

Conformity Assessment in Railways – EXERCISE

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EUROPEAN
UNION
AGENCY
FOR RAILWAYS

SCOPE OF EXERCISE

- Analyse some practical applications of conformity assessment in railways/Apply CA concepts to real life/railway products
- Understand roles & responsibilities of different entities involved in the conformity assessment process
- Become familiar with different tasks, phases of conformity assessment
- Refresh conformity assessment topics, concepts of the course
- Prompt questions for a better understanding of CA topics/notions

EXERCISE OUTPUT (1)

- 1) Indicate if the object of assessment is an IC or a Subsystem
- 2) Indicate which module/s may be applied for Conformity assessment (ICs) or EC Verification (Subsystems) and where may this information be found
- 3) Based on the information provided, select the most appropriate module/s for Conformity assessment or EC Verification. Explain reasons for your choice

EXERCISE OUTPUT (2)

- 4) Based on the module/s selected, briefly describe the:
 - a) activities to be carried by the NoBo
 - b) type/s of certificates the NoBo may issue (depends on the choice of module/s...)
 - c) obligations/tasks for the applicant/manufacturer
- 5) Find the appropriate certificate, or an equivalent one, in [ERADIS](#)

TYPES OF NOBO CERTIFICATES

 <p>9 Supported by NB-Rail Association</p>	<p style="text-align: center;">RECOMMENDATION FOR USE</p> <p style="text-align: center;">NB-RAIL COORDINATION GROUP</p> <p style="text-align: center;">Administrative Decision according to Interoperability Directive (EU) 2016/797 art. 30.6</p>	 <p style="text-align: center;">Co-funded by the European Union</p>
<p>RFU-STR-001</p>		<p>Issue 20 Date 19/06/2024</p>
<p>Each ISV shall clearly identify the stages and parts covered.</p> <p>The second digit of the ISV type refers to the type of certificate/ QMS-Approval as described under section C.</p> <p>Rail Notified Bodies may issue CLDs of the following types:</p> <ol style="list-style-type: none"> 1 EC Type Examination Certificate (B,CB, SB) 2 EC Design Examination Certificate (CH1, H2, SH1, SH2) 4 Quality Management System Approval (CD, CH, CH1, D, SD, H1, H2, SH1, SH2)* 5 EC Certificate of Conformity (A1, CA1, CA2, CF, F) 6. EC Certificate of Verification (SD, SF, SG, SH1, SH2) 7 EC Certificate of Suitability for Use (CV, V)** 8.1. Intermediate Statement of Verification – EC Type Examination (SB) 8.2. Intermediate Statement of Verification – EC Design Examination (SH1, SH2) 8.4. Intermediate Statement of Verification – Quality Management System Approval (SD, SH1, SH2) 8.6. Intermediate Statement of Verification (SD, SF, SG, SH1, SH2) <p>(The Modules that lead to the indicated CLD types are given in brackets.)</p>		

EXERCISE 1

Fccpps SALT wagon

SALT: 'Dust Reducing Ballast Vehicle'

'wagon fitted with hydraulic unloading and high-pressure water spraying system which suppresses dust particles with a water mist sprayed over the ballast as it leaves the wagon. This effectively minimizes exposure to hazardous ballast dust for the workers'



Fccpps SALT wagon

MANUFACTURER: Voestalpine (consider 2 cases, manufacturer with or without QMS)

PRODUCTION VOLUME: < 10-15 units/wagons per year

SUBSYSTEM: Rolling Stock (RST)

TSI: [Regulation \(EU\) 321/2013](#) (TSI WAG)

NoBo: Certifer HHC/DRS B.V. [NB 1869]

Fccpps SALT wagon

6.2. Subsystem

6.2.1. Modules

The EC verification of the subsystem 'Rolling stock — freight wagons' shall be performed in accordance with the module(s) described in Table 10.

Table 10

Modules for EC verification of subsystems

SB	EC-Type Examination
SD	EC verification based on quality management system of the production process
SF	EC verification based on product verification
SH1	EC verification based on full quality management system plus design examination

These modules are specified in detail in Decision 2010/713/EU.

6.2.2. EC verification procedures

The applicant shall choose one of the following combinations of modules or module for the EC verification of the subsystem:

— (SB+SD), or

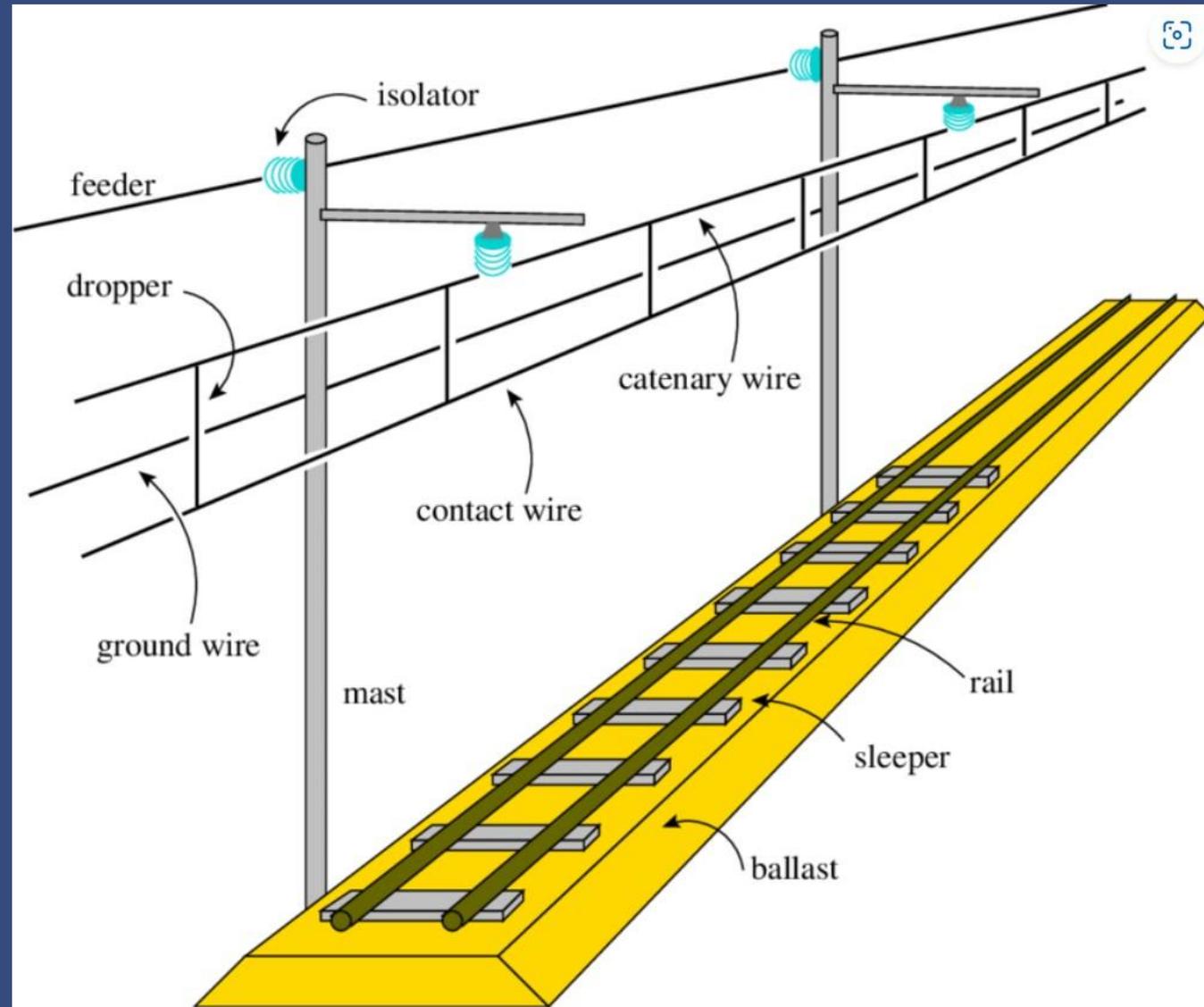
— (SB+SF), or

— (SH1).

EXERCISE 2

Overhead Contact Line – OCL

Contact line placed above (or beside) the upper limit of the vehicle gauge and supplying vehicles with electric energy through roof-mounted current collection equipment



Overhead Contact Line – OCL

MANUFACTURER: RZD International (with QMS)

PRODUCTION VOLUME: > 400 units per year

SUBSYSTEM: ENERGY (ENE)

TSI: [Regulation \(EU\) 1301/2014](#) (TSI ENE), point 4.2.9 & 5.2.1 (geometry)

CONFORMITY ASSESSMENT: OCL (point 6.1.3.7, table of modules 6.1.2)

NoBo: SIQ Ljubljana [NB 1304]

Overhead Contact Line – OCL

6.1.2. *Application of modules*

- (1) The following modules for conformity assessment of interoperability constituents are used:
- (a) CA Internal production control
 - (b) CB EC type examination
 - (c) CC Conformity to type based on internal production control
 - (d) CH Conformity based on full quality management system
 - (e) CH1 Conformity based on full quality management system plus design examination

Table 6.1.2

Modules for conformity assessment to be applied for ICs

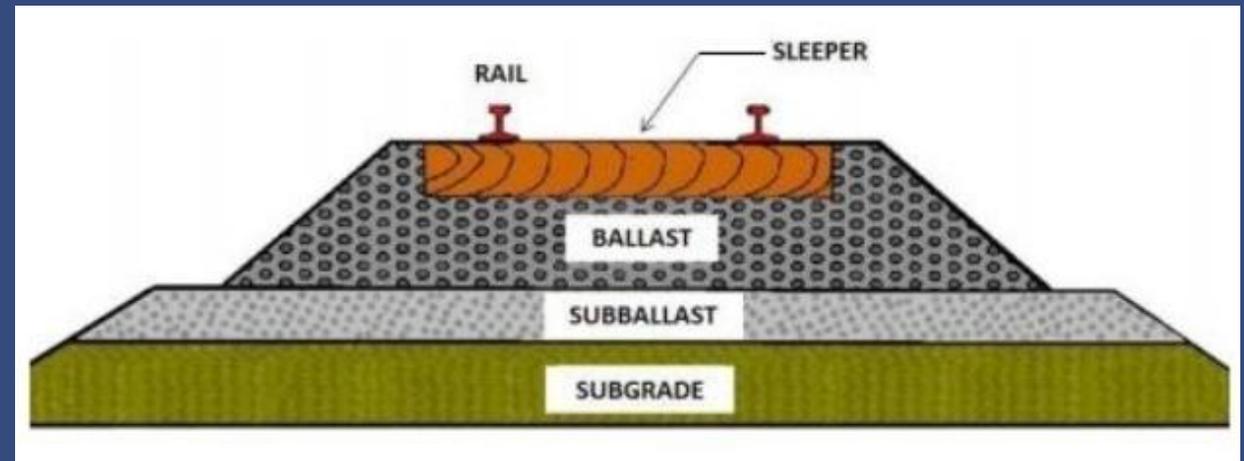
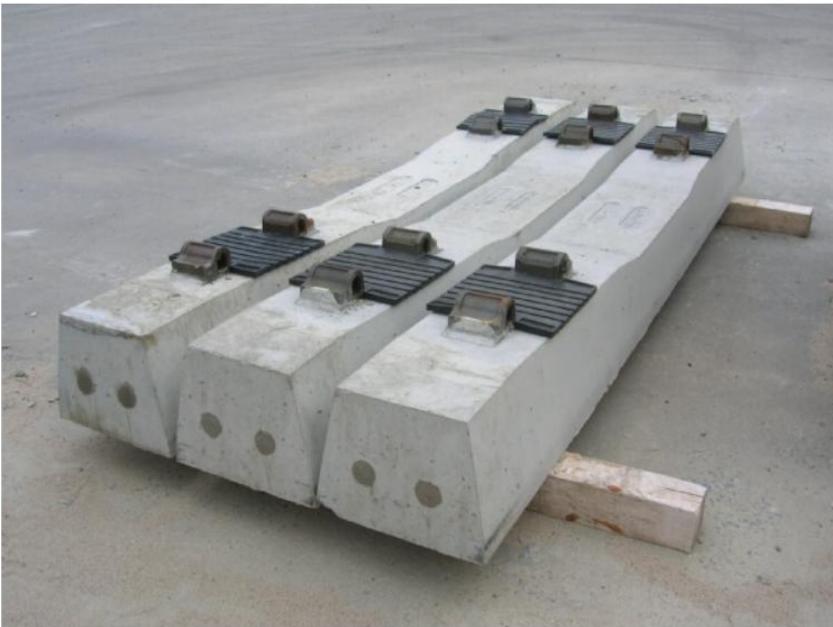
Procedures	Modules
Placed on the EU market before entry in force of this TSI	CA or CH
Placed on the EU market after entry in force of this TSI	CB + CC or CH1

EXERCISE 3

Track sleepers

Transverse components of the track which control the gauge and transmits loads from the rail to the ballast or other support (see [EN 13230-1](#))

Concrete Sleeper



Track sleepers

MANUFACTURER: Wytwórnia Podkładów Strunobetonowych STRUNBET Sp. z o.o. (with QMS)

PRODUCTION VOLUME: > 10000 units per year

SUBSYSTEM: INFRASTRUCTURE (INF)

TSI: [Regulation \(EU\) 1299/2014](#) (TSI INF), point 5.3.3

CONFORMITY ASSESSMENT: Track sleepers (point 6.1.3.7, table n. 20 in section 6.1.2)

NoBo: Instytut Kolejnictwa [NB 1467]

Track sleepers

6.1.2. Application of modules

(1) The following modules for conformity assessment of interoperability constituents are used:

- (a) CA 'Internal production control'
- (b) CB 'EC type examination'
- (c) CC 'Conformity to type based on internal production control'
- (d) CD 'Conformity to type based on quality management system of the production process'
- (e) CF 'Conformity to type based on product verification'
- (f) CH 'Conformity based on full quality management system'

(2) The modules for conformity assessment of interoperability constituents shown in Table 20.

Table 20

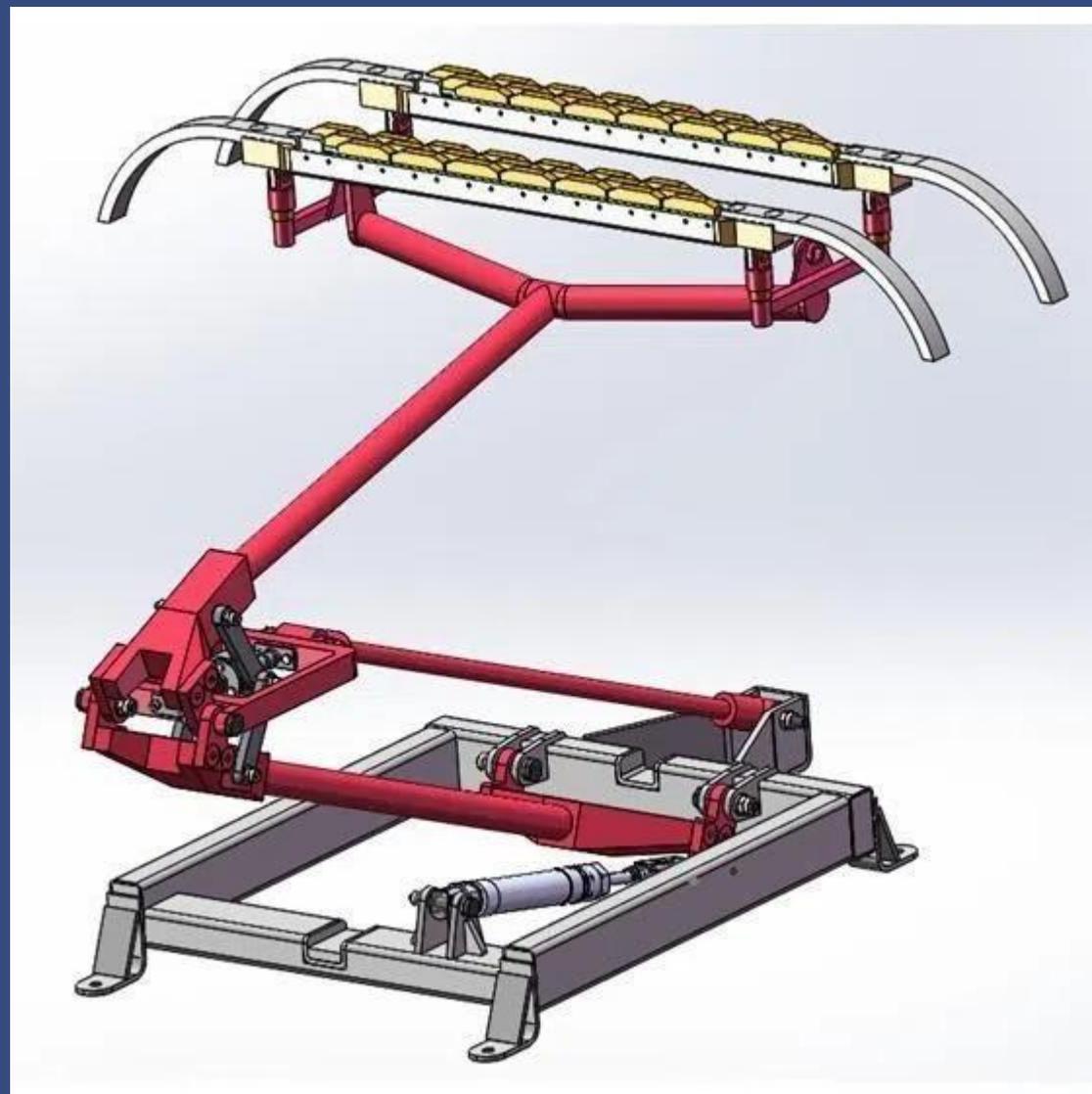
Modules for conformity assessment to be applied for interoperability constituents

Procedures	Rail	Rail fastening system	Track sleepers
Placed on the EU market before entry into force of relevant TSIs	CA or CH	CA or CH	
Placed on the EU market after entry into force of relevant TSIs	CB + CC or CB + CD or CB + CF or CH	CA or CH	

EXERCISE 4

Pantograph

Device for transmitting power from the overhead catenary to the train



Pantograph

MANUFACTURER: Richard AG Murgenthal (with QMS)

PRODUCTION VOLUME: > 400 units per year

SUBSYSTEM: Rolling Stock (RST)

TSI: [Regulation \(EU\) 1302/2014](#) (TSI Loc & Pas), point 5.3.10

CONFORMITY ASSESSMENT: Pantograph (point 6.1.3.7, table of modules in section 6.1.2)

NoBo: Arsenal Railway Certification GmbH [NB 2250]

Pantograph

6.1.2. *Application of modules*

Modules for EC certification of conformity of interoperability constituents:

Module CA	Internal production control
Module CA1	Internal production control plus product verification by individual examination
Module CA2	Internal production control plus product verification at random intervals
Module CB	EC-Type examination
Module CC	Conformity to type based on internal production control

Module CD	Conformity to type based on quality management system of the production process
Module CF	Conformity to type based on product verification
Module CH	Conformity based on full quality management system
Module CH1	Conformity based on full quality management system plus design examination
Module CV	Type validation by in service experience (Suitability for use)

Pantograph

- (1) The manufacturer or his authorised representative established within the European Union shall choose one of the modules or module combinations indicated in the following table for the constituent to be assessed:

TSI point	Constituents to be assessed	Module						
		CA	CA1 or CA2	CB + CC	CB + CD	CB + CF	CH	CH1
5.3.10	Pantograph		X ⁽¹⁾		X	X	X ⁽¹⁾	X

EXERCISE 5

Y25 Bogie & Running Gear

Bogie consisting of wheelset, axle box, suspension device, bogie frame, basic brake rigging and a load-proportional device.

Main technical & performance parameters:

Gauge: 1,435mm

Axle load: 22.5t

Tare weight: ≤ 4.7 t

Wheelbase: 1,800mm

Maximum running speed:
120km/h

Diameter of wheels:
920mm



Y25 Bogie & Running Gear

INPUT

MANUFACTURER: SIDERURGICA REQUENA, S.A.U.

PRODUCTION VOLUME: > 400 units per year

SUBSYSTEM: Rolling Stock (RST/WAG)

TSIs: [Reg. 321/2013](#) (TSI WAG) & [Reg. 1304/2014](#) (TSI NOI)

CONFORMITY ASSESSMENT:

For ICs → point 6.1.2

For Subsystem → point 6.2.1 [(SB + SD), (SB + SF) or (SH1)]

Y25 Bogie & Running Gear

INPUT

OBJECT OF NOBO ASSESSMENT: Replacement of bogie Y25 (width 1435 mm) by bogie Y21 (width 1668 mm) in 6 RIV wagons, Res series, registered in Slovakia

Y25 Bogie & Running Gear

Table 9

Modules to be applied for interoperability constituents

Point	Constituent	Modules					
		CA1 or CA2	CB + CD	CB + CF	CH	CH1	CV
4.2.3.6.1	Running gear		X	X		X	
	Running gear — established	X			X		
4.2.3.6.2	Wheelset	X (*)	X	X	X (*)	X	
4.2.3.6.3	Wheel	X (*)	X	X	X (*)	X	
4.2.3.6.4	Axle	X (*)	X	X	X (*)	X	

Interoperability constituents for TSI WAG

Point	Constituent	Modules					
		CA1 or CA2	CB + CD	CB + CF	CH	CH1	CV
4.2.3.6.6	Automatic variable gauge system	X (*)	X	X	X (*)	X	X (**)
4.2.4.3.5	Friction element for wheel tread brakes	X (*)	X	X	X (*)	X	X (**)
5.3.5	Rear-end signal	X			X		

(*) Modules CA1, CA2 or CH may be used only in the case of products placed on the market, and therefore developed, before the entry into force of this TSI, provided that the manufacturer demonstrates to the NoBo that design review and type examination were performed for previous applications under comparable conditions, and are in conformity with the requirements of this TSI; this demonstration shall be documented, and is considered as providing the same level of proof as module CB or design examination according to module CH1.

(**) Module CV shall be used in case the manufacturer of friction element for wheel tread brakes has no sufficient return of experience (according to its own judgment) for the proposed design.

Y25 Bogie & Running Gear

Subsystem

Table 10

Modules for EC verification of subsystems

SB	EC-Type Examination
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Y25 Bogie & Running Gear

Bogie & running gear are ICs → **CB** + **CD** certificates issued for two types of bogies Y25 & Y21 (certificates not in ERADIS)

For this case **SB** + **SD** certificates issued (available in ERADIS):

- 1615/1/**SB**/2023/RST/ES/21080042MR-1/V01
- 1615/4/**SD**/2023/RST/ES/21080042MR-1/V01

WHY?

Y25 Bogie & Running Gear

Certificado CE de examen de tipo

N° 1615/1/SB/2023/RST/ES/21080042MR-1/V01

De acuerdo con la Directiva (UE) 2016/797 de 11 de mayo de 2016 (y sus modificaciones posteriores)

Evaluación de acuerdo con el Documento Técnico de la ERA, 000MRA1044 versión 1.1 de junio 2017.

Objeto de la evaluación: Subsistema Material Rodante
Certificación de la sustitución de bogie Y25 (ancho 1435 mm) por bogie Y21 (ancho 1668 mm) en 6 vagones RIV, serie Res, inscritos en Eslovaquia

OBJECT OF ASSESSMENT: Replacement of bogie Y25 (width 1435 mm) with bogie Y21 (width 1668 mm)

Applicant requested NoBo to assess the impact of such replacement on the wagon subsystem

Y25 Bogie & Running Gear

Certificates

- 1615/1/**SB**/2023/RST/ES/21080042MR-1/V01
- 1615/4/**SD**/2023/RST/ES/21080042MR-1/V01

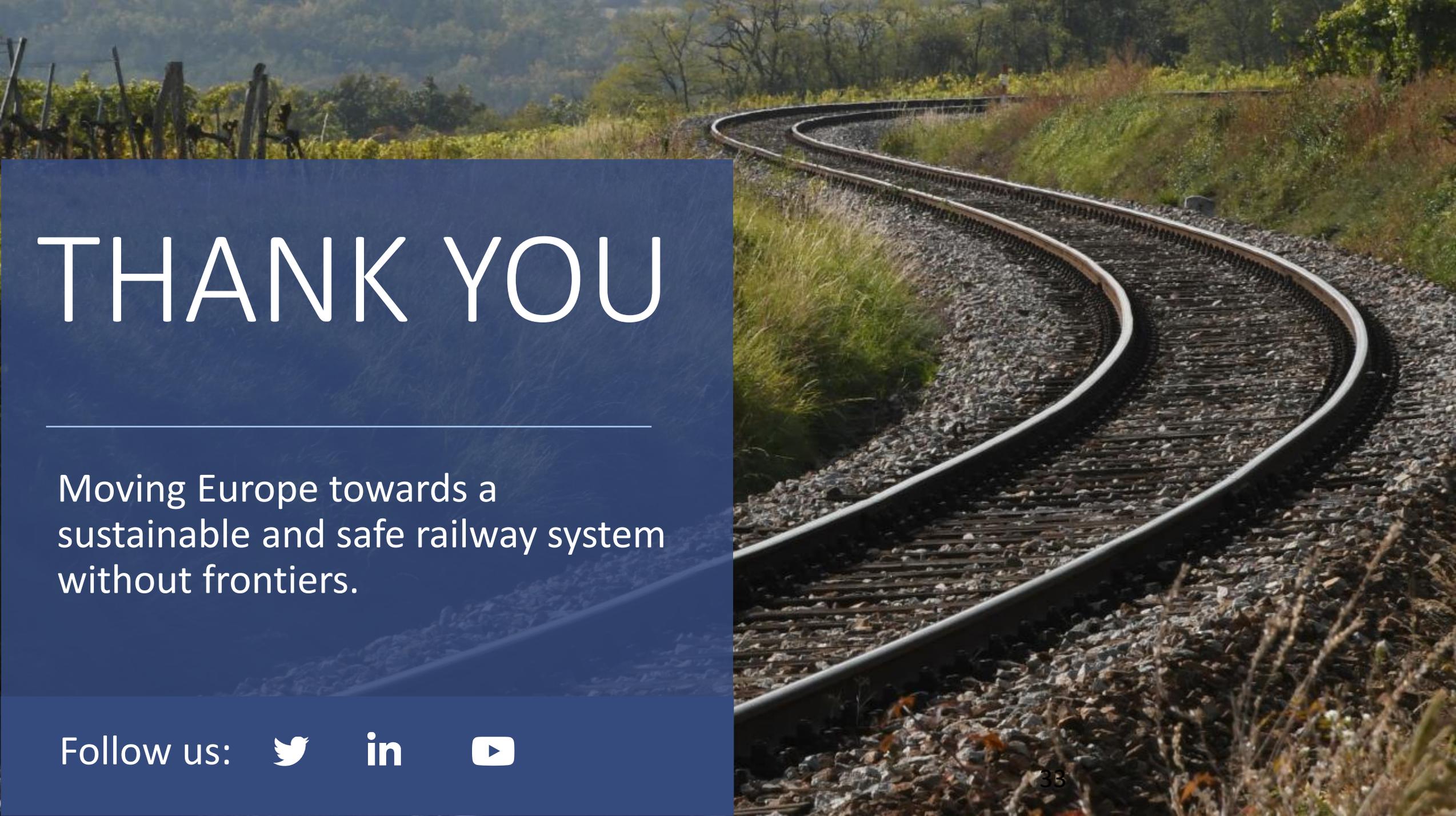
are not for the assessment of the IC bogie but for the
SUBSYSTEM (WAGON) where the bogie was replaced

HAVE A QUESTION? NEED FURTHER CLARIFICATIONS ON NOBO?

Drop a line to:

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THANK YOU

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