EUROPEAN
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TECHNICAL ADVICE

ERA/ADV/2018-1

OF THE EUROPEAN UNION AGENCY FOR RAILWAYS

for

THE EUROPEAN COMMISSION

Regarding

Consultation of UTK on the pertinence of requesting a derogation for certain parts of the CCS Trackside Subsystem

Disclaimer:

The present document is a non-legally binding advice 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

1.1. Introduction

1.1.1. In its letter referenced as 'Ares(2018)1490841', dated 19th March 2018, addressed to the European Union Agency for Railways ("the Agency"), the European Commission requested the Agency to provide additional advice regarding the technical opinion ERA/OPI/2016-3 that answered a request put forward by NB Rail (ref. NB-Raii QC-STR-009) concerning certifications according to withdrawn Technical Specifications for Interoperability.

1.1.2. The advice requested has the objective of providing clarification to the questions raised by UTK to the European Commission in a letter dated on the 23rd November 2017 (identified as DZTI-WI.0710.8.2017.1OJS) and registered on 8th March 2018:

Question 1: " is it mandatory to obtain a derogation in accordance with article 9 of the Directive 2008/57/EC to assess a project encompassing only train detection (not encompassing ETCS or GSM-R) against repealed versions of TSI CCS (or other alternative rules)?"

Question 2: "does the obligation to obtain a derogation in accordance with article 9 of the Directive 2008/57/EC for an above mentioned projects encompassing only train detection exist, if the national implementation plan of TSI CCS does not foresee an installation of ETCS on the line on which that project is being implemented?"

1.1.3. In addition, the Commission has provided the letter sent by UTK to the European Commission, dated 6th October 2017, completing the list of projects at an advanced stage of development that were communicated on the 26th July 2017, on the basis of the Art.9 para. 3 of Directive 2008/57/EC.

1.1.4. Both UTK and PKP have expressed their interest in the result of the consultation, given the impact that this may have for some specific projects, since these projects are financed by EU funds (having begun in the financial framework 2007-2013, they have obtained a permission for financing in the framework 2014-2020). The Agency has been informed that a condition for the funding is that the projects shall be finalised by the end of 2018. The Agency held a meeting on the 23rd March 2018 with some representatives of PKP's representative office in Belgium to obtain more detailed information. Further information exchanges have taken place via email between the Agency and the PKP representatives during April and May 2018. UTK has invited the Agency's Executive Director to a session on the 17th May 2018 where this matter was part of the agenda.

1.1.5. PKP has provided the list of projects affected by the question raised on April 23rd, indicating the details of the train detection system used for the 5 projects that have to be finalised by end of 2018, and has completed these details for the rest of projects on the 2nd May 2018.

2. Legal background

2.1.1. Article 41 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) provides the Commission with the possibility to request advice from the Agency "in matters requiring specific knowledge".

2.1.2. The Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system[2] (Interoperability Directive) sets out the principles concerning the assessment of conformity for constituents and of subsystems, together with the principles governing the authorisation of subsystems and the non-application of TSIs. This replaces the Directive 2008/57/EC of 17 June 20083.

2.1.3. The Commission Regulation (EU) 2016/919 of 27 May 2016 on the technical specification for interoperability relating to the "control-command and signalling" subsystems of the rail system in the European Union[4] (CCS TSI) defines its technical and geographical scope, lists the parts of the Control-Command and Signalling Subsystems, and provides the specific implementation rules for the train detection systems.

[1] OJ L138, 26.5.2016, p 1
[2] OJ L138, 26.5.2016, p 44
[3] OJ L191, 18.7.2008, p 1
[4] OJ L158, 15.6.2016, p 1

3. Analysis

3.1. General principles on the authorisation for placing in service of fixed installations and non-application of TSIs (derogations)

3.1.1. The Interoperability Directive establishes the conditions to be met to achieve the interoperability within the Community rail system, including the placing in service of the different subsystems.

3.1.2. According to its article 2, fixed subsystems shall comply with the TSI and national rules in force at the time of requesting authorisation of placing in service, taking into account the implementation strategy described in the corresponding TSI.

3.1.3. The scope of the Interoperability Directive and of the CCS TSI (as per sections 1.1 and 1.2 of its Annex) includes the CCS Trackside Subsystems of the network of the whole rail system, excluding the cases referred to in Article 1(3) of Directive 2008/57/EC. The CCS TSI shall not apply either to short border crossing lines with 1 520 mm track gauges that are connected to the network of third countries.

3.1.4. The Interoperability Directive states in its article 18 that the authorisation for placing in service of fixed installations, including the CCS trackside subsystem shall be granted only if they are installed in such a way that they meet the interoperability requirements and the request is submitted to the national safety authority, accompanied by a file including documentary evidence of the declarations of verification (as per article 15). This process was also described in the Directive 2008/57/EC, in its article 15, which refers to the assessment and verification procedures laid down in the relevant TSIs.

3.1.5. In the event of renewal or upgrading of existing subsystems, a file describing the project has to be sent to the national safety authority, as per article 18 (6) of the Interoperability Directive (also in article 20 of the Directive 2008/57/EC). The national safety authority shall decide if a new authorisation for placing in service is needed. In article 20 of the Directive 2008/57/EC it is noted that if a new authorisation is needed, the Member State shall decide to what extent the TSIs need to be applied to the project.

3.1.6. The Interoperability Directive indicates in its article 7(1) the cases where a Member State may allow the non-application of one or more TSIs or parts of them. In the Directive 2008/57/EC, this is covered in article 9(1)"Derogations".

3.1.6.1. The point (a) in both articles refers to the case of a new subsystem or part of it, the renewal or upgrading of an existing subsystem or part of it, which is at an advanced stage of development or which is the subject of a contract in the course of performance on the date of application of the TSI(s) concerned.

3.1.6.2. In that case (a), the Member State shall, on the one hand, submit to the Commission the request received for the non-application of the TSIs or parts of them, accompanied by a file containing the justification of the request and the alternative provisions that it intends to apply, and, on the other hand, the Member State shall communicate the Commission its decision on the non-application of the TSIs or parts of them.

3.1.6.3. The Member State may apply the intended alternative provisions without delay, even before having received the result of the analysis of the Commission.

3.1.7. The request of a derogation is an administrative process that, for the case of projects at an advanced stage of development, is decided directly by the Member State; therefore, the maximum delay set for this process may be shortened if found suitable.

3.1.8. In the Agency Opinion ERA/OPI/2016-3[5], section 3, an analysis is provided regarding the possibility to use an old TSI in a determined project during the transition phase stated in the TSI. In section 3.3, it is clarified that the CCS TSI does not describe transitional periods, and, therefore, a derogation according to Article 91 (a) of Directive 2008/57 is always required for projects at an advanced stage of development.

3.2. Train detection systems are a part of the trackside subsystem defined in the CCS TSI

3.2.1. In the CCS TSI, Annex section 2.2, there are 3 parts defined that apply to the Trackside Subsystem: train protection (ETCS), voice and data radio communication (GSM-R) and train detection (axle counters, wheel detectors, vehicle detectors based on inductive loops or track circuits).

3.2.1.1. This allows full flexibility to deploy each of the parts at different pace, independently, or to deploy some or all of them at the same time.

3.2.1.2. The 3 parts are equally affected by the obligations expressed in the CCS TSI.

3.2.1.3. The requirements in the CCS Trackside Subsystem for the train detection part are specified in relation to the interface requirements for the detection system, to ensure compatibility with rolling stock.

3.2.2. In CCS TSI Annex section 6.3.1, the assessment procedures for the CCS Subsystems are described. The applicant shall draw an EC declaration of verification of the fulfilment of the requirements that affect the Subsystem, based on an EC verification procedure carried out by a Notified Body (NoBo).

3.2.2.1. The assessment modules and the list of aspects to be covered by the procedure for trackside subsystems are included in the chapter 6.3.4.

3.2.3. It is also clearly explained in the CCS TSI Annex section 6.4.1 that it is possible to assess the parts defined in the CCS TSI independently.

32.3.1. This means that a NoBo may issue a certificate for the train detection part of the subsystem when it is ready to be in service.

3.2.3.2. Later on, if other parts are deployed in the same trackside (train protection and/or radio communication parts), they can be assessed separately. The NoBo assessing the additional part or parts shall not repeat the assessment already done.

3.2.4. In order to follow the procedure for placing in Service (as per Directive 2008/57 and Directive (EU) 2016/797) of the trackside subsystem, the assessment procedures laid down in the TSI shall be used.

[5] http://www.era.europa.eu/Document-Register/Pages/Opinion-ERAOPI201603.aspx

3.3. Applicability of the Interoperability Directive and the CCSTSI requirements to the specific projects under discussion

3.3.1. The projects included in the list provided by PKP (see Annex) fall inside the scope of the Interoperability Directive and the CCS TSI. None of the projects correspond to short border crossing lines with 1520 mm track gauges that are connected to the network of third countries, nor do they seem to fall into the categories listed in Article 1(3) and 1(4) in the Interoperability Directive.

3.3.1.1. If any of the projects refer, for example, to networks that are functionally separate from the rest of the Union rail system and intended only for the operation of local, urban or suburban passenger services, as well as undertakings operating solely on those networks, then these projects will not be under the scope of the Directive, and not bound to its obligations.

3.3.2. According to CCS TSI Annex section 4.1.3, there are 3 basic parameters that are relevant for the train detection part:

3.3.2.1. parameter 4.2.10: trackside Train Detection systems, with the specification of the interface requirements between trackside train detection system and rolling stock to be respected ;

3.3.2.2. parameter 4.2.11: electromagnetic compatibility between rolling stock and CCS trackside equipment;

33.2.3. parameter 4.2.16: construction of equipment used in CCS subsystems, including the environmental conditions that have to be met.

3.3.3. In addition, other requirements in the CCS TSI apply to the train detection part (such as 4.5 Maintenance rules, 4.7 Health and safety conditions...).

3.3.4. In section 7.5 of the CCS TSI, there are additional remarks on the applicability of the requirements of the TSI to the train detection systems. In particular, it is stated that they shall be respected when:

33.4.1. upgrading the train detection system;

33.4.2. renewing the train detection system, provided that respecting the requirements of this TSI does not imply unwanted modifications or upgrades of other trackside or on-board systems;

3.3.43. renewing the train detection system, where this is required by the upgrade or renewal of trackside systems that use information from the train detection system;

33.4.4. removing Class B train protection systems where the train detection and train protection systems are integrated."

3.3.5. According to the information available, the projects in the list provided lay under these cases (new installation, upgrading or renewal of the train detection system): there is no indication that there are technical issues with other systems

CONCLUSION 1: The requirements in the Interoperability Directive and the CCS TSI apply to the projects in the list, even for those only implementing the train detection part of the CCS trackside subsystem, except if any of these projects correspond to networks that are functionally separate from the rest of the Union rail system or fall into the categories listed in Article 1(3) and 1(4) in the Directive.

3.3.6. The document ERA/ERTMS/033281 "Interfaces between CCS trackside and other subsystems", listed in Annex A of the CCS TSI with Index 776, contains the requirements identified with reference to the train detection system intended to be used. This document has been listed in the CCS TSI since Decision 2012/88/EU.

3.3.7. According to the information received from PKP, all the axle counters used in the projects have type-approval certificates issued by the national safety authority, which means that they meet the national technical specifications and standardization documents, the use of which allows the fulfillment of the essential requirements for the interoperability of the railway system.

3.3.8. In addition, each device is accompanied by declarations of conformity with the type, which means that they meet the requirements of standards and regulations for these devices, valid at the day of their construction.

3.3.9. After some thorough analysis of the types of axle counters used in the projects listed, the Agency has concluded that all the relevant requirements in the interface document ERA/ERTMS/033281 are met (since they follow the technical specification from CENELEC TS 50238-3 "Compatibility between rolling stock and train detection systems: compatibility with axle counters"- see Annex 2 for information-), with the exception of the parameters related to distances between the end of train and the first axle. These parameters cannot be assessed based on the type of axle counter: these parameters have to be analysed at project level and a report has to be made available for the verification of the fulfillment of these requirements.

CONCLUSION 2: Based on the information available, it is not expected that the train detection systems used suffer from interoperability issues. The axle counters used meet all the CCS TSI requirements in the interface document except from those parameters related to distances between the end of train and the first axle, as they can only be assessed at project level.

[6] http://www.era.europa.eu/Document-ReBister/Pages/Set-[redacted]-and-2-and-3-ERA%20ERTMSX20033281.aspx

4. The advice

4.1.1. *For all the projects under the scope of the Interoperability Directive and the CCS TSI, the Member States may allow the non-application of one or more TSIs or part of them on the cases listed in the Interoperability Directive. The applicant shall formally request the permission to the Member State (derogation). The Member State shall submit to the Commission the request received. In the case of projects at an advanced stage of development, the Member State shall communicate to the Commission its decision.*

4.1.2. *The CCS TSI allows the deployment of the different parts defined in it independently, but all the parts are bound to the same obligations laid in the TSI and in the Interoperability Directive. The train detection part of the CCS trackside subsystem is not an exception. Projects that only install the train detection part are treated in the same way as those implementing other parts.*

4.1.3. *It is possible to request a derogation for the non-application of a TSI (or a part of it) or for the application of a previous TSI also for the projects that implement only one of the parts defined in it.*

4.1.4. *Regarding the assessment by a Notified Body, it may issue a certificate for the train detection part of the CCS subsystem independently when it is ready to be in service. No duplication of the assessment work is expected if, later on, another part of the CCS subsystem is deployed (such as the train protection or radio communication part).*

4.1.5. *For the projects listed in the letter submitted, and based on the information available, it is not expected that the train detection systems used in them suffer from interoperability issues. The axle counters used meet all the CCS TSI requirements in the interface document except from those parameters related to distances between the end of train and the first axle, as they can only be assessed at project level.*

Valenciennes,

Josef DOPPELBAUER
Executive Director

ANNEX 1

Letter from DG MOVE reference 'Ares(2018)1490841', dated 19th March 2018, after review on 9th April 2018.

Annex 1 - Request_to_ERA_Arf

List of projects provided by PKP on 2nd May with the train detection systems used in ail of them.

System of detection_AILdocx

ANNEX 2

Annex in TS 50238-3 "Compatibility between rolling stock and train detection systems: compatibility with axle counters"

Type of axle counter detector	centre frequency. tolerance range KHZ	Filer curve 3 dB / 26 dB bandwidth KHZ	Filar * order using for ●valuation	Magnatie field In X direction RMS dB■A/m	Magnetic field in V direction RMS CBpA/m	Magnetic field In Z direction RMS CBpA/ffl	FUJI current* UIC << RMS niA	integration time T■ me
Zp 30 H, 2P 30 C-NT	27.0 - 32.0 *	**★0,12 /** ± 0.45	4	114	W	101	220	4
DM	39.0 ★ 0.39	**★0.10 /** ★ 0,40	4	13	120	126	1 700	1
WDD39	39.0 ★ 0.15	★ 0.50 / ★ 1.5	**2**	109.5	121.5	121,5	2 MO	**1**
2P 43 E	43.0 ★ 1.0	★ 0.5 / ★ 1.6	4	**100**	53	98	58	1
ZP D 43	43.0 ★ 1.7	★ 0.02 / ★ 0.3	2	**100**	85	98	58	2
D 50	50.0 ★ 0.50	**★0.10 /** ★ 0,40	4	93	125	126	1 700	1
WDD5Q	50.0 ★ 0.15	★ 0.60 / ★ 1.6	4	109	121	121	2 470	1
W3D SYS 1	830,0 ★ 26.0	★ 4.0 / ★ 40.0	2	106	55	101	50	1.5
WCD SYS Z	960.0 ★ 26.0	★ 4.0 / ★ 40.0	2	106	55	101	50	1.8
RZH 180	250 ★ 1.0	★ 5.0 / ★ 15	4	121	113.8	101.0	277.6	1.5
RSR 123 **SYS 1**	1 000.0 ★ 1.0	★ 3.0 / ★ 10.0	4	120.5	114.5	114,5	1 750	2
RSR 123 SYS 2	1 228.8 ★ 1.0	★ 3.0 / ★ 10.0	4	119.5	113.6	113.6	1 400	2
AS / ASZB *ICC*	325.0 ★ 25.0	★ 2.0 / ★ 13.0	4	109	99	81	100	8
ELS-93	42X1 ± 0.01 46X14 0.01	**± 1.5 / ± 3.2**	4	92.3	55.6	110.2	231	2
iS-95	46X110.02 48.19 ■ 0.02	**±1.0 / 12.6**	4	82.8	100.7	98X	133	2

[4] Rai current oMyimxmai/e.
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