



Guideline

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Products Subject to Quality Inspection

Track Superstructure Materials

Version 1st of March 2024

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All changes in Part 1 have been marked with a margin bar on the left compared to the previous version of 01.03.2022.

Part 2: Determination of the minimum scope of quality assurance measures on parts, components and systems

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All changes in Part 2 have been marked with "2" in the respective field compared to the previous version of 01.03.2022 and the margin bar for the respective line.

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Teil 1: General rules

1 Purpose

- | | |
|--|--------------------------|
| (1) The list of products subject to quality assurance regulates the minimum scope of the quality assurance measures of Deutsche Bahn AG (DB AG) for the products listed. The provisions made apply both to the procurement of these products by Deutsche Bahn AG and its affiliated companies and to the procurement of these products by contractors (AN)/sub-contractors (UAN) within the scope of orders placed by Deutsche Bahn AG and its affiliated companies. | Basic |
| (2) The list of products subject to quality control consists of <ul style="list-style-type: none"> - Part 1: General regulations - Part 2: Specification of the minimum scope of quality assurance measures on parts, components and systems. | Constituent parts |
| (3) This list applies to the procurement of parts, components and systems for new construction as well as maintenance of/on permanent way materials. | Scope |

2 General notes

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| (1) The products shall be assigned to test levels P I and P II according to aspects of complexity and safety relevance. The assignment of the products to P I/P II and the evaluation of the Contractor's quality capability - Q1, Q2 or Q3 - result in the type and scope of the quality assurance measures to be carried out by Deutsche Bahn AG's quality assurance department and by the Contractor. | Inspection levels/ quality capability of Contractor |
| (2) New products that are not listed in Part 2 but are comparable with the products listed shall be allocated appropriate quality assurance measures correspondingly. | New products |
| (3) The basis for action are the contractually agreed regulations (e.g. EVB, DIN, EN, UIC, DBS, drawings, checklists, specifications). | Handlungsgrundlage |

3 Quality capability of Contractor

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| (1) The quality assurance department of DB AG's Purchasing Department evaluates the Contractor's quality capability and classifies the Contractor in the Q1, Q2 or Q3 category. | Quality capability of Contractor |
| (2) This classification is usually valid for one year and can be updated if necessary. The update is based on the evaluation of the quality data (e.g. complaints, product probation, quality data) and/or on the result of an audit. | Update |
| (3) The classification may be changed at any time in the event of changes in the quality capability of the Contractor or its Subcontractors or in the quality of the products and services. | Change |
| (4) Non-classified employees of Deutsche Bahn AG shall be treated as employees of category Q3. | Constructors with no Q-rating |

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4 Inspection levels

- (1) The scope of the quality assurance measures is basically derived from the following tables. **Scope**

Products with inspection level	Contractor's Q-rating	Quality assurance measures
I	Q1	Deutsche Bahn AG carries out sample testing of the deliveries for product inspection purposes. Delivery with 3.1 inspection certificate/'Ü-EBA' conformity mark/CE marking and delivery release/inspection certificate by DB AG.
	Q2	Deutsche Bahn AG checks every delivery. Delivery with 3.1 inspection certificate/'Ü-EBA' conformity mark/CE marking and delivery release/inspection certificate by DB AG.
	Q3	Contractor is barred

Table 1: QA measures for inspection level I (PI) products

Products with inspection level	Contractor's Q-rating	Quality assurance measures
II	Q1	Deutsche Bahn AG accepts complete inspection by the manufacturer. Regular inspections of Contractor by DB AG. Delivery with 3.1 inspection certificate/'Ü-EBA' conformity mark /CE marking.
	Q2	Deutsche Bahn AG carries out sample testing of the deliveries for product inspection purposes. Delivery with 3.1 inspection certificate/'Ü-EBA' conformity mark /CE marking and delivery release/inspection certificate by DB AG.
	Q3	Contractor is barred

Table 2: QA measures for inspection level II (PII) products

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5 Manufactured-related product qualification (HPQ)

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|-----|--|-------------------------------------|
| (1) | Manufacturer-related product qualification is a quality assurance instrument of Deutsche Bahn AG and is generally based on requirements from national and international railway-specific standards, regulations and guidelines. | Basis |
| (2) | The aim of the HPQ is to ensure that special products are only supplied by manufacturers who have demonstrated that they can meet the requirements for safety, reliability and process capability. The HPQ is required from manufacturers for specific production processes (e.g. casting, forging) who supply directly or indirectly to Deutsche Bahn AG. The specific products are identified in Part 2 of this document. | Objective |
| (3) | <p>The validity of the HPQ is usually 3 years. An HPQ shall be performed again</p> <ul style="list-style-type: none"> - in case of relocation of production - in the event of changes to production methods or process sequences - after the expiry of the 3-year validity period in the case of indirect suppliers - after 6 years at the latest in the case of direct suppliers (after 3 years, a one-time extension can take place if deliveries have been made on the basis of a contract and the conditions on the basis of which the HPQ was issued have not changed). | Validity |
| (4) | <p>In the previous edition, some products in Part 2 were allocated to the manufacturing processes. An adjustment has been made here. The manufacturing processes are stored in the manufacturer's master data in the quality assurance infrastructure and are then listed in the HPQ certificate. These include:</p> <ul style="list-style-type: none"> - Rolling - Forging - Casting - Welding - Mechanical processing - Tempering | Special production processes |

6 Quality engineering (QE) methods

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| (1) | In order to support the quality planning of the CO during the entire product development, the requirements of DB AG for quality engineering methods are described below. QE methods are to flank testing quality assurance measures such as HPQ and control monitoring and to supplement these with their preventive approach. | Basis |
| (2) | The aim of the QE measures is to ensure the translation of requirements into product characteristics and to adequately control the delivery quality of products subject to quality assurance through preventive quality assurance and evaluation of the design and manufacturing processes. | Objective |

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- (3) Contractors with development responsibility are obliged to document planned measures to safeguard product and process quality during development in a QE plan. The selection of suitable measures and components shall be based on a risk-based approach. **Quality planning (QE plan)**
- (4) Obligatory results of the product and process development of the Contractor are design and process FMEA according to DIN EN 60812 in which the progress of the risk minimization is to be documented. For the execution, at least the specifications according to VDA Volume 4 "Assuring Quality in the Process Environment" or AIAG "Potential Failure Mode and Effects Analysis (FMEA)", shall be applied. The equivalence of FMEA based on other standards than those mentioned shall be proven by the Contractor. For the evaluation of the significance of a failure, the following catalog shall be used in addition to the aforementioned standards: **FMEA**

1	Very minor , very minor functional impairment, only detectable by skilled personnel
2-3	Minor , minor functional impairment of the components, elimination during the next maintenance session, functional limitation of operating and comfort systems
4-6	Moderate , functionality of components limited, immediate error-elimination not absolutely necessary, functional limitation of important operating and comfort systems, alternatives possible
7-8	Severe , severe functional limitation of components, immediate elimination mandatory, functional limitation of important subsystems, slow approach, train at a standstill
9-10	Very severe , safety risk, statutory requirements not met, disproportionately high cost of replacement in the event of breakdown, damage, or maintenance work

Table 3: Importance of errors

- (5) The maintainability and availability in operation in accordance with DIN EN 50126 shall be taken into account in the design FMEA. **Maintainability and availability**
- (6) The Contractor shall be obliged to perform a process FMEA prior to the start of series production and to document it as one of the prerequisites for internal production release. **Internal production release**
- (7) The documentation of the QE measures shall be kept up to date, in particular field data, test results as well as internal and external complaints shall be taken into account. In addition, a revision of design and process FMEA is required in the following cases: **Updating**
- Design changes
 - Relocation of production
 - Change of production methods or process flows
- (8) The effectiveness of the QE methods and the resulting measures shall be verified by annual internal audits of the CO. **Effectiveness checks**
- (9) The QE plan, design and process FMEA shall be submitted to Deutsche Bahn AG for inspection upon request. **Inspection**
- (10) The QE plan and the design and process FMEA shall be checked by Deutsche Bahn AG. An initial review of the process FMEA shall be **Initial checks**

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performed at the latest prior to series production, for example for HPQ or initial sample inspection.

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| (11) The Contractor is obliged to evaluate its UAN on the basis of risk-based criteria. Points (1) - (10) shall apply analogously to UANs that contribute significantly to the success of the end product and the product of the UAN is listed in Part 2 of the LgP. The application of points (1)-(10) for the responsible UAN shall be verified by the CO. | Subcontractors |
| (12) One of the points 7a) - 7c) or a new tender leads to immediate application of the requirements of this guideline. A process FMEA must be prepared by 31.12.2018 for all products subject to quality inspection to be supplied to DB AG. A design FMEA is only required for newly developed products that are approved by DB Netz AG after 31 December 2018. | Transition period |
| (13) An essential task of quality assurance is the monitoring of test criteria. Suitable measuring and test equipment is required for the comparability of measurement and test results. Calibration is performed by appropriate procedures and institutions. | Measuring equipment |
| (14) In the quality assurance of all railway-specific and standardized measuring and test equipment, the general requirements for the competence of testing and calibration laboratories according to DIN ISO 17025 are decisive. | Requirements for testing laboratories |

7 Special production processes

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| (1) Special manufacturing processes are regulated in the respective standards and Technical Terms of Delivery (TL). | Technical Terms of Delivery (TL) |
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8 Regular inspections

- | | |
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| (1) In order to safeguard the quality interests of Deutsche Bahn AG, all COs with products of test level II and Q1 classification as well as the existing supply contract shall be monitored by DB AG's quality assurance department. Product and/or process audits are carried out as part of this regular monitoring. The audits can also take the form of unannounced inspections. | Regular inspections at contractors' premises |
| (2) If quality risks or quality deficiencies are identified in the course of the regular surveillance, this may result in a change of the Q -classification and/or the withdrawal of the HPQ.

The direct effects on existing supply and service contracts will be examined by Purchasing once the results are available and appropriate measures will be initiated. | Shortcomings and validity |
| (3) For subcontractors that supply products subject to quality inspection in accordance with this list to DB AG's CO, the respective CO must carry out the defined number of regular inspections (see "Guideline for regular inspections" in the supplier portal of Purchasing). The planning of the quality checks and their results (including findings and measures) must be proven to Deutsche Bahn AG as part of the assessment of the quality capability or as part of the standard monitoring of the contractor. | Regular inspections at subcontractors' premises |
| (4) Insofar as risks and/or defects have been identified at UAN, the effects on the Q rating of one or more COs and the further measures at the UAN shall be determined in consultation with the CO's purchasing and quality | Shortcomings |

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assurance departments. The Contractor shall bear any additional expenses incurred by Deutsche Bahn AG as a result.

9 8D report

- (1) In the context of complaints, an 8D report is exchanged between the Contractor and DB AG. The process includes the following elements: **Basis**
- D1: Team determination
 - D2: Error description
 - D3a: Immediate measures DBAG
 - D3b: Immediate measures supplier
 - D4: Causes of error
 - D5: Possible corrective measures
 - D6: Implemented corrective measures
 - D7: Preventive measures implementation
 - D8: Documentation, lessons learned
- (2) (D1) Depending on the nature of the problem, an interdisciplinary team with sufficient product and process knowledge must be appointed. **Implementation**
- (D2) The description of the fault shall be based on facts.
- (D3) If necessary, immediate measures must be taken by both the Contractor (and/or its subcontractor) and DB AG to prevent further damage (e.g. blocking of the material or 100 % testing).
- (D4) On the basis of data and facts, probable causes of the fault are to be analyzed by the contractor (subcontractor).
- (D5) The selection of corrective measures to eliminate the cause of the defect is the responsibility of the contractor. Based on the root cause analysis, measures are to be identified that permanently eliminate the fault in the sense of DB AG and do not cause any undesired side effects. Before implementing a measure, its effectiveness must be checked. The focus should be on error prevention and error detection.
- (D6) In accordance with the effectiveness demonstrated under D5, corrective measures must be defined that reliably prevent the recurrence of the fault. The effectiveness of the measures taken shall be monitored over an appropriate period of time. Once effectiveness has been demonstrated, immediate measures still in progress, such as additional tests, may be scaled back.
- (D7) In order to exclude recurrences of the occurred/similar defects, the contractor (and/or his subcontractor) shall take preventive measures such as e.g. inclusion of the defect in the design and/or process FMEA, adaptation of guidelines, work instructions and internal processes, testing of further production lines or related processes for robustness against the occurred defect.
- (D8) In the sense of a Lesson Learned, the most important findings-se from the 8D are documented. An 8D report can only be closed by appropriately authorized personnel and with the consent of the customer DB AG.

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(3) - remains free -

(4) The printed form 120.0381V30 "Guideline & Form 8D Report" in the Annex to the Guideline shall be used internally to create the 8D Report (see also DB Netz process portal: LN24-01-07). A separate external guideline is also stored in the supplier portal.

Printed form

10 Documentation and proofs of conformity

(1) For products and components according to the list "Products subject to quality inspection - permanent way material" Part 2, the supplier shall in principle document a documentation/proof of conformity depending on the inspection level of the product (PI or PII) and its classification (Q1 or Q2) for each delivery or partial delivery. The supplier must keep the proof of conformity for at least 10 years.

Inspection certificate

Verification for products of test level I:

- as Q1 supplier: acceptance test certificate 3.1 according to DIN EN 10204 and delivery release/test certificate of DB AG

- as Q2-supplier: acceptance test certificate 3.1 according to DIN EN 10204 and delivery release/ test certificate of DB AG

Verification for products of test level II:

- as Q1 supplier: acceptance test certificate 3.1 according to DIN EN 10204

- as Q2-supplier: acceptance test certificate 3.1 according to DIN EN 10204 and delivery release/ test certificate of DB AG

(2) These certificates of conformity serve Deutsche Bahn AG or EBA and the industry as proof that the agreed quality assurance measures have been carried out and that the products meet the requirements in terms of quality. Furthermore, the identification and unambiguous assignment of products and components in the event of defect notifications shall be ensured.

TSI conformity declaration

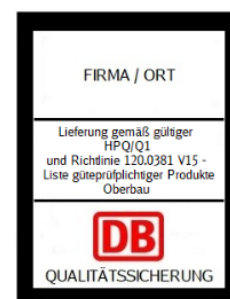
TSI declarations of conformity shall be provided by the supplier for the following components of the track:

- Rails, sleepers, switches and crossings and complete rail fastening systems.

11 Marking

(1) Starting with 01.01.2022 the QS mark will be introduced.

It certifies that the supplier and/or manufacturer complies with the manufacturing and delivery conditions of the products listed in the product list of Deutsche Bahn AG. of the products listed in the product list of Deutsche Bahn AG and is monitored by the Quality Assurance Procurement department.



QS marking

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It is sent to the supplier in connection with the HPQ and/or quality classification and can be attached to the delivery bill, the packaging or the product.

It is not necessary to send the 3.1 certificates to the construction sites when using the QS mark. However, if necessary, the 3.1 certificates must be sent to the customer or the user of the equipment or the documents must be inspected.

- (2) On the basis of the Administrative Regulation BAU of the Federal Railway Authority (EBA), the U-EBA mark shall be affixed to the construction product, the packaging or the delivery bill, thus confirming that the construction product supplied by it complies with the Railway-Specific Construction Rules Lists of the EBA, the approval or the consent in the individual case.



U – EBA marking

This applies to all products approved by the EBA after 1994 have been approved.

- (3) For track ballast, the regulations for CE marking in accordance with DIN EN 13 450 shall be observed. The acceptance test certificate 3.1 according to DIN EN 10 204 is replaced by this.

CE marking

Use of the CE - mark: (concerns only ballast)

CE specimen

CE		
01234		
AnyCo Ltd, P.O. Box 21, B-1090		
02		
0123-CPD-0456		
EN 13450		
Gesteinskörnungen für Gleisschotter		
Kornform	Kategorie	(z. B. F1,3)
Korngröße	Bezeichnung	(<i>u</i> & <i>l</i>) &
	Kategorie	(z. B. B)
Rohdichte	Sollwert	(Mg/m ³)
Widerstand gegen Zertrümmerung	Kategorie	(z. B. LA ₁₀ 18)
Abriebwiderstand	Kategorie	(z. B. M ₀₄ RB 5)
Reinheit	Kategorie	(z. B. B)
Freisetzung gefährlicher Substanzen	z. B. Substanz X: 0,2 µm ³	
Frost-Tau-Wechsel-Beständigkeit	Sollwert	(F oder MS)
Verwitterungsbeständigkeit	Sollwert	(SB)

CE-Konformitätskennzeichnung, bestehend aus dem in der Richtlinie 93/168/EWG angegebenen „CE“-Symbol

Kennnummer der Zertifizierungsstelle

Name oder Kennzeichen und eingetragene Anschrift des Herstellers

die letzten beiden Ziffern des Jahres, in dem das Kennzeichen angebracht wurde

Nummer des EU-Zertifikats

Nummer der Europäischen Norm

Beschreibung des Produktes und

Angaben zum Produkt und den Vorschriften unterliegenden Merkmalen

Bild ZA.1 - Beispiel für die Angaben zur CE-Kennzeichnung von Gesteinskörnungen für Gleisschotter nach System 2+

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12 List of abbreviations

AIAG	Automotive Industry Action Group
DB AG	German Railways (<u>D</u> eutsche <u>B</u> ahn <u>A</u> G)
DBS	German Railway Standard (<u>D</u> eutsche <u>B</u> ahn <u>S</u> tandard)
DIN	German Institute for Standardization e.V. (<u>D</u> eutsche <u>I</u> nstitut für <u>N</u> ormung e.V.)
EBA	German Federal Railway Authority (<u>E</u> isenbahn - <u>B</u> undes <u>a</u> mt)
EN	European Standard (<u>E</u> uropäische <u>N</u> orm)
EVB	Supplementary Conditions of Contract (<u>E</u> rgänzende <u>V</u> ertrags <u>b</u> edingungen)
FMEA	Failure Mode and Effects Analysis (<u>F</u> ehler <u>m</u> öglichkeiten- und - <u>e</u> influss <u>A</u> nalyse)
HPQ	Manufacturer-related product qualification (<u>H</u> erstellerbezogene <u>P</u> rodukt <u>q</u> ualifikation)
log/ low	Engineer drawing track superstructure - tracks/ Engineer drawing track superstructure - switches
LgP	List of products subject to quality inspection (<u>L</u> iste <u>g</u> üteprüfpflichtiger <u>P</u> rodukte)
P I	Inspection level 1 (<u>P</u> rüfstufe <u>1</u>)
P II	Inspection level 2 (<u>P</u> rüfstufe <u>2</u>)
QE	Quality classification (<u>Q</u> ualität <u>e</u> instufung)
QS	Quality assurance (<u>Q</u> ualität <u>s</u> sicherung)
RÜ	Regular inspection (<u>R</u> egel <u>ü</u> berwachung)
TL	Technical Terms of Delivery
TSI	Technical Specifications for Interoperability (<u>T</u> echnische <u>S</u> pezifikationen für die <u>I</u> nteroperabilität)
UIC	International Union of Railways (frz. : <u>U</u> nion <u>I</u> nternational des <u>C</u> hemins de Fer)
VDA	Association of the Automotive Industry (<u>V</u> erband <u>d</u> er <u>A</u> utomobilindustrie)

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Structural level	Product groups/products	Applicable documents	HPQ	In-spection level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
1	Rails			II					
1.1	Track rails (Vignole rails from 46 kg/m)								
1.1.1	Track rails (Vignole rails from 46 kg/m, as rolled)	TL 889.2541	X	II	2	Insp. Cert. 3.1	X	10710010 ²	
1.1.2	Track rails (Vignole rails from 46 kg/m, head hardened)	TL 889.2541	X	II	2	Insp. Cert. 3.1	X	10710010 ²	
1.1.3	Track rails (Vignole rails from 46 kg/m, special grade)	TL 889.2541	X	II	2	Insp. Cert. 3.1	X	10710010 ²	
1.2	Rails for switches and crossings								
1.2.1	Rails for switches and crossings (as rolled)	TL 889.2542	X	II	2	Insp. Cert. 3.1	X	10710030 ²	
1.2.2	Rails for switches and crossings (head-hardened)	TL 889.2542	X	II	2	Insp. Cert. 3.1	X	10710030 ²	
1.2.3	Rails for switches and crossings (special grade)	TL 889.2542	X	II	2	Insp. Cert. 3.1	X	10710030 ²	
1.3	Check rails	TL 889.2543	X	II	2	Insp. Cert. 3.1	X	10710030	
1.4	Flash butt welded rails (fixed plant)	TL 889.2551	X	II	2	Insp. Cert. 3.1	X	10710020	
1.5	Reconditioned rails (fixed plant)	TL 889.2551	X	II	2	Insp. Cert. 3.1	X	10770010	
1.6	Transition rails manufacturing (fixed plant)	TL 889.2551	X	II	2	Insp. Cert. 3.1	X	10710020	
1.7	Running surface milling of new rails (fixed plant)	TL 889.2551	X	II	2	Insp. Cert. 3.1	X	10710020	
1.8	Grooved rails	EN 14811	X****	-	-	Insp. Cert. 3.1	X	10710010	****HPQ for track rails required (structural level 1.1)

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Structural level	Product groups/products	Applicable documents	HPQ	In-specification level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
2	Rail connectors			II					
2.1	Fishplate bolts and/or anchor bolts	TL 889.0024	X	II	2	Insp. Cert. 3.1	X	10750010	
2.2	Flange nuts and/or nuts	TL 889.0024	X	II	2*	Insp. Cert. 3.1	X	10750010	*If necessary, at the supplier of the screws
2.3	Fishplate nuts and bolts (high-strength) and/or anchor bolts (high-strength)	TL 889.0024	X**	II	2	Insp. Cert. 3.1	X	10750010	**same manufacturer's mark
2.4	Insulating end posts	TL 889.0280	X	II	2	Insp. Cert. 3.1	X	10750020	
2.5	Insulated block joints (factory assembled)	TL 889.0256	X	II	2	Insp. Cert. 3.1	X***	10710010	*** Company signs
2.6	Insulated block joint kits	TL 889.0256	X	II	2	Insp. Cert. 3.1	X	10710010	
2.7	Fishplates ²	TL 889.0025, TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	
2.8	Emergency rail clamps	TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	
2.8.3	Bracket for emergency link clamps	TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	
2.9	Aluminothermic welding portions	TL 889.0248	X	II	2	Insp. Cert. 3.1	X	10710040	
2.10	Single-use crucibles with aluminothermic welding portions	TL 889.0248	X	II	2	Insp. Cert. 3.1	X	10710040	
2.11	Moulds for aluminothermic weldings	TL 889.0248	X	II	2	Insp. Cert. 3.1	X	10710040	

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Structural level	Product groups/products	Applicable documents	HPQ	In-specification level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
3	Rail fasteners			II					
3.1	Angle guide plates and/or plastic guide plates	TL 889.0280	X	II	2	Insp. Cert. 3.1	X	10750020	
3.2	Sleeper screws	TL 889.0024	X	II	2	Insp. Cert. 3.1	X	10750010	
3.3	Nuts and T-bolts								
3.3.1	T-bolts	TL 889.0024	X	II	2	Insp. Cert. 3.1	X	10750010	
3.3.2	Nuts for T-bolts	TL 889.0024	X*	II	2*	Insp. Cert. 3.1	X	10750010	*If necessary, at the Screws supplier's
3.4	Spring washers	TL 889.0006	X	II	2	Insp. Cert. 3.1	X	10750010	
3.5	Spring steel clamping elements								
3.5.1	Tension clamps	TL 889.0127	X	II	2	Insp. Cert. 3.1	X	10750010	
3.5.2	Clips and/or elastic rail spike	TL 889.0127	X	II	2	Insp. Cert. 3.1	X	10750010	
3.5.3	Inner bracing spring clips	TL 889.0127, TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10750010	
3.5.4	Wire form springs and/or tension springs	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10750010	
3.5.5	Torsion springs	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10750010	
3.5.6	Coil springs	log 30.7004	-	II	-	Insp. Cert. 3.1	-	10750010	
3.5.7	Leaf springs	TL 889.0127	X	II	2	Insp. Cert. 3.1	X	10750010	
3.6	Rail clamps ²	TL 889.0025, TL 889.0125, TL 889.0126 ²	X	II	2	Insp. Cert. 3.1	X	10750010	
3.7	Rail base plates ²	TL 889.0025, TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	welding if necessary ²
3.7.4	Collar inserts and/or spacers	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10750010	

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3.8	Rail insulator flats and/or rail insulator angles								
3.8.1	Rail insulator flats	TL 889.0280	X	II	2	Insp. Cert. 3.1	X	10750020	
3.8.2	Rail insulator angles	TL 889.0280	X	II	2	Insp. Cert. 3.1	X	10750020	
3.9	Rigid rail pads and/or rigid base plates								
3.9.1	Rigid rail pads	TL 889.0280	X	II	2	Insp. Cert. 3.1	X	10750020	
3.9.2	Rigid base plates	TL 889.0280	X	II	2	Insp. Cert. 3.1	X	10750020	
3.10	Elastic rail pads and elastic base plates								
3.10.1	Elastic rail pads	TL 889.0235	X	II	2	Insp. Cert. 3.1	X	10750020	
3.10.2	Elastic base plates	TL 889.0235	X	II	2	Insp. Cert. 3.1	X	10750020	
3.11	Height adjustment pads								
3.11.1	Height adjustment pads (plastic)	TL 889.0280	X	II	2	Insp. Cert. 3.1	X	10750020	
3.11.2	Height adjustment pads (metal)	IOG drawings	X	II	2	Insp. Cert. 3.1	X	10750010	
3.12	Rail gauge rod	IOG drawings	X	II	2	Insp. Cert. 3.1	X	10750010	welding ²
3.13	Rail anchors	IOG drawings	X	II	2	Insp. Cert. 3.1	X	10750010	
3.14	Rail dowels								
3.14.1	Rail plastic dowels	TL 889.0280	X	II	2	Insp. Cert. 3.1	X	10750020	
3.14.2	Rail metal coils for sleeper screws	log 50.5000	X	II	2	Insp. Cert. 3.1	X	10750010	

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Structural level	Product groups/products	Applicable documents	HPQ	In-spection level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
4	Sleepers & bearers			II					
4.1	Timber railway sleepers (impregnated)	TL 889.0144	X	II	2	Insp. Cert. 3.1	X	10720010	
4.2	Steel and/or cast-iron sleepers								
4.2.1	Steel sleeper	IOG drawings	X	II	2	Insp. Cert. 3.1	X	10720030	welding ²
4.2.2	Y-steel sleepers	IOG drawings	X	II	2	Insp. Cert. 3.1	X	10720030	welding ²
4.2.3	Hollow sleepers								
4.2.3.1	Hollow sleepers for cables ² (unpadded)	TL 889.0025, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10720030	welding if necessary ²
4.2.3.1.5 ²	Hollow sleepers for cables ² (padded)	TL 889.1452	X	II	2	Insp. Cert. 3.1	X	10720030	
4.2.3.2	Hollow bearer for locking system (unpadded)	TL 889.0126, IOW drawings	X	II	2	Insp. Cert. 3.1	X	10720030	
4.2.3.3	Hollow bearer for locking system (padded)	TL 889.1452	X	II	2	Insp. Cert. 3.1	X	10720030	
4.2.4	Steel channel sleepers for bridges	IOW drawings	X	II	2	Insp. Cert. 3.1	X	10720030	welding ²
4.3	Concrete sleepers			II					
4.3.1	Concrete sleepers (new, unpadded)	TL 889.0143	X	II	6	Insp. Cert. 3.1	X	10720020	
4.3.2	Concrete sleepers (new, padded)	TL 889.1452	X	II	6	Insp. Cert. 3.1	X	10720020	
4.3.3	Concrete bearers (new, unpadded)	TL 889.0143	X	II	6	Insp. Cert. 3.1	X	10720021	
4.3.4	Concrete bearers (new, padded)	TL 889.1452	X	II	6	Insp. Cert. 3.1	X	10720021	
4.3.5	Concrete sleepers (refurbished)	TL 889.0146	X	II	4	Insp. Cert. 3.1	X	10770020	

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Structural level	Product groups/products	Applicable documents	HPQ	In-spection level	Number of Regular Insp./year	Documentation	Manufactures` mark	Material-group	Comments
4.4	Plastic sleepers								
4.4.1 ²	Plastic sleepers (tracks) ²	Technical instructions	X	II	1	Insp. Cert. 3.1	X	10720050	
4.4.2 ²	Plastic sleepers (switches) ²	Technical instructions	X	II	1	Insp. Cert. 3.1	X	10720050	
4.4.3 ²	Plastic sleepers (bridges) ²	Technical instructions	X	II	1	Insp. Cert. 3.1	X	10720050	
4.5	Elastic under sleeper pad	TL 889.1451	X	II	2	Insp. Cert. 3.1	X	10750020	
4.6	Lateral resistance anchor (end plates)	log 80.0001 till log 80.0003	X	II	2	Insp. Cert. 3.1	X	10750010	welding ²
4.7	Lateral resistance anchor (central plates)	log 80.0100 till log 80.0102	X	II	2	Insp. Cert. 3.1	X	10750010	welding ²
4.8	Concrete slab tracks								
4.8.1	Prefabricated slab tracks	TL 889.0143	X	II	1	Insp. Cert. 3.1	X	21110100	
4.8.2	Sound absorber panels for concrete slab tracks	Diverse DIN	X	II	1	Insp. Cert. 3.1	X	21110100	
4.8.3	Road vehicle access panels	Diverse DIN	X	II	1	Insp. Cert. 3.1	X	21110100	
4.8.4 ²	Sleepers for slab track ²	Diverse DIN	X	II	1	Insp. Cert. 3.1	X	21110100	
4.8.5 ²	ZSX-Sleepers ²	TL 889.0143	X	II	1	Insp. Cert. 3.1	X	10720020	Two B90 sleepers connected with a cross anchor

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Structural level	Product groups/products	Applicable documents	HPQ	In-spection level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
5	Switches, switch components, crossings and/or expansion joints			II					
5.1	Switches	TL 889.0120	X	II	2	Insp. Cert. 3.1	X	10740040	welding ²
5.1.1	Area between toe and heel			II					
5.1.1.1	Forged tongue rails	TL 889.0122	X	II	2	Insp. Cert. 3.1	X	10740010	
5.1.1.2	Half sets	TL 889.0120	X	II	2	Insp. Cert. 3.1	X***	10740010	*** Company plaque
5.1.1.3	Replacements for individual switch blade	TL 889.0120	X	II	2	Insp. Cert. 3.1	X	10740010	
5.1.1.4	Replacements for individual stock rails	TL 889.0120	X	II	2	Insp. Cert. 3.1	X	10740010	
5.1.2	Closure rail area								
5.1.2.1	Closure rails, wing rails, Running rails	TL 889.0120	-	II	2	Insp. Cert. 3.1	X	10710030	HPQ in rolling mill (see 1.1 and 1.2)
5.1.2.2	Check rails (fabricated)	TL 889.0120	X	II	2	Insp. Cert. 3.1	X	10740010	HPQ in rolling mill (see 1.3)
5.1.3	Common crossings or frogs			II					
5.1.3.1	Common crossing blocks and/or crossing vees (forging blanks) (heat-treated, bainitic)	TL 889.0125, TL 889.0142	X	II	2	Insp. Cert. 3.1	X	10740010	tempering ²
5.1.3.2	Common crossing blocks (fixed-nose, complete)	TL 889.0142	X	II	2	Insp. Cert. 3.1	X	10740010	
5.1.3.3	Common crossing blocks, heat-treated (fixed-nose, complete)	TL 889.0142	X	II	2	Insp. Cert. 3.1	X***	10740010	*** Company plaque
5.1.3.4	Common crossing blocks, heat-treated (swing-nose, complete)	TL 889.0142	X	II	2	Insp. Cert. 3.1	X***	10740010	*** Company plaque
5.1.3.5	Common crossing blocks, bainitic (fixed-nose, complete)	TL 889.0141	X	II	2	Insp. Cert. 3.1	X***	10740010	*** Company plaque
5.2	Crossings	TL 889.0120	X	II	2	Insp. Cert. 3.1	X	10740040	(see 5.1.1, 5.1.2, 5.1.3)
5.3	Expansion joints	TL 889.0120	X	II	2	Insp. Cert. 3.1	X	10740040	(see 5.1.1.)

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Structural level	Product groups/products	Applicable documents	HPQ	In-spection level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
5.4	Switch fastenings								
5.4.1	Heel blocks ²	TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	welding if necessary ²
5.4.2	Switch thermal expansion anchors	TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	
5.4.3.1	Rail supports and/or guard rail fixings	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10750010	welding if necessary ²
5.4.3.2	Switch blade spacer blocks ²	TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	
5.4.3.4	Check rail chairs ²	TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	
5.4.4	Base plates	TL 889.0025, TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10750010	
5.4.4.1 ²	Base plates without special requirement ²	TL 889.0025	-	II	-	Insp. Cert. 3.1	X	10750010	
5.4.5 ²	Slide chair plates and/or heel plates ²	TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	welding if necessary ²
5.4.5.3	Slide chair ²	TL 889.0125	-	-	-	Insp. Cert. 3.1	X	10750010	Component for the production of sliding chair plates
5.4.6	Check rail support plates ²	TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	welding if necessary ²
5.4.7	Hold-downs ²	TL 889.0025	- ²	II	2	Insp. Cert. 3.1	X	10750010	
5.4.8	Clamping bushing spring	TL 889.0280	X	II	2	Insp. Cert. 3.1	X	10750020	
5.4.9	Slide plate (moveable frog)	TL 889.0025	X	II	2	Insp. Cert. 3.1	X	10750010	
5.4.10	Central plates	TL 889.0025	X	II	2	Insp. Cert. 3.1	X	10750010	

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Structural level	Product groups/products	Applicable documents	HPQ	In-spection level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
5.5	Switch nuts and bolts and/or components			II					
5.5.1	Switch bolts as per IOW drawings	TL 889.0024	X	II	2	Insp. Cert. 3.1	X	10750010	
5.5.2	Nuts as per IOW drawings	TL 889.0024	X	II	2	Insp. Cert. 3.1	X	10750010	
5.5.3	Shims (pads under rail base plates)	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10750010	
5.6.	Switch setting systems			II					
5.6.1	Lockings (of points), clamplocks, HRS, WKV, WEV, CKA, EVZ and EVH locking systems	IOW drawings	X	II	2	Insp. Cert. 3.1	X	10740020	mounted
5.6.1.1 ²	Stretcher bars ²	TL 889.0025, TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10740020	
5.6.1.2 ²	Detector rods, coupling rods (in according to low) ²	-	-	-	-	-	-	-	Product is now anchored in the list for signalling
5.6.1.3	Permanent locking devices	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10750010	
5.6.1.4	Components for locking device			II					
5.6.1.4.1	Locking clamp bolts	TL 889.0024	X	II	2	Insp. Cert. 3.1	X	10740020	
5.6.1.4.2	Locking piece bolts and/or clamping bands	TL 889.0024	X	II	2	Insp. Cert. 3.1	X	10740020	
5.6.1.4.3	Blocks with threaded bolts	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10740020	
5.6.1.4.4	Guide pieces	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10740020	
5.6.1.4.5	Locking clamps and/or locking catches	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10740020	
5.6.1.4.6	Latching plates	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10740020	
5.6.1.4.7	Locking catches	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10740020	
5.6.1.4.8	Locking pieces and/or locking tuppets	TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10740020	
5.6.1.4.9	Pin joint to stretcher bar brackets ²	TL 889.0125, TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10740020	welding if necessary ²
5.6.2	Common crossing and Switch blade rolling devices	IOW drawings	X	II	2	Insp. Cert. 3.1	X	10740030	mounted

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Structural level	Product groups/products	Applicable documents	HPQ	Inspection level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
5.7	Sleeper connecting plates								
5.7.1	Sleeper connecting plates (unpadded)	TL 889.0025, TL 889.0125	X	II	2	Insp. Cert. 3.1	X	10750010	welding if necessary ²
5.7.2	Sleeper connecting plates (padded)	TL 889.1452	X	II	2	Insp. Cert. 3.1	X	10750010	
5.8	Coupling joint plates	TL 889.0126	X	II	2	Insp. Cert. 3.1	X	10750010	
5.9	Drag shoe ejector constructions, rail transitions for bridges, special constructions	IOW drawings	X	II	2	Insp. Cert. 3.1	X		
6	Ballast			II					
6.1	Track ballast (new)			II					
6.1.1	Track ballast (new)	TL 889.0061	X	II	4	-	-	10730010	CE-marking, > 6 % quantity supplied
6.1.2	Track ballast (new)	TL 889.0061	X	II	2	-	-	10730010	CE-marking, ≥ 1 %, ≤ 6 % quantity supplied
6.1.3	Track ballast (new)	TL 889.0061	X	II	1	-	-	10730010	CE-marking, < 1 % quantity supplied
6.2	Track ballast (reconditioned with mobile equipment)			II					
6.2.1	Track ballast (reconditioned with mobile equipment)	TL 889.0061	X	II	4	-	-	10770030	CE-marking, > 6 % quantity supplied
6.2.2	Track ballast (reconditioned with mobile equipment)	TL 889.0061	X	II	2	-	-	10770030	CE-marking, ≥ 1 %, ≤ 6 % quantity supplied
6.2.3	Track ballast (reconditioned with mobile equipment)	TL 889.0061	X	II	1	-	-	10770030	CE-marking, < 1 % quantity supplied

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Structural level	Product groups/products	Applicable documents	HPQ	Inspection level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
6.3	Track ballast (reconditioned off site)			II					
6.3.1	Track ballast (reconditioned off site)	TL 889.0061	X	II	4	-	-	10770030	CE-marking, > 6 % quantity supplied
6.3.2	Track ballast (reconditioned off site)	TL 889.0061	X	II	2	-	-	10770030	CE-marking, ≥ 1 %, ≤ 6 % quantity supplied
6.3.3	Track ballast (reconditioned off site)	TL 889.0061	X	II	1	-	-	10770030	CE-marking, < 1 % quantity supplied
6.4	Track ballast (reconditioned on track)	TL 889.0061	X	II	1	-	-	10770030	CE-marking
6.5	Under-ballast mats	TL 889.0711	X	II	2	Insp. Cert. 3.1	X	10750020	
7²	- intentionally left blank - ²								
	The manufacturing processes "Rolling", "Forging", "Casting", "Welding", "Machining" and "Tempering" (previously structure level 7) are assigned to the manufacturers' master data in the quality assurance infrastructure and are named in Part 1 of this list. ²								
8	- intentionally left blank -								

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Structural level	Product groups/products	Applicable documents	HPQ	Inspection level	Number of Regular Insp./year	Documentation	Manufactures's mark	Material-group	Comments
9	Other track superstructure materials				track				
9.1	Other track superstructure materials without inspection certificate 3.1		-	-	-	-	-		Required in SAP (e.g. insulating fabric)
9.2	Other track superstructure materials with inspection certificate 3.1		-	-	-	Insp. Cert. 3.1	X		Required in SAP, Manufacturer's mark, if applicable according to specification (e.g. Nordlock washers and hexagon bolts or nuts according to EN)
9.3	Superstructure components in design, development or intended for blocking		-	-	-	-	-		Required for allocation in SAP through type support and quality assurance

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² Changes compared to the product list from 01/03/2022

Notes: For "packs", the allocation of the individual of the individual components, such as hook bolts and tension clamps in the respective product group.