



Guideline

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Products Subject to Quality Inspection

Track Superstructure Materials

Version 1 March 2021

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Part 1: General rules

1 Purpose

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| (1) The list of products subject to quality inspection regulates the minimum scope of the quality assurance measures of Deutsche Bahn AG (DB AG) for the products listed. The rules in place apply to the procurement of these products both by Deutsche Bahn AG and its affiliated companies, and by Contractor or its subcontractors for the purposes of orders placed by Deutsche Bahn AG and its affiliated companies. | Basis |
| (2) The list of products subject to quality inspection consists of <ul style="list-style-type: none"> - Part 1: General rules - Part 2: Defining the minimum scope of the quality assurance measures for elements, components, and systems | Constituent parts |
| (3) This list applies to the procurement of elements, components, and systems for new track superstructure construction or maintenance work. | Scope |

2 General notes

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| (1) Inspection levels P I and P II are assigned to the products according to issues of complexity and relevance to safety. The type and scope of the quality assurance measures to be performed by Deutsche Bahn AG's quality assurance unit and by Contractor are determined by the P I/P II levels and the assessment of Contractor's quality capability (Q1, Q2 or Q3). | 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 contractually agreed provisions (e.g. SCC, DIN, European standards, UIC, DBS, drawings, checklists, drawings) constitute the basis for action. | Basis for action |

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3 Quality capability of Contractor

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| (1) The quality assurance team within Purchasing at DB AG assesses the quality capability of Contractor and assigns Contractor a Q1, Q2, or Q3 rating. | Quality capability of Contractor |
| (2) This rating is usually valid for one year and can be updated if necessary. The rating is updated on the basis of an evaluation of the quality data (e.g. complaints, product proving, quality data) and/or with reference to the result of an audit. | Update |
| (3) The rating can be changed at any time in the event of changes in the quality capability of Contractor or its subcontractors, or in the quality of the products and services. | Change |
| (4) Contractors of Deutsche Bahn AG with no Q-rating shall be treated as Q3 contractors. | Contractors with no Q-rating |

4 Inspection levels

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| (1) The scope of the quality assurance measures is fundamentally determined 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

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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

5 Manufacturer-related product qualification (HPQ)

- (1) The manufacturer-related product qualification is a quality assurance tool used by Deutsche Bahn AG and normally based on requirements from German and international railway-specific standards, regulations, and guidelines. **Basis**
- (2) The objective of the HPQ is to ensure that special products are delivered only by manufacturers who have provided evidence that they can meet the requirements as to safety, reliability and process capability. The HPQ is required from manufacturers for specific production processes (e.g. casting and forging) who supply Deutsche Bahn AG either directly or indirectly. The special products are identified in Part 2 of this document. **Objective**
- HPQs are normally valid for 3 years. Specifically, an HPQ must be reacquired **Validity**
 - if production is relocated
 - if production processes or process cycles are changed
 - following expiry of the 3-year validity period for subcontractors who do not have a direct supply relationship with DB AG
 - after 6 years at the latest for direct suppliers (a one-off extension can be granted after 3 years 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).

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6 Quality engineering (QE) methods

- (1) To support Contractor's quality planning during the entire product development process, DB AG's requirements re quality engineering methods are described below. QE methods should accompany quality assurance measures involving scrutiny, such as HPQ and regular inspections, and must supplement these through its preventive approach. **Basis**
- (2) The objective of the QE measures is to ensure the translation of requirements into product features and to appropriately manage the delivery quality of products subject to quality inspection through preventive quality assurance and the evaluation of design and manufacturing processes. **Objective**
- (3) Contractors with responsibility for development are obliged to document planned measures for the safeguarding of product and process quality during development in a QE plan. Suitable processes and components should be selected using a risk- based approach. **Quality planning (QE plan)**
- (4) Design and process FMEAs in accordance with DIN EN 60812, in which the progress of risk minimisation measures must be documented, are mandatory deliverables of the product and process development process. To implement this, the provisions of VDA Volume 4 "Quality Assurance in the Process Landscape" or AIAG "Potential Failure Mode and Effects Analysis (FMEA)" must be applied as a minimum. The equivalence of FMEAs based on standards other than those specified must be substantiated by Contractor. In addition to the above-mentioned standards, the following scale should be used to assess the importance of an error: **FMEA**

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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) | Consideration must be given in the design FMEA to maintainability and availability in operation, in accordance with DIN EN 50126. | Maintainability & availability |
| (6) | Contractor is obliged to implement an FMEA process prior to the commencement of series production and to document this as one of the preconditions of internal production release. | Internal production release |
| (7) | The documentation of the QE measures must be kept constantly up to date, with account taken of field data, test results and internal and external complaints in particular. In addition, design and process FMEAs must be revised in the following cases:
- Design changes
- Relocation of production
- Change in production processes or process cycles | Updating |
| (8) | The effectiveness of the QE methods and the resulting QE measures must be reviewed on an annual basis by Contractor's internal audit. | Effectiveness checks |
| (9) | The QE plan and design and process FMEAs must be submitted to Deutsche Bahn AG for inspection, upon request. | Inspection |
| (10) | The QE plan and the design and process FMEAs shall be checked by Deutsche Bahn AG. An initial check of the process FMEA shall take place prior to series production at the latest, for example regarding the HPQ or initial sample inspection. | Initial checks |
| (11) | Contractor is obliged to assess its subcontractors using risk-based criteria. Points (1) - (10) apply analogously to subcontractors making a substantial contribution to the success of the end product and whose product is listed in Part 2 of the list of products subject to quality inspection (LgP). The application of points (1) - (10) by the responsible subcontractors must be checked by Contractor. | Subcontractors |

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(12) Any of points 7a) - 7c) or a new call for tender will result in the immediate application of the requirements of this guideline. A process FMEA must be prepared by 31 December 2018 for all of the products subject to quality inspection to be delivered 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) A key task of quality assurance is the monitoring of inspection criteria. Suitable measuring and inspection equipment is required to compare measuring and inspection results. This equipment is calibrated by accredited institutes using appropriate calibration methods.

Measuring equipment

(14) Regarding the quality assurance of all rail-specific and standardized measuring and inspection equipment, the General Requirements for the Competence of Testing and Calibration Laboratories (DIN ISO 17025) shall be definitive.

Requirements for testing laboratories

7 Special production processes

(1) Special production processes are regulated in the respective standards and DB Standards.

DB Standards

8 Regular inspections

(1) To secure the quality interests of Deutsche Bahn AG, all contractors with P II products and a Q1 status as well as an existing supply agreement shall be monitored by DB AG's quality assurance unit. Product and/or process audits shall be carried out as part of these regular inspections. Audits can also take place in the form of unannounced inspections.

Regular inspections at contractors' premises

(2) If quality risks or quality shortcomings are identified during regular inspections, this can result in a change in the Q-rating and/or retraction of the HPQ.

Shortcomings & validity

Purchasing will review the direct impact on existing delivery and performance contracts once the results are available and initiate appropriate action.

(3) For subcontractors who supply DB AG's contractors with products subject to quality inspection as per this list, the respective contractor must carry out the defined amount of regular inspections or arrange for these to be carried out (see "Guideline on regular inspections" in Purchasing's supplier portal). Deutsche Bahn AG must be provided with evidence of the planning and results of the regular inspections (including findings and measures) as part of the assessment of quality capability or regular inspections of Contractor.

Regular inspections at subcontractors' premises

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- (4) If risks and/or shortcomings are identified with regard to subcontractors, the impact on the Q-rating of one or more contractor(s) and further measures to be taken re the subcontractor(s) shall be determined by Purchasing in coordination with Contractor's quality assurance team. **Shortcomings**

Contractor shall bear any additional expenses incurred by Deutsche Bahn AG as a result of this.

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9 8D report

- (1) Within the framework of complaints, an 8D report will be exchanged between Contractor and DB AG. The process covers the following elements:

Bases

- D1: Team definition
- D2: Error description
- D3a: Immediate measures by DBAG
- D3b: Immediate measures by supplier
- D4: Error causes
- D5: Possible remedial measures
- D6: Remedial measures implemented
- D7: Preventive measures
- D8: Documentation, lessons learned

- (2) (D1) Depending on the character of the problem, an interdisciplinary team must be appointed with sufficient product and process knowledge.

Implementation

(D2) The description of the error should be based on facts.

(D3) In order to directly avert additional damage, immediate action (e.g. blocking the material or 100% testing) should be taken if necessary both by Contractor (and/or its subcontractor) and by DB AG.

(D4) The probable causes of the error should be analysed by Contractor (subcontractor) on the basis of data and facts.

(D5) Contractor is responsible for selecting remedial measures to remove the cause of the error. Based on the root cause analysis, measures should be identified, which permanently fix the error in the interests of DB AG and do not give rise to any undesired side effects. Before any measure is implemented, its effectiveness must be checked, with a particular focus on error avoidance and error detection.

(D6) According to their verified effectiveness under D5, remedial measures should be determined which will reliably prevent the error from re-occurring. The effectiveness of the measures implemented should be monitored over a reasonable period. Once their effectiveness has been substantiated, immediate measures (e.g. additional inspections) that are still ongoing can be retracted.

(D7) To preclude the reoccurrence of the error that occurred/similar errors, preventive measures must be taken by Contractor (and/or its subcontractor(s)), such as recording the error in the design and/or process FMEA, adapting guidelines, work instructions, and internal processes, and checking additional production lines or related processes for robustness.

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(D8) The most important findings from the 8D are documented as lessons learned. An 8D report can only be concluded by appropriately authorised personnel and with the agreement of Client (DB AG).

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| (3) | In order to provide the departments affected with the opportunity to coordinate with each other, the introduction of the 8D report within the framework of complaints provides for a transition period of one year beginning on 1 January 2016. | Transition period |
| (4) | The printed form 120.0381V30 entitled "Guideline & Form for 8D Report" in the annex to the guideline should be used internally to prepare the 8D report (see also DB Netz process portal: LN24-01-07). A separate external guideline can also be found in the supplier portal. | Printed form |

10 Documentation and proofs of conformity

- | | | |
|-----|--|-------------------------------|
| (1) | For products and components in the "Products subjection to quality inspection - Track superstructure materials" list Part 2 the supplier must always keep documentation/proof of conformity depending on the inspection level of the product (PI or PII) and the supplier's Q-rating (Q1 or Q2) for each delivery or part delivery. The supplier must retain the proofs of conformity for at least 10 years. | Inspection certificate |
|-----|--|-------------------------------|

Proof for inspection level I products:

- as a Q1 supplier: inspection certificate 3.1 in accordance with DIN EN 10204 and DB AG delivery release/inspection certificate
- as a Q2 supplier: inspection certificate 3.1 in accordance with DIN EN 10204 and DB AG delivery release/inspection certificate

Proof for inspection level II products:

- as a Q1 supplier: inspection certificate 3.1 in accordance with DIN EN 10204
- as a Q2 supplier: inspection certificate 3.1 in accordance with DIN EN 10204 and DB AG delivery release/inspection certificate

- | | | |
|-----|---|------------------------------------|
| (2) | These conformity certificates serve as proof for Deutsche Bahn AG, the German Federal Railway Authority (EBA) and the industry that the agreed quality assurance methods have been implemented and the products meet the quality requirements. They should also ensure the identification and unequivocal allocation of products and components in the event of defect notifications. | TSI conformity declarations |
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The supplier must provide TSI conformity declarations for the following track components:

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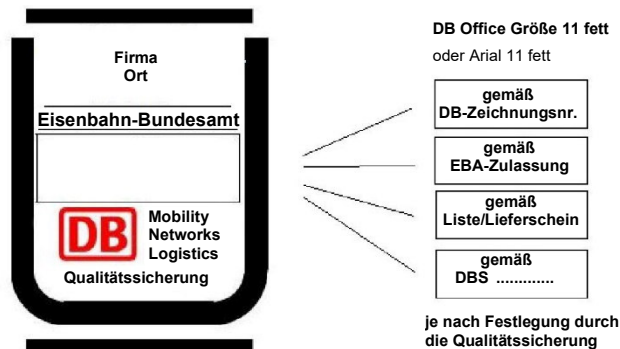
- Rails, sleepers and bearers, switches and crossings, and complete rail fastening systems

11 Marking

- (1) On the basis of the BAU administrative provision of the German Federal Railway Authority (EBA), it is sufficient if the manufacturer attaches the conformity mark ('Ü-EBA' mark) to the building product, packaging, or delivery note, thereby confirming that an internal product control has ensured that the building product delivered by the manufacturer conforms with the Railway-specific Building Regulation Lists of the EBA for certification or case-by-case approval.
- (2) The 'Ü-EBA' conformity mark on the building product or delivery note serves as proof for the receiving point that the track superstructure materials have been used in conformity with their intended purpose and is recognised by the EBA as proof of conformity for the purpose of the usage checks.

**'Ü-EBA'
conformity
mark**

**'Ü-EBA'
conformity
mark -
specimen**



If the 'Ü-EBA' conformity mark is used, it is not necessary to send the 3.1 certificates to the construction sites.

With this regulation, the supplier gives its assurance that it has kept all the records cited in the "Goods subject to quality inspections" lists (Part 2). This presupposes all the inspections described in corresponding DB Standards or in special inspection sheets and their documentation by the manufacturer. If necessary, Client or the user of the equipment must be allowed to inspect the documents.

The Quality Assurance department of Deutsche Bahn AG shall send the Ü-EBA conformity mark to the companies concerned, together with the HPQ in the case of direct contracting parties. The Ü-EBA conformity mark will be an image file and can therefore be included in the delivery documents, on the product, or on the packaging, instead of a delivery with a 3.1 certificate.

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- (3) For track ballast, the regulations for the CE marking in accordance with DIN EN 13 450 must be observed. This replaces the inspection certificate 3.1 in accordance with DIN EN 10 204. Use of the CE marking: (only concerns ballast)

CE marking

CE		
01234		
Any Co Ltd, P.O. Box 21, B-1050		
02		
0123-CPD-0456		
EN 13450		
Gestenskömungen für Gleisschotter		
Kornform	Kategorie	(z. B. F _{1,2})
Korngröße	Bezeichnung	(d & D) &
	Kategorie	(z. B., B)
Rohdichte	Sollwert	(Mg/m ³)
Widerstand gegen Zertrümmerung	Kategorie	(z. B., LA ₁₀ 18)
Abriebwiderstand	Kategorie	(z. B., M ₁₀ 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 93/68/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

CE specimen

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12 List of abbreviations

AIAG	Automotive Industry Action Group
DB AG	Deutsche Bahn AG
DBS	Deutsche Bahn Standard
DIN	German Institute for Standardisation
EBA	German Federal Railway Authority
EN	European standard
SCC	Supplementary Contractual Conditions
FMEA	Failure Mode and Effects Analysis
HPQ	Manufacturer-related product qualification
IOW	Civil engineering - track superstructure - points
LgP	List of products subject to quality inspection
P I	Inspection level 1
P II	Inspection level 2
QE	Quality engineering
RI	Regular inspections
TSI	Technical specifications for interoperability Subcontractors
UIC	(French) Union International des Chemins de Fer (International Union of Railways)
VDA	German Association of the Automotive Industry

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Structural level	Description	Other applicable documents	HPQ	Inspection level	No. of RIs/year	Documentation	Manufacturer's mark	Material group	Comments
A	General materials								
1	Rail								
1.1	Track Rail (flat-bottomed rail from 46kg/m)								
1.1.1	Track rail (flat-bottomed rail from 46kg/m, as rolled)	DBS 918 254-1	X	II	2	Insp. cert. 3.1	X	10710010, 10710030	
1.1.2	Track rail (flat-bottomed rail from 46kg/m, head hardened)	DBS 918 254-1	X	II	2	Insp. cert. 3.1	X	10710010, 10710030	
1.1.3	Track rail (flat-bottomed rail from 46kg/m, special grade)	DBS 918 254-1	X	II	2	Insp. cert. 3.1	X	10710010, 10710030	
1.2	Rail for switches and crossings								
1.2.1	Rail for switches and crossings (as rolled)	DBS 918 254-2	X	II	2	Insp. cert. 3.1	X	10710010, 10710030	
1.2.2	Rail for switches and crossings (head hardened)	DBS 918 254-2	X	II	2	Insp. cert. 3.1	X	10710010, 10710030	

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1.2.3	Rail for switches and crossings (special grade)	DBS 918 254-2	X	II	2	Insp. cert. 3.1	X	10710010, 10710030	
1.3	Check rail	DBS 918 254-3	X	II	2	Insp. cert. 3.1	X	10710030	
1.4	Flash-welded rail (in the depot)	DBS 918 255-1	X	II	2	Insp. cert. 3.1	X	10710020	
1.5	Reconditioned rail (in the depot)	DBS 918 255-1	X	II	2	Insp. cert. 3.1	X	10770010	
1.6	Rail transitions (in the depot)	DBS 918 255-1	X	II	2	Insp. cert. 3.1	X	10710020	
1.7	Milled rail (new layer milling in the depot)	DBS 918 255-1	X	II	2	Insp. cert. 3.1	X	10710020	
1.8	Grooved rail	DIN EN 14811	X****	II	1	Insp. cert. 3.1	X	10710010	****HPQ for entry 1.1 structural level
2	Rail connectors								
2.1	Fishbolt	DBS 918 024	X	II	2	Insp. cert. 3.1	X	10750010	
2.2	Collar nut and nut	DBS 918 024	X	II	2*	Insp. cert. 3.1	X	10750010	*possibly at the bolt supplier's premises
2.3	Fishbolt with nut (high-strength)	DBS 918 024	X**	II	2	Insp. cert. 3.1	X	10750010	**same manufacturer's mark

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2.4	Intermediate joint layer for insulated rail joints	DBS 918 280	X	II	2	Insp. cert. 3.1	X	10750020	
2.5	Insulated rail joint (factory-made)	DBS 918 256	X	II	2	Insp. cert. 3.1	X***	10710010	***Company plaque
2.6	Insulated rail joint (kit)	per Standard Drawing	X	II	2	Insp. cert. 3.1	X	10710010	
2.7	Fishplate								
2.7.1	Fishplate (rolled)	DBS 918 025	X	II	2	Insp. cert. 3.1	X	10750010	
2.7.2	Fishplate/insulating steel fishplate (forged)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	
2.7.3	Fishplate/insulating steel fishplate (cast)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
2.8	Clamp (emergency fish joint)								
2.8.1	Emergency fishplate connector (forged)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	2.8.1
2.8.2	Emergency fishplate connector (cast)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	2.8.2

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2.9	Welding portion, single-use crucible and forms for the track superstructure welding general parts	DBS 918 248	X	II	2	Insp. cert. 3.1	X	10710040	
2.10	Single-use crucible with aluminothermic welding portions	DBS 918 248	X	II	2	Insp. cert. 3.1	X	10710040	
2.11	Form for aluminothermic weldings	DBS 918 248	X	II	2	Insp. cert. 3.1	X	10710040	
3	Rail fastening								
3.1	Plastic guiding element	DBS 918 280	X	II	2	Insp. cert. 3.1	X	10750020	
3.2	Coach screw	DBS 918 024	X	II	2	Insp. cert. 3.1	X	10750010	
3.3	Clip bolt and nut								
3.3.1	Clip bolt	DBS 918 024	X	II	2	Insp. cert. 3.1	X	10750010	
3.3.2	Nut for clip bolt	DBS 918 024	X*	II	2*	Insp. cert. 3.1	X	10750010	*possibly at the bolt supplier's premises
3.4	Spring washer	DBS 918 006	X	II	2	Insp. cert. 3.1	X	10750010	

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3.5	Spring steel clamping element (rail clamp, clip, clamp)								
3.5.1	Rail clamp	DBS 918 127	X	II	2	Insp. cert. 3.1	X	10750010	
3.5.2	Clip	DBS 918 127	X	II	2	Insp. cert. 3.1	X	10750010	
3.5.3	Clamp	DBS 918 127, DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	
3.5.4	Wire form spring	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	
3.5.5	Torsion spring	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
3.5.6	Coil spring	log 30.7004	-	II	-	Insp. cert. 3.1	-	10750010	
3.5.7	Leaf spring	DBS 918 127	X	II	2	Insp. cert. 3.1	X	10750010	
3.6	Rail clip	DBS 918 025, DBS 918 125	X	II	2	Insp. cert. 3.1	X		
3.6.1	Rail clip (rolled)	DBS 918 025	X	II	2	Insp. cert. 3.1	X	10750010	
3.6.2	Rail clip (forged)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	
3.7	Base plate, collar insert								

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3.7.1	Base plate (rolled)	DBS 918 025	X	II	2	Insp. cert. 3.1	X	10750010	welding in accordance with 7.3
3.7.2	Base plate (forged)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	welding in accordance with 7.3
3.7.3	Base plate (cast)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
3.7.4	Collar insert	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	
3.8	Insulating pad, insulating angle								
3.8.1	Insulating pad	DBS 918 280	X	II	2	Insp. cert. 3.1	X	10750020	
3.8.2	Insulating angle	DBS 918 280	X	II	2	Insp. cert. 3.1	X	10750020	
3.9	Rigid intermediate layer, intermediate plate								
3.9.1	Rigid intermediate layer	DBS 918 280	X	II	2	Insp. cert. 3.1	X	10750020	
3.9.2	Rigid intermediate plate	DBS 918 280	X	II	2	Insp. cert. 3.1	X	10750020	
3.10	Elastic plastic intermediate plate, intermediate plate								

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3.10.1	Elastic synthetic intermediate layer	DBS 918 235	X	II	2	Insp. cert. 3.1	X	10750020	
3.10.2	Elastic intermediate plate	DBS 918 235	X	II	2	Insp. cert. 3.1	X	10750020	
3.11	Height adjustment plate								
3.11.1	Height adjustment plate (synthetic)	DBS 918 280	X	II	2	Insp. cert. 3.1	X	10750020	
3.11.2	Height adjustment plate (metal)	Zeichnung	X	II	2	Insp. cert. 3.1	X	10750010	
3.12	Track rod for tracks	per Standard Drawing	X	II	2	Insp. cert. 3.1	X	10750010	welding in accordance with 7.3
3.13	Rail anchor	per Standard Drawing	X	II	2	Insp. cert. 3.1	X	10750010	
3.14	Dowell								
3.14.1	Dowel (synthetic)	DBS 918 280	X	II	2	Insp. cert. 3.1	X	10750020	
3.14.2	Dowel (metal)	log 50.5000	X	II	2	Insp. cert. 3.1	X	10750010	
4	Sleeper								
4.1	Wooden sleeper (impregnated)	DBS 918 144	X	II	3	Insp. cert. 3.1	X	10720010	
4.2	Steel sleeper, cast iron sleeper								
4.2.1	Hollow sleeper		X	II	3	Insp. cert. 3.1	X	10720030	welding in accordance with 7.3

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4.2.2	Y sleeper, steel beam bridge sleeper		X	II	3	Insp. cert. 3.1	X	10720030	welding in accordance with 7.3
4.2.3	Hollow sleeper								
4.2.3.1	Cable trough sleeper								
4.2.3.1.1	Cable trough sleeper (cast, unpadded)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10720030	
4.2.3.1.2	Cable trough sleeper (cast, padded)	DBS 918 145-2	X	II	2	Insp. cert. 3.1	X	10720030	
4.2.3.1.3	Cable trough sleeper/hollow steel sleeper (welded, unpadded)	DBS 918 025	X	II	2	Insp. cert. 3.1	X	10720030	welding in accordance with 7.3
4.2.3.1.4	Cable trough sleeper/hollow steel sleeper (welded, padded)	DBS 918 145-2	X	II	2	Insp. cert. 3.1	X	10720030	welding in accordance with 7.3
4.2.3.2	Hollow sleeper for point lock (unpadded)	DBS 918 126, low-Zeichnungen	X	II	2	Insp. cert. 3.1	X	10720030	
4.2.3.3	Hollow sleeper for point lock (padded)	DBS 918 145-2	X	II	2	Insp. cert. 3.1	X	10720030	

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4.2.4	Steel beam bridge sleeper	log-Zeichnungen	X	II	2	Insp. cert. 3.1	X	10720030	welding in accordance with 7.3
4.3	Concrete sleeper								
4.3.1	Concrete sleeper - new (track, unpadded)	DBS 918 143	X	II	6	Insp. cert. 3.1	X	10720020	4.3.1
4.3.2	Concrete sleeper - new (track, padded)	DBS 918 145-2	X	II	6	Insp. cert. 3.1	X	10720020	4.3.2
4.3.3	Concrete sleeper - new (switch, unpadded)	DBS 918 143	X	II	6	Insp. cert. 3.1	X	10720021	4.3.3
4.3.4	Concrete sleeper - new (switch, padded)	DBS 918 145-2	X	II	6	Insp. cert. 3.1	X	10720021	4.3.4
4.3.5	Concrete slab track navigability coating	Various DIN	X	II	4	Insp. cert. 3.1	X	10770020	
4.4	Plastic sleeper	Technical Instruction on testing plastic sleepers	X	II	1	Insp. cert. 3.1	X	10720050	document review only
4.5	Elastic sleeper sole	DBS 918 145-1	X	II	2	Insp. cert. 3.1	X	10750020	

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4.6	Safety cap		X	II	2	Insp. cert. 3.1	X	10750010	welding in accordance with 7.3
4.7	Sleeper anchor		X	II	2	Insp. cert. 3.1	X	10750010	welding in accordance with 7.3
4.8	Concrete slab track								
4.8.1	Concrete slab track pre-fabricated slab	DBS 918 143	X	II	1	Insp. cert. 3.1	X	?	
4.8.2	Concrete slab track sound absorber plate	Diverse DIN	X	II	1	Insp. cert. 3.1	X	?	
4.8.3	Concrete slab track navigability coating	Diverse DIN	X	II	1	Insp. cert. 3.1	X	?	
5	Points								
5.1	Switch	DBS 918 120	X	II	2	Insp. cert. 3.1	X	10740040	welding in accordance with 7.3
5.1.1	Switch area								
5.1.1.1	Switch reforging	DBS 918 122	X	II	2	Insp. cert. 3.1	X	10740010	
5.1.1.2	Set of switches	DBS 918 120	X	II	2	Insp. cert. 3.1	X***	10740010	***Company plaque

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5.1.1.3	Switch for individual replacement	DBS 918 120	X	II	2	Insp. cert. 3.1	X	10740010	
5.1.1.4	Stock rail for individual replacement	DBS 918 120	X	II	2	Insp. cert. 3.1	X	10740010	
5.1.2	Closure rail area								
5.1.2.1	Closure rail/running rail	DBS 918 120	-	II	2	Insp. cert. 3.1	X	10710030	HPQ in rolling mill (see 1.1 and 1.2)
5.1.2.2	Check rail	DBS 918 120	X	II	2	Insp. cert. 3.1	X	10740010	HPQ in rolling mill (see 1.1 and 1.2)
5.1.3	Common crossing								
5.1.3.1	Common crossing block (forging blank)	DBS 918 142	X	II	2	Insp. cert. 3.1	X	10740010	
5.1.3.2	Common crossing (complete) - fixed point	DBS 918 142	X	II	2	Insp. cert. 3.1	X	10740010	***Company plaque
5.1.3.3	Common crossing, heat treated, fixed point (complete)	DBS 918 142	X	II	2	Insp. cert. 3.1	X***	10740010	***Company plaque
5.1.3.4	Common crossing, heat treated, movable point (complete)	DBS 918 142	X	II	2	Insp. cert. 3.1	X***	10740010	***Company plaque

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5.1.3.5	Common crossing, bainitic, fixed point (complete)	DBS 918 141	X	II	2	Insp. cert. 3.1	X***	10740010	***Company plaque
5.2	Crossing	DBS 918 120	X	II	2	Insp. cert. 3.1	X	10740040	(see 5.1.1, 5.1.2, 5.1.3)
5.3	Expansion joint	DBS 918 120	X	II	2	Insp. cert. 3.1	X	10740040	(see 5.1.1)
5.4	Small switch components								
5.4.1	Bushing (forged)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	if required, welding in accordance with 7.3
5.4.1.2	Bushing (cast)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.2	Anchoring element	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.3	Rail supports, switch supports, block supports								
5.4.3.1	Rail support (block support)	DBS 918 025	X	II	2	Insp. cert. 3.1	X	10750010	welding in accordance with 7.3
5.4.3.2	Switch support (forged)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.3.3	Switch support (cast)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	

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5.4.3.4	Support plate (cast)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.3.5	Support plate (forged)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.4	Support plate	DBS 918 125, DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.5	Slide plate	DBS 918 126							
5.4.5.1	Slide baseplate (forged)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	if required, welding in accordance with 7.3
5.4.5.2	Slide baseplate (cast)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.5.3	Slide chair (slide plate) (forged)	DBS 918 125	-	-	-	Insp. cert. 3.1	X	10750010	
5.4.6	Slide baseplate								
5.4.6.1	Support block plate (forged)	DBS 918 025	X	II	2	Insp. cert. 3.1	X	10750010	welding in accordance with 7.3
5.4.6.2	Support block plate (cast)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.7	Down holder	DBS 918 025	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.7	Support block plate	DBS 918 126	X	II	2	Insp. cert. 3.1	X		

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5.4.8	Stuffing box ring follower	DBS 918 980	X	II	2	Insp. cert. 3.1	X	10750020	
5.4.9	Peak joint plate	DBS 918 025	X	II	2	Insp. cert. 3.1	X	10750010	
5.4.10	Central plate	DBS 918 025	X	II	2	Insp. cert. 3.1	X	10750010	
5.5	Switch bolt and nut								
5.5.1	Switch bolt per IOW	DBS 918 024	X	II	2	Insp. cert. 3.1	X	10750010	
5.5.2	Nut per IOW	DBS 918 024	X	II	2	Insp. cert. 3.1	X	10750010	
5.5.3	Substrata	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	
5.6.	Switch setting system								
5.6.1	Clip (fork, clamp, and HRS locking device, WKV switch clamp, WEV, EVZ, EVH)	per Standard Drawing	X	II	2	Insp. cert. 3.1	X	10740020	installed
5.6.1.1	Stopper, guide piece								
5.6.1.1.1	Slide rod (forged)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10740020	
5.6.1.1.2	Slide rod (solid material)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10740020	

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5.6.1.2	Detector rod, coupling rod (IOW)	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10740020	if required, welding in accordance with 7.3
5.6.1.3	Permanent locking device	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10750010	
5.6.1.4	Locking clamp, latch								
5.6.1.4.1	Locking clamp bolt	DBS 918 024	X	II	2	Insp. cert. 3.1	X	10740020	
5.6.1.4.2	Locking piece bolt/clamping band	DBS 918 024	X	II	2	Insp. cert. 3.1	X	10740020	
5.6.1.4.3	Block with threaded bolt	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10740020	
5.6.1.4.4	Guide piece	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10740020	
5.6.1.4.5	Locking anchor (clamping bolt, clamping band)	DBS 918 024	X	II	2	Insp. cert. 3.1	X	10740020	
5.6.1.4.6	Locking plates	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10740020	
5.6.1.4.7	Lock catch	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10740020	
5.6.1.4.8	Locking piece	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10740020	

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5.6.1.4.9	Pin joint to stretcher bar bracket	DBS 918 125	X	II	2	Insp. cert. 3.1	X	10740020	welding in accordance with 7.3
5.6.2	Switch blade rolling device	per Standard Drawing	X	II	2	Insp. cert. 3.1	X	10740030	installed
5.7	Sleeper connecting plate								
5.7.1	Sleeper connecting plate (cast, unpadding)	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
5.7.2	Sleeper connecting plate (cast, padding)	DBS 918 145-2	X	II	2	Insp. cert. 3.1	X	10750010	
5.8	Coupling joint plate	DBS 918 126	X	II	2	Insp. cert. 3.1	X	10750010	
5.9	Special structures (rail slipper, lift bridge, etc.)		X	II	2	Insp. cert. 3.1	X		
6	Ballast								
6.1	Track ballast								
6.1.1	Track ballast (new)	DBS 918 061	X	II	4	-	-	10730010	CE marking, > 6% quantity supplied
6.1.2	Track ballast (new)	DBS 918 061	X	II	3	-	-	10730010	CE marking, > 1% quantity supplied

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6.1.3	Track ballast (new)	DBS 918 061	X	II	1	-	-	10730010	CE marking, < 1% quantity supplied
6.2	Track ballast (reconditioned) - mobile								
6.2.1	Track ballast (reconditioned) - mobile	DBS 918 061	X	II	4	-	-	10770030	CE marking, > 6% quantity supplied
6.2.2	Track ballast (reconditioned) - mobile	DBS 918 061	X	II	3	-	-	10770030	CE marking, > 1% quantity supplied
6.2.3	Track ballast (reconditioned) - mobile	DBS 918 061	X	II	1	-	-	10770030	CE marking, < 1% quantity supplied
6.3	Track ballast (reconditioned) - stationary								
6.3.1	Track ballast (reconditioned) - stationary	DBS 918 061	X	II	4	-	-	10770030	CE marking, > 6% quantity supplied
6.3.2	Track ballast (reconditioned) - stationary	DBS 918 061	X	II	3	-	-	10770030	CE marking, > 1% quantity supplied
6.3.3	Track ballast (reconditioned) - stationary	DBS 918 061	X	II	1	-	-	10770030	CE marking, < 1% quantity supplied

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6.4	Ballast mats	DBS 918 071-1	X	II	2	Insp. cert. 3.1	X	10750020	
7	Key machining processes								
7.1	Machining of superstructure components	alle DBS	X	-	-	-	-		in conjunction with structural level 1 to 5
7.2	Quenching and tempering of common crossings	DSB 918 142	X	II	2	Insp. cert. 3.1	-		
7.3	Manufacture of welded superstructure components (excluding rails)	DBS 918 025, DBS 918 125	X	II	2	Insp. cert. 3.1	-		