

OPINION

OPI 2019-15

OF THE EUROPEAN UNION AGENCY FOR RAILWAYS

for

THE EUROPEAN COMMISSION

regarding

WAG TSI 321/2013 potential deficiency – Harmonisation of cant
deficiency

Disclaimer:

The present document is a non-legally binding opinion of the European Union Agency for Railways. It does not represent the view of other EU institutions and bodies, and is without prejudice to the decision-making processes foreseen by the applicable EU legislation. Furthermore, a binding interpretation of EU law is the sole competence of the Court of Justice of the European Union.

1. General Context

In its letter dated August 2019 and referenced MOVE.C4/BC/tg(2019)5647558, The Commission has requested the Agency to issue an opinion concerning an issue raised by SBB on a potential deficiency in the Regulation (EU) No 321/2013 amended by Regulation (EU) No 1236/2013, Regulation (EU) 2015/924 and Implementing Regulation (EU) 2019/776 (TSI WAG:2019).regarding the harmonisation of cant deficiency requirements.

In its presentation from 13th June 2019, SBB considers that there has been a loss of harmonisation in the TSI WAG:2019 compared to the Regulation (EU) No 321/2013 amended by Regulation (EU) No 1236/2013 and Regulation (EU) 2015/924 (previous TSI WAG). This presentation had already been provided by NSA CH in the 51st NSA Network meeting held at Valenciennes on 21st and 22nd May 2019.

This present opinion agrees that this harmonisation level needs to be kept for GE and CW wagons as defined in Appendix C of the TSI WAG:2019 and proposes an amendment to this appendix.

2. Legal Background

According to the provisions of Article 19(1)(d) of Regulation (EU) 2016/796 of the European Parliament and of the Council of 11 May 2016 on the European Union Agency for Railways and repealing Regulation (EC) No 881/2004¹ (Agency Regulation), the Agency has the possibility to issue opinions which constitute acceptable means of compliance concerning deficiencies in TSIs, in accordance with Article 6(4) of Directive (EU) 2016/797, and provide those opinions to the Commission.

This Opinion concerns the TSI WAG:2019, in particular the following points:

- 4.2.3.5.2 Running dynamic behaviour
- 4.9 Route compatibility checks before the use of authorised vehicles
- 7.1.2 Mutual recognition of the first authorisation of placing on the market
- Appendix C Additional optional conditions

This Opinion also concerns the Commission Implementing Regulation (EU) 2019/773 of 16 May 2019 (TSI OPE:2019), in particular its appendix D1 'Parameters for the vehicle and train compatibility over the route intended for operation'.

SBB made a request to the Commission as the TSI WAG:2019 refers to the EN 14363:2016 in order to define the procedures and the assessment to prove the running dynamic behaviour, in particular those related to the combination of cant deficiency and maximum speed. The EN 14363:2016 no longer include mandatory minimum values of the combination of maximum speed and cant deficiency.

The TSI WAG:2019 requires to define the combination of maximum speed and cant deficiency using the methodology of the EN 14363:2016 and record them in the Technical file so they can be used to perform the route compatibility check as defined in point 4.9 of TSI WAG:2019 and Appendix D1 of TSI OPE:2019.

SBB points out that vehicles with too low values of cant deficiency may result in speed reductions to new, TSI WAG:2019 leading to unacceptable reduction of capacity in high density networks. However, the previous TSI WAG covered the same requirements by referring to the EN 14363:2005, in which there are minimum, mandatory values of the combination of maximum speed and cant deficiency. In the EN 14363:2016 these minimum values are part of an informative annex.

More detailed background information is available in the attached presentation from SBB and minutes of the 51st NSA Network meeting.

¹ OJ L 138, 26.5.2016, p. 1.

3. Analysis

3.1. Safety analysis

Cant deficiency in curves is the difference, expressed in mm, between the applied cant on the track and the equilibrium cant for the vehicle at the particular stated speed². The principle of the TSI WAG:2019 is that the vehicle must be tested in accordance with the methodology defined in the EN 14363:2019 in order to define the operation envelope, which is given by the combination of speed and cant deficiency for which the vehicle is intended to be operated³.

The operational envelope is then recorded in the Technical File so the route compatibility check can be performed by comparing such envelope and the rail inclination in which the vehicle has been tested with those of the route. This is defined in section 4.9 of TSI WAG:2019 and Appendix D1 of TSI OPE:2019:

'Comparison of the combination of maximum speed, maximum cant deficiency and rail inclination(s) to which the vehicle is assessed, with the cant deficiency, speed and rail inclination declared in RINF or information provided by the Infrastructure Manager.

In case vehicle characteristics don't match infrastructure characteristics and the compatibility between the vehicle and the route might be compromised, the Infrastructure Manager shall provide the exact combination of speed and cant deficiency for the specific points in which the compatibility might be compromised within one month, free of charge and in electronic format.

Note: The output of the check should be taken into account by the Railway Undertaking for the route book preparation. Operational conditions might be imposed as a result of this check (e.g. speed restriction for a section of line)'

Therefore, the running safety is ensured via the route compatibility check above and the fact that the TSI WAG:2019 does not impose a minimum performance envelope does not compromise at all the safety level of the railway system.

3.2. Performance analysis

No performance level is required in the TSIs regarding any basic parameter, as far as it is safe to operate. However, it is possible to define minimum performance levels in the TSIs when required to achieve interoperability⁴.

The loss of these minimum performance levels for the operation envelope means that new, TSI WAG:2019 compliant wagons may face speed reductions for the same cant deficiency than those compliant with previous version of the TSI WAG, thus decreasing the average speed of the network. This problem is particularly severe in networks which are operated to the full extent of its capacity, but it is not limited to them.

² Appendix S of 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.

³ EN 14363:2019, Chapter 3, terms and definitions

⁴ 'Interoperability' as defined in Directive (EU) 2016/797 means the ability of a rail system to allow the safe and uninterrupted movement of trains which accomplish the required levels of performance

However, keeping the existing performance levels may lead to the impossibility of authorising tailored solutions which cannot fulfil these levels, such as but not limited to vehicles under the scope of point 2.1(a), 2.1(c) and section 7.1 of the TSI WAG.

Therefore, the existing level of performance should be kept at least to the extent where the network capacity is not compromised and some liberty is given to the actors in order to place in the market tailored solutions which do not fulfil the minimum performance of the operation envelope.

The current TSI WAG:2019 allows for three levels of compliance:

- Compliance with chapters 4, 5 and 6 of the TSI,
- Compliance with 4, 5, 6 and optional clause 7.1.2 and
- Compliance with 4, 5, 6, 7.1.2 and optional Appendix C.

The two first levels of compliance does not require standardised solutions nor compliance with historical (RIV/UIC) operational and maintenance conditions. These level of compliance are typically used for special, non standardised wagons.

The third level of compliance considers technical solutions and conditions coming from UIC/RIV (e.g. UIC footsteps and handrails). However, the way Appendix C wagons can be operated is completely within the responsibility of RUs. The Agency proposes to mandate a minimum operation envelope for these wagons equal to those of the previous TSI. These have been kept in the EN 14363:2016 in the optional appendix H, Table H.1.

3.3. Economic impact assessment

The technical opinion only addresses optional requirements in appendix C of the WAG TSI. For this reason, there are no negative economic impacts for the railway sector. Therefore, no specific light impact assessment was performed.

4. The opinion

The Agency recommends to amend the TSI WAG:2019 by inserting the bold text below, and recommends as well that this opinion constitutes an acceptable means of compliance as foreseen in Article 6(3) of Directive (EU) 2016/797:

**'In Appendix C, 'Additional optional conditions', the following point is added at the end of the Appendix:
'C. 20. Running dynamic behaviour:**

The combination of maximum operating speed and maximum admissible cant deficiency shall be as shown in Table H.1 of EN 14363:2016.

Units equipped with established running gear as described in chapter 6 of EN 16235:2013 are presumed to be in conformity with this requirement.'

Valenciennes, 17.02.2020



Josef DOPPELBAUER
Executive Director

ANNEX 1



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR
MOBILITY AND TRANSPORT



Ref. Ares(2019) 650 - 06/08/2019

Request of the Commission to the Agency for an Opinion/Advice

Requesting Organisation (name, address)	DG MOVE, C4	
Contact information	Bertrand COLLIGNON (bertrand.collignon@ec.europa.eu)	
Legal base	Opinion	<ul style="list-style-type: none"> ✦ Agency Regulation Art. 25 and 26 ✦ Agency Regulation Art. 10.1 ✦ Agency Regulation Art. 10.2 ✦ Agency Regulation Art. 19 ✦ Agency Regulation Art. 42
	Advice	<ul style="list-style-type: none"> ✦ Agency Regulation Art. 41
Objective	Evaluation and technical opinion	
Scope	WAG TSI 321/2013 potential deficiency – Harmonisation of cant deficiency	
Task Description	<p>Evaluation, technical opinion.</p> <p>The Agency's opinion shall constitute an acceptable means of compliance.</p>	
Key input documents	<p><u>Background information and justification for the request:</u></p> <p>The Swiss railway company SBB has raised an issue with the WAG TSI: due to a revision of standard EN 14363 referenced in the TSI, requirements on cant deficiency are not harmonised anymore which may result in unacceptable reduction of capacity in high density networks.</p> <p>More detailed background information is available in the attached presentation from SBB and minutes of the 51st NSA Network meeting.</p>	
Request to be sent to:	opinionadvice@portal.era.europa.eu	