registers of Infrastructure ([RINF](#))
- European Register of Authorised Types of Vehicles ([ERATV](#))

General Contract of Use for Wagons (GCU) Bureau

- [Appendix 9](#): Conditions for the technical transfer inspection of wagons
- [Appendix 11](#): Inscriptions and signs on wagons (published separately)
- [Appendix 14](#): Additional conditions for the use of wagons on ferries and in exchange with railways operating on standard or broad gauge lines

Union Internationale des Chemins de Fer (UIC)

- Uniform Distance Table for International Freight Traffic ([DIUM](#))
- [Loading Guidelines Volume 1 - Principles](#)
- [Loading Guidelines Volume 2 - Goods](#)
- The Harmonised Commodity Code ([NHM](#))
- [Leaflet 920-14 - Country Codes](#)
- [Company Codes \(RISC\)](#)
- These three documents are not openly available, they require purchase from [UIC online shop](#):
 - **IRS 50502** Exceptional consignments - Regulations concerning the preparation and management of exceptional consignments
 - **IRS 50502-1** Exceptional consignments - UIC profile system
 - **IRS 50502-2** Exceptional consignments - Outline procedure

CEN/TC 256 - European Committee for Standardization

- **EN 15273** – Railway applications – Gauges (series)
- **EN 15528** – Railway applications – Line categories for managing the interface between load limits of vehicles and infrastructure