European Railway Agency

Executive Director

ERA/OPI/2013-1

OF THE EUROPEAN RAILWAY AGENCY

FOR

EUROPEAN COMMISSION

REGARDING

APPLICATION OF THE TSI HS INF TO LINES WHERE THE LINE SPEED IS BELOW 200KM/H

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1 General Context

1. With note Ref. Ares(2013) 144638, dated 05/02/2013, European Comission, DG MOVE - Directorate B, requested the Agency to give a technical opinion on a letter from EIM and CER. In their letter, CER and EIM request to investigate the possibility to accept interoperability constituents (hereafter referred to also as 'ICs') on high-speed lines with speeds up to 200 km/h in accordance with Commission Decision 2011/275/EU of 26 April 2011 concerning a technical specification for interoperability relating to the' infrastructure' subsystem of trans-European conventional rail system (hereafter referred to as 'TSI CR INF'). By this acceptance the Commission Decision 2008/217/EC of 20 December 2007 concerning a technical specification for interoperability relating to the 'infrastructure' sub-system of the trans-European high-speed rail system (hereafter referred to as 'TSI HS INF') may be modified to use the ICs in a more flexible way.

2 Legal Background

1. The Agency is requested to give a opinion in accordance with Article 10 (2b) of Regulation (EC) No 881/2004 of the European Parliament and of the Council of 29 April 2004 establishing a European railway agency[1] (hereafter referred to as 'Agency Regulation') and Article 7(1) of Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community[2] (hereafter referred to as 'Interoperability Directive').
2. The request is to apply the TSI CR INF for the interoperability constituents as defined Section 5.2. of TSI HS INF on those high-speed lines which speed below 200km/h.
3. In line with its Section 1.1, the TSI HS INF *"... concerns the infrastructure subsystem and part of the maintenance subsystem of the trans-European high-speed rail system. ...The high-speed lines comprise:*
   - *— specially built high-speed lines equipped for speeds generally equal to or greater than 250 km/h,*
   - *— specially upgraded high-speed lines equipped for speeds of the order of 200 km/h,*
   - *— specially upgraded high-speed lines which have special features as a result of topographical, relief or town-planning constraints, on which the speed must be adapted to each case.*

   In the present TSI these lines have been classified as category I, category II and category III respectively."

   Those high-speed lines which speed below 200km/h to which the request relates fall under Category III.
4. Chapter 5 of TSI HS INF defines and lists the ICs for the trans-European high-speed rail system and describes the specifications applicable to these ICs.

   Section 5.2 identifies the following ICs:

   " — the rail (5.3.1)
   — the rail fastening systems (5.3.2)
   — track sleepers and bearers (5.3.3)
   — switches and crossings (5.3.4)
   — water filling connector (5.3.5)".

   Section 5.3.1.2 defines the design linear mass for rails to be more than 53 kg/m.

   The mass of concrete sleepers in plain line is specified in section 5.3.3 to be at least 220 kg.
5. The TSI CR INF *"... concerns the infrastructure subsystem and part of the maintenance subsystem of the trans-European conventional rail system".*

[1] OJ L 164, 30.04.2004, p. 1.
[2] OJ L 191, 18.7.2008, p. 1.

6. Chapter 5 of TSI CR INF lists the ICs for the trans-European conventional rail system and describes the specifications applicable to these ICs.
   Section 5.2 identifies the following ICs:
   "*— the rail (5.3.1)*
   — the rail fastening systems (5.3.2)
   — track sleepers (5.3.3)".
   Unlike in TSI HS INF, switches and crossings, as well as water filling connector are not defined as ICs in TSI CR INF.

3 Analysis

1. According to CER/EIM, ICs identified in TSI HS INF are typically used for high speed track constructions where operating speed is 200 km/h and more. Below the speed of 200 km/h rails with lower linear mass and wooden sleepers are widely used. The strict application of the TSI HS INF by using rails with a design linear mass of 53 kg/m or more and concrete sleepers adds unnecessarily cost to the track construction for tracks with lower operating speeds.
2. TSI CR INF generally covers lines with speed up to 200 km/h. Interoperability constituents as defined in chapter 5 of the CR INF TSI allow for track constructions with rails as specified in Section 5.3.1.2. (2) with a moment of inertia of the rail cross section of at least 1600 cm^4 which is equivalent to a linear mass as low as 46 kg/m on wooden or concrete sleepers.
3. The issue raised by CER/EIM concerns those lines of the trans-European high speed rail system which are intended to be operated permanently with speed below 200 km/h. This is mainly the case when a line is designed as Category III according to the TSI HS INF including special features as a result of topographical, relief, environmental or town-planning constraints, on which the speed must be adapted.
4. At the time the TSI HS INF was adopted, a specific TSI for the trans-European conventional rail system did not exist. Requirements for basic parameters of the infrastructure subsystem in chapter 4 of TS HS INF distinguish between the 3 line categories for the trans-European high-speed rail system. Requirements for Category III are usually less strict than for Category I applied for lines with a speed eual to or greater than 250 km/h or for Category II with a speed of order of 200km/h. Chapter 5 of TSI HS INF concerning ICs does not distinguish between the line categories thus the requirements for ICs apply on the trans-European high-speed rail system.
5. The Agency's recommendation on the revised Technical Specification for Interoperability relating to the subsystem 'infrastructure' ('TSI INF')[3], which was submitted to the Commission last December and forms the basis for the draft Comission Decision on this subject contains merged requirements for the high-speed and conventional rail systems. Chapter 5 of the Agency's recommendation basically follows the concept of the TSI CR INF. However, there is no specific requirement for the size of rails any more and for track constructions wooden or concrete sleepers can be used.
6. It is therefore technically justified to apply the TSI CR INF for lines with a speed below 200 km/h where respective requirements are set out. Thereby a solution is provided for the issue raised by CER/EIM in the same way as in the Agency's recommendation on TSI INF.

[3] ERA/REC/10-2012/INT

4 The opinion

1. The Agency is of the opinion that the Annex to the Commission Decision 2008/217/EC of 20 December 2007 concerning a technical specification for interoperability relating to the 'infrastructure' sub-system of the trans-European high-speed rail system is to be amended by introducing the following sentence in section 1.1 'Technical scope':
   "For the Category III lines as described in Section 4.2.1 and with a speed of up to 200km/h, it shall be permitted to apply the Annex to Commission Decision 2011/275/EU of 26 April 2011 concerning a technical specification for interoperability relating to the' infrastructure' subsystem of trans-European conventional rail system."
2. The Agency is also of the opinion that Section 1.1 of Annex to Commission Decision 2011/275/EU of 26 April 2011 concerning a technical specification for interoperability relating to the' infrastructure' subsystem of trans-European conventional rail system is to be amended by introducing the following sentence:
   "This TSI may also be applied to lines with a speed of up to 200km/h of Category III lines of the trans-European high-speed rail system as defined in Section 4.2.1 of the Annex to the Commission Decision 2008/217/EC of 20 December 2007 concerning a technical specification for interoperability relating to the 'infrastructure' sub-system of the trans-European high-speed rail system."

Valenciennes, 05 JUIL. 2013

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