

OTIF



**ORGANISATION INTERGOUVERNEMENTALE POUR
LES TRANSPORTS INTERNATIONAUX FERROVIAIRES**

**ZWISCHENSTAATLICHE ORGANISATION FÜR DEN
INTERNATIONALEN EISENBAHNVERKEHR**

**INTERGOVERNMENTAL ORGANISATION FOR INTER-
NATIONAL CARRIAGE BY RAIL**

**Commission d'experts techniques
Fachausschuss für technische Fragen
Committee of Technical Experts**

**A 94-00/8.2011
14.07.2011**

Original : EN

Item 9

**4th Session of the Committee of Technical Experts
Berne, 14 - 15 September 2011**

Consultation of non-EU OTIF Member States on preliminary draft TSIs:

- 1) TSI Operation and Traffic Management (merged)
- 2) TSI Freight wagons (revised)

Answer to the European Commission (DG MOVE) and the European
Railway Agency (ERA), A 94-00/6.2011 dated 07.07.2011

(for information)

Document transmitted by the Secretariat of OTIF

Par souci d'économie, le présent document a fait l'objet d'un tirage limité. Les délégués sont priés d'apporter leurs exemplaires aux réunions. L'OTIF ne dispose que d'une réserve très restreinte.

Aus Kostengründen wurde dieses Dokument nur in begrenzter Auflage gedruckt. Die Delegierten werden daher gebeten, die ihnen zugesandten Exemplare zu den Sitzungen mitzubringen. Die OTIF verfügt nur über eine sehr geringe Reserve.

For reasons of cost, only a limited number of copies of this document have been made. Delegates are asked to bring their own copies of documents to meetings. OTIF only has a small number of copies available.

Consultation on TSI WAG revised and TSI OPE merged

Neither the Secretariat of OTIF nor any non-EU OTIF Member State has been allowed to participate in the ERA WPs that have produced these two draft TSIs. We are very disappointed in the outcome of this work, which has taken a long time and must have taken up a lot of resources.

The comments on TSI WAG are based on the consultation document, preliminary draft 1.0, which is available on the ERA website.

The non-EU OTIF Member States have been consulted and these comments reflect the comments the OTIF Secretariat has received.

The Secretariat reserves the right to make further comments if there have been mistakes in understanding the consultation documents or any oversights.

As the very important section 7.1.2 in TSI WAG concerning the requirements for authorisation of a wagon in all Member States in accordance with Article 23(1) of Directive 2008/57/EC contains no text in the version for consultation, we request that OTIF be consulted on the final draft as well.

General

A new strategy is launched – which we consider to be contradictory to the aims of the EU and OTIF

The preliminary draft TSI WAG introduces a complete change of strategy in comparison to the current one, a change which we find unnecessary and disadvantageous. The introduction of a very limited “core” TSI, which in some cases does not fulfil the essential requirements (see below), passes from one ditch to the other instead of staying on the road.

Nobody – except theoretical lawyers – would define “interoperability” in the way it has been done in this revised TSI WAG, namely, that interoperability should NOT include interconnectability (the requirement that wagons in general can be coupled to each other and to a locomotive) but only the interface between a wagon and the infrastructure.

It is for example completely unacceptable that the core TSI does not include geometrical requirements for couplings and buffers. The core TSI allows buffers to be used, but includes no geometrical specifications; these are only found in the voluntary Appendix C. It would be VERY dangerous if, due to different buffer designs and/or positions (distance between them and their height over the rails), wagons were to override each other, resulting in a derailment. If one of the wagons were a tank-wagon, damage to the wagon and its tank could lead to pollution of the environment and a substantial risk of explosion or fire!

OTIF considers interoperable wagons to be wagons which are technically and functionally easily exchangeable between RUs, keepers and customers, thus opening the market instead of promoting separate systems reserved for a single operator or (closed) business cooperation. The pool of freight wagons is an open system with “nomadic” wagons not dedicated to closed systems, unlike passenger traffic, where closed systems based on dedicated trainsets gain ground.

For OTIF, the term “interoperable” means that the vehicles meet requirements that make them safe and technically compatible on the network, able to be connected to other interoperable vehicles in a train and to be safe for staff and the environment.

Safety problems, increased costs and timescales for admissions and jeopardising existing interoperability

Only the core TSI is mandatory and a wagon that complies with this part will therefore meet the TSI; thus an EU Member State is obliged to authorise it according to Article 22(1) of Directive 2008/57/EC. If the wagon also meets section 7.1.2 (some of the voluntary requirements from Appendix C) it will correspond to Article 23(1), and will thus be automatically authorised in all Member States. Due to the equivalent transposition into future OTIF regulations (UTP), this will likewise apply to OTIF Contracting States.

However, we doubt that responsible and conscientious national authorities will accept this. Instead, they might use their right/obligation to check the technical compatibility and safe integration as specified in Article 15 of the Directive. This will automatically increase the burden, timescales and costs for the assessing entities and admitting authorities and would also increase costs and timescales for the manufacturers, railways, keepers and other applicants. We regret that there seems to be no cost/benefit analysis for the core part and the revised TSI WAG overall, whereas such an analysis is mandatory according to EU regulations.

The core TSI is weak with regard to specific assessment methods for many important safety requirements (for staff, train composition, braking, coupling etc.). Many of these requirements and assessment methods are only defined in the voluntary Appendix C. Furthermore, the core part specifications use vague words such as:

“sufficient measures shall be taken”, “shall have limited ignitability and flame spread properties, tested in accordance with an appropriate standard”, “shall be suitable and sufficient in accordance with the appropriate standards”, etc.

Assessment will be much more expensive and will take much longer than under the current TSI, especially for the safety risk analysis of the brake system, as a risk assessment according to Commission Regulation No. 352/2009 is required. If there is no clear code of practice, the risks might be assessed differently and if there are no clear acceptance criteria, the applicant might be “discriminated” against. What might also jeopardise interoperability is that the admitting authorities may start to apply national rules differing from those in other countries to fill the gaps created by the missing assessment methods in the TSI.

The rail freight sector has suffered substantial reduction of its market share during the last 20 years. Without really providing certainty for promising alternatives, this new strategy with a core TSI that makes incompatible solutions possible could contribute to destroying the remaining part of individual wagon load traffic, which today, and in the foreseeable future, covers more than 85% of all freight traffic in and between the OTIF Member States (including those in the EU) and has been interoperable in Europe as a result of the Technical Unity, the UIC leaflets and RIV for the last 90 years. In our view, this flagrantly contradicts the aims of both the EU and OTIF and the recitals at the beginning of the EU Interoperability Directive. By means of harmonised regulations, the aim should be to make existence easier for the rail sector and to reduce its costs, thus strengthening its competitiveness against road transport. The change in strategy that this revised TSI WAG imposes is politically, economically, technically and legally unacceptable!

What were/are our expectations concerning the revised TSI WAG?

It is correct that some people in the sector have criticised the TSI WAG in force owing to its being too voluminous. However, taking the TSI and the applicable standards and UIC leaflets, they contain almost the same number of pages as are in the current regulations which have to be applied. The TSI could certainly be shortened by deleting all the declarations concerning requirements in other TSIs and other superfluous texts, including operational requirements for trains and requirements for

the wagon that cannot be assessed (e.g. requirements concerning parking brakes for a keeper's fleet).

Our expectation of this revision was/is that the open points (for all wagons, not just those subject to section 7.6.4 in the current TSI WAG) would be closed through a specification, ambiguities would be clarified and problems highlighted in remarks sent to ERA from Member States and NoBos (including NB-rail unofficial interpretations) would be dealt with.

Functional requirements – “New Approach”

OTIF considers that the EU's “New Approach”, with functional requirements instead of specific technical solutions included in the law, is basically not a bad approach. But in cases where technical compatibility and safety depend on geometrical and system specifications, we need explicit values with tolerances. Examples: measures for the buffers as described above and a specification of the braking system interface between the vehicles.

The new approach requires harmonised (the OTIF terminology is “validated”) standards to give the applicant (at least one) guideline on how to achieve compliance with the essential requirements as specified by the functional requirements. If the applicant can choose a solution from a harmonised standard that has proven to be feasible, this should also minimise the assessments to be carried out, and hence also time and costs.

In the revised TSI WAG such proven solutions can be found in Appendix C, but the announcement that Appendix C is only temporary and intended to be deleted from the TSI later gives us cause for serious concern.

Therefore, for each functional specification, the new approach in the TSI should include the references to the clauses of the harmonised/validated standard(s) which, for each functional requirement can prove “assumption of conformity”. But we have only found a list of standards and their clauses which have been made mandatory by means of a reference in the TSI (Appendix D).

In its core part, the revised TSI WAG does away with many clear and easily assessable explicit requirements from the current TSI and replaces them with “blurred” functional requirements of the type indicated above, which is counterproductive. In other words, the few new innovative solutions are prioritised at the cost of the many solutions using traditional components and design.

Assessment methods are not complete

The “core TSI” has flaws concerning specific assessment methods for many important safety requirements (for staff, train composition, braking, coupling etc.). Many of these requirements and assessment methods are (only) defined in the voluntary Appendix C. Assessment will be much more expensive and will take much longer than under the current TSI, especially for safety risk analysis of the brakes, as risk assessment according to Commission Regulation No. 352/2009 is required in the revised TSI WAG. There is also a risk that national rules will be applied by NSAs to compensate for these missing assessment methods in the (core) TSI. This clearly reduces interoperability.

Both the specifications and assessments in the TSI WAG should be written in terms of an interoperable wagon (as a “go-everywhere” wagon) and should include rules to carry out other procedures for those wagons which are different from interoperable wagons. In other words, the whole of Appendix C should be included in the mandatory rules.

Target systems

A way of opening up the specifications in a controlled way might be to describe target systems in the TSI. Through inquiries in the sector we have learned that a reason for creating the core part is that

the “future belongs to racks of wagons or block trains for which the infrastructure gauge can be used more efficiently through new designs”, and that it takes a long time to achieve an authorisation (admission) of a new design through the current innovative solutions process. That may be, but even if this were true, one should not create problems for existing traffic by jeopardising wagon loads as a result of cancelling existing interoperability requirements.

We suggest three target systems for the interface between wagons and between wagons and locomotives:

- 1) existing UIC system (draw hook, buffers and UIC brake system)
- 2) automatic coupling compatible with the UIC specifications (Russian system SA3)
- 3) only functional requirements (but including specification of capability of Longitudinal Compressive Forces) but no geometrical requirements for internal coupling between the wagons in a rack, but at the end of the rack solution 1) or 2) should be required.

We believe that rather than difficulties in having new solutions authorised, the reduction in the rail freight market share is probably due to political support for the road mode and the increasing costs due to additional requirements for rail vehicles (noise, ongoing extra costs for axle inspections since Viareggio, etc.). These increasing costs have not been offset by the level of fees for using the rail infrastructure. It should not be forgotten that systems such as “Modalor” in France and the “rollende Landstrasse” in Germany were set up under the present system.

It appears that the concept of interoperability constituents (IC) is slowly being abandoned

The number of ICs has been drastically reduced in the revised TSI WAG; the current one contains 19 and the new one only contains 5. Even Annex FF has been cancelled. Why? This will also increase costs.

OTIF therefore disagrees with the drastic reduction of the number of ICs in the TSI WAG without offering an alternative approach, such as “Interchangeable Spare Parts” or using Annex FF of the current TSI WAG. As an example: Why is a buffer, which has been an IC for years in RIV, but also in the two previous legal versions of the TSI, no longer an IC in the revised TSI WAG? If a component is specified as an IC, an assessing entity (NoBo) cannot ask for additional checks for this kind of component if the supplier can provide the relevant certificate. ICs should also be specified (in Appendix C) for the components used in solutions in conformity with Appendix C.

Detailed comments

TSI WAG revised

1.1 Scope

Why a maximum operational speed of up to 190 km/h? Which analysis, test runs and calculations have been carried out to include such higher speeds, particularly for open flat wagons with tarpaulins, wagons with bulk loads and wagons meeting oncoming trains in 2 track tunnels?

2. Scope and definition of subsystem

“Separate rail bogies connected to a compatible road vehicle the combination of which form a rake of a rail compatible system”; is it only the rail bogie that must comply with the TSI or also the compatible road vehicle?

It should be clear that the road vehicle must comply with the TSI (track interaction and gauging, longitudinal compressive forces, interface between bogies and road vehicle (mechanical, pneumatic brake and if necessary electrical), etc.). The TSI or the regulations concerning NVR should describe how to register in the NVR “a rake of permanently connected elements, those elements cannot be operated separately” and “separate rail bogies”. It should be possible to exchange separate rail bogies on a road vehicle without requiring a new admission in each case.

4.1 Introduction

First sentence: “The rail system, to which the Directive applies and of which the wagons form a part, is an integrated system whose consistency shall be verified. This consistency shall be checked in particular with regard to the specifications of the rolling stock subsystem, its interfaces in relation to the other subsystems of the rail system in which it is integrated, as well as the operating and maintenance rules”.

How can a NoBo and a national authority check a wagon’s integration with other ones if it is designed only to comply with the core TSI?

Second sentence: “The common characteristics of the wagon are defined in the present chapter 4 of this TSI and include, as far as possible, those related to the compatibility with infrastructure” is an example of ambiguous words such as “as far as possible”; such expressions should not be used. The TSI must cover all essential requirements listed in Annex III of 2008/57/EC; if not, an open point has to be included. But there should not be any open points, as according to 2011/217/EU, the TSIs must include all regulations necessary to ensure technical compatibility and safe integration.

4.2.2.1.1 End coupling

Why only when moving? In the case of manual coupling, a space such as the Berne rectangle must be provided to protect staff (Berne rectangle is only in optional Appendix C) to meet essential requirement 1.1.5.

4.2.3.6.2 and 3: Characteristics of wheelsets and wheels

This specification is only valid for the 1435 mm track gauge. The scope of the TSI includes 1520 mm, 1524 mm, 1600 mm and 1668 mm. Where are the geometrical specifications for wheels and wheelsets with variable track gauge for international use?

4.2.4 Brake

The revised TSI WAG does not include detailed specifications for brake blocks. There is only an ERA Technical Document. The methodology for complying with it is not clear if there are no specifications (see current TSI Annexes I.10, P.1.10 and P.2.10 and the completed UIC document for K blocks and the document for LL blocks which has not yet been completed). A solution could be to refer to UIC leaflet 541-4 and to UIC leaflet 544-1 for K blocks. TD02 is dangerous, as it does not describe the scope of use of such blocks, for instance in terms of weight of the wagon (20-80t).

4.2.5 Environmental conditions

Temperatures higher than +40 °C may occur in OTIF Member States such as Syria and the Maghreb countries and maybe also within the EU (southern Spain and Italy). Please include +70 °C in the core part or make it a condition in 7.1.2 (for Article 23(1) authorisation) as in C.11.

The second bullet point in this core part of the TSI contains a specification for the interface between wagons (this is necessary but not in accordance with the general principle of not specifying such interfaces).

4.2.6.1.2 Fire safety

What do the following requirements mean and how can they be assessed?

4.2.6.1.2.1 Barriers: “sufficient measures shall be taken to reduce the risk of a fire spreading”.

4.2.6.1.2.2 Materials: “All permanent materials used on the unit shall have limited ignitability and flame spread properties, tested in accordance with an appropriate standard”.

4.2.6.1.2.3 Cables: “a fire performance which is suitable and sufficient in accordance with the appropriate standards.

4.2.6.1.2.4 Flammable liquids: “shall be suitable”.

4.2.6.1.2.5 Running capability: “shall be suitable and sufficient”.

Such vague requirements (no hazard acceptance values/criteria) call for the “full CSM Orchestra” and represent the risk of different results and “carte blanche” for the Member States to develop (differing) national rules.

4.4 Operating rules

COTIF does not require that RUs operate a (certified) safety management system, but the requirements concerning documentation are satisfactory.

4.5 Maintenance rules

Where have the EVIC rules (requirements after Viareggio for maintenance of axles) been reflected in the TSI?

6.1 ICs

Why has module CV (formerly module V: suitability for use) been left out?

6.1.2.4 Axle

We cannot find any requirements to ensure that damage to wheelsets with axles that have already been tested will be prevented during storage (corrosion) and transport (scratches when lifted).

7.1.2

In version 1.0 for the consultation, this paragraph only contains the bullet points – no provisions.

As stated before, it is our view that the wagon may only be subject to 7.1.2 if all the provisions of Appendix C are complied with. Only such wagons are really “Go Everywhere” and should display 2 or 3 as the first digit in their 12 digit vehicle number. Wagons only complying with the core TSI must be admitted according to Article 23(2) of Directive 2008/57/EC and should display 4 or 8.

Missing requirements

A

The current TSI WAG 4.2.2.2 and Annex EE include provisions for “Safe access and egress for rolling stock” (handrail and footsteps). Wagon provisions to protect staff are necessary in section 4.7, also in the core TSI, in order to meet essential requirement 1.1.5.

B

Why have references to the Dangerous Goods Directive (RID) been left out?

C

Cross-wind and aerodynamic requirements were included in the current TSI (in force since 2006) as open points and it was announced that specifications would be included in the next revision. Directive 2009/107/EC closed the open point concerning cross-winds, but only for passe-partout wagons; safety is instead to be ensured through operational provisions. The same statement should be included as a remark in the “core TSI” (valid for all wagons).

It is most regrettably that the TSI is not closing the open point concerning aerodynamics. Keeping it open is a hindrance to cross-authorisation.

D

The requirements in the current TSI for the closing and locking of doors and for securing freight have been deleted, except for wagons voluntarily complying with Appendix C. Any freight wagon must have equipment designed to secure the freight being carried; if they do not have such equipment, there is a huge safety risk. How has it been proven that the omission of these requirements does not reduce the safety level for a "core TSI" wagon?

E

There are no requirements in the core part for markings.

Especially we miss:

- *Length over buffers*
- *Brake weight and brake performance*

This is a problem as TSI OPE requires information on the length of train and its brake performance, but also a problem for those OTIF Member States which actually rely on the marking on the wagon when checking a train composition before departure, without online connection to an IT system.

We request that the core TSI shall include Annex B of the current TSI WAG, however with indication of which markings in the standard EN 15877-1 are obligatory and which are applicable (when the marked hazard/function is present on the wagon); the rest of markings in the standard are voluntary.

F

Appendix C

C.7 Please add the limit 17500 mm for distance between adjacent inner axles.

C.9 Please make sure that all necessary specifications for the UIC brake system are specified, including references to applicable EN standards and UIC leaflets.

We miss requirements for

- Requirement that the wagon shall be able to be hump shunted,
- Tow hooks: specify UIC 535-1 clause 1.4,
- Protection of projecting parts: specify UIC 535-2, clause 1.3.

TSI OPE merged

4.2.2.3 Vehicle identification

Why has article 1b in Decision 2010/640/EC not been included in the merged version?

4.2.2.5 Train composition, point (a) vehicles

Section 4.3.3.11 as amended in Commission Decision 2010/640/EC has not been included, thus the issue relating to the longitudinal compression forces (LCF) is no more part of the TSI OPE. Why?

LCF is important for the safe running of the trains as a bad evaluation of the LCF can lead to derailments.

The TSI should include principles for assessing longitudinal dynamics of train compositions.

Annex P

P.4

The codes for these two OTIF Member States shall correctly be:

Serbia: SRB, 72, ŽS

Montenegro: MNE, 62, ?

P.5 and P.6

We find it important that the numbering and marking will follow the same rules in all Member States (EU and non-EU OTIF Member States). If not it would be a substantial loss of interoperability. As there are a million or more freight wagons already in service, and the current system is well known by staff and used for IT systems, it is extremely important to keep the backward compatibility!

In the current system, a wagon marked with the first digit 0, 1, 2 or 3 has the general permission to be operated safely on the 1435 mm network except UK. We propose to mark them with GE (Go-Everywhere). RIV Wagons and cross authorised wagons according to decision 2009/107/EC are falling under this category as well as wagons that comply with TSI WAG Appendix C. The compliance of the wagons will be checked during train composition / disposition by IT-Systems and in the field by operational staff.

Wagons complying with the current TSI WAG and complying with the additional specifications for wagons subject to section 7.6.4 but not being gauge C1 and/or exceeding the accepted distance between inner axles do also also have the general permission, BUT not on the complete network of 1435 mm; they had no RIV marking but the RU name where the wagon was accepted on the infrastructure was written in the derogation plate in the past. The wagon is able to be operated in trains together with all wagons with 1 digit 0,1,2 or 3 but the RUs have to pay attention to the infrastructure characteristics (gauge, track circuit system, etc.). We propose to mark them CW (Compatible with GE) and use 4 or 8 as first digit.

The specifications for the wagon numbering included in the draft TSI OPE, Annex P does not offer the possibility to identify the wagon category. Therefore it is not backward compatible with all existing wagons. The loss of the correct and requested information described above would lead to essential cost increase, less safety and delay of train departures for the main part of the current freight traffic.

It is important not only to signify the States where the wagon is authorised (TEN marking = all Member States or grid = those States indicated) but also its technical characteristics for operational purposes (GE or CW). The technical characteristics may be retrieved from the central register of authorised types (by the digits 5 to 8), but that is not operational yet and many years might pass until it is complete.

OTIF has made a proposal (annex PP to UTP WAG) on these issues to WG TECH in May this year. Discussions in order to find a common solution acceptable to EU, OTIF and the stakeholder organisations (RUs and keepers) are ongoing.

P.9

This electronic register should be a joint OTIF-ERA register like the VKM register and with the same rules "mutatis mutandis".

P.13

It should be ensured (by means of a standard?) that the code letters in P.13 (passenger coaches) do not overlap with those of P.12 (freight wagons).

Final remarks

The comments above are the result of an in-depth examination of the texts of the two draft TSIs as made available on the ERA website.

Owing to the fact that the authors have obviously followed a completely new approach, the examinations of the texts in the Secretariat and the non-EU OTIF Member States was very difficult and time consuming.

These consolidated comments must therefore not be regarded as complete and definitive. The number and content of our comments makes clear that the TSI drafts cause serious concern. OTIF's expertise should be used to complete, correct and clarify any future versions of these two drafts.