



HPQ

Noise barrier elements in accordance with GL 889.0007 / DBS 918 007

Deutsche Bahn AG
 Infrastructure Procurement
 Quality Assurance
 Caroline-Michaelis-Strasse 5-11
 10115 Berlin, Germany

Matrix for implementing the minimum requirements in the manufacturer's QMS.

Manufacturer:		Address:	
Checked documents:			
FS.EI 12 check:		Date:	
Result of the document check:			
Comments:			

Section DIN EN 1090-3	Description	Documents available	Requirement	Requirement specified in/as [to be completed by manufacturer]						Implementation of the requirement in the area of [to be completed by manufacturer]						
				VA	AA	CL	PA	WPK	E	TB	QS	AV	W	M	Reference to document in QMS (manufacturer)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Table A.1: General specifications																
4.1.2	Execution class to be applied		EXC 3													
4.2.2	Need for a quality management plan to carry out the work		Required													
5.1	Construction materials to be used		Specification in accordance with European standardisation. The construction materials to be used must be specified.													

File 3_HPQ_DBS918007_QMS Matrix_Firma_02-2017
 Key:
 VA - process instruction
 AA - work instruction
 CL - checklist
 TI - test instruction

WPK - records of
 factory production control

E - Purchasing area, goods receipt
 TB - Technical Board
 QS - quality assurance
 AV - production planning and control

W - workshop production area
 M - assembly production area



HPQ

Noise barrier elements in accordance with GL 889.0007 / DBS 918 007

Overview of the implementation of the minimum requirements in the manufacturer's QMS

Deutsche Bahn AG
Infrastructure Procurement
Quality Assurance
Caroline-Michaelis-Strasse 5-11
10115 Berlin, Germany

Section DIN EN 1090- 3	Description	Documents available	Requirement	Requirement specified in/as [to be completed by manufacturer]						Implementation of the requirement in the area of [to be completed by manufacturer]						
				VA	AA	CL	PA	WPK		E	TB	QS	AV	W	M	Reference to document in QMS (manufacturer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
5.6.1	Categories of bolted connections, product standards, bolt grades and all other requirements such as surface treatment		must be specified in accordance with 5.6.1 DIN EN 1090-3													
6.4	Need to remove sharp edges for technical reasons		Sharp edges must be removed.													
6.6	- Hole sizes - Countersink dimensions for countersunk screws - Countersink dimensions for countersunk rivets		must be specified in accordance with 6.6.1 DIN EN 1090-3													
6.9	The need for complete assembly		must be specified in the manufacturer's QA scheduling and agreed with the client.													
7.5.1	Welding requirements for welding processes other than metal inert gas welding		For other welding processes, EN ISO 15613 and, where appropriate, the relevant part of EN ISO 15614 must be applied.													
7.5.5	Permission to weld temporary assembly aids and locations where this is not permitted		Planned, WPS, test planning													
7.5.9	Hole dimensions for slotted and perforated seams		Slotted and perforated seams not permitted													

File: 3_HPQ_DBS918007_QMS Matrix_Firma_02-2017

Key:

VA - process instruction
AA - work instruction
CL - checklist
TI - test instruction

WPK - records of
factory production control

E - Purchasing area, goods receipt
TB - Technical Board
QS - quality assurance
AV - production planning and control

W - workshop production area
M - assembly production area

Page 2 of 9



HPQ

Noise barrier elements in accordance with GL 889.0007 / DBS 918 007

Overview of the implementation of the minimum requirements in the manufacturer's QMS

Deutsche Bahn AG
Infrastructure Procurement
Quality Assurance
Caroline-Michaelis-Strasse 5-11
10115 Berlin, Germany

Section DIN EN 1090- 3	Description	Documents available	Requirement	Requirement specified in/as [to be completed by manufacturer]					Implementation of the requirement in the area of [to be completed by manufacturer]							
				VA	AA	CL	PA	WPK	E	TB	QS	AV	W	M	Reference to document in QMS (manufacturer)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
7.5.13	Requirements for other welds, e.g. spot or stud welds that are not listed in 7.3		For other welding processes, EN ISO 15613 and, where appropriate, the relevant part of EN ISO 15614 and DIN EN ISO 14555 must be applied.													
8.2.6	Use of normal or oversized washers		"Normal" washers in accordance with DIN EN ISO 7089 must be used.													
10.3.1	Type and extent of all protective measures (surface coating and contact surfaces)		The type and extent of the protective measures are specified DIN EN 12206; GL 804 (module 5501 and 6201) applies, taking into account Additional Technical Contract Conditions for Civil Engineering Works (ZTV ING), Part 4; Section 3; Annex A; Table A 4.3.2; component no. 3.6.3.													
11.1	Any special tolerances		must be shown in the design documents (workshop plans) and agreed with the client.													
12.3.2	Locations and frequency of dimensional checks		Inspection plan must be drawn up in accordance with the design requirements.													

File: 3_HPQ_DBS918007_QMS Matrix_Firma_02-2017

Key:
VA - process instruction
AA - work instruction
CL - checklist
TI - test instruction

WPK - records of
factory production control

E - Purchasing area, goods receipt
TB - Technical Board
QS - quality assurance
AV - production planning and control

W - workshop production area
M - assembly production area

Page 3 of 9



HPQ

Noise barrier elements in accordance with GL 889.0007 / DBS 918 007

Overview of the implementation of the minimum requirements in the manufacturer's QMS

Deutsche Bahn AG
Infrastructure Procurement
Quality Assurance
Caroline-Michaelis-Strasse 5-11
10115 Berlin, Germany

Section DIN EN 1090- 3	Description	Documents available	Requirement	Requirement specified in/as [to be completed by manufacturer]						Implementation of the requirement in the area of [to be completed by manufacturer]							
				VA	AA	CL	PA	WPK		E	TB	QS	AV	W	M	Reference to document in QMS (manufacturer)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
12.4.3.1	Quality requirements for welded connections and minimum scope of testing		Inspection plan must be created. Execution class: EXC3 (see Section 3) Stress category: SC2 (see Section 3) Quality level in accordance with DIN EN ISO 10 042: See Table 4, Section 12.4.4.2. Scope of additional non-destructive testing: See Table 5, Section 12.4.3.1. Additional inspections and test methods: See Table 5, Sections 12.4.3.1 and 12.4.3.2.														



HPQ

Noise barrier elements in accordance with GL 889.0007 / DBS 918 007

Overview of the implementation of the minimum requirements in the manufacturer's QMS

Deutsche Bahn AG
Infrastructure Procurement
Quality Assurance
Caroline-Michaelis-Strasse 5-11
10115 Berlin, Germany

Section DIN EN 1090- 3	Description	Documents available	Requirement	Requirement specified in/as [to be completed by manufacturer]						Implementation of the requirement in the area of [to be completed by manufacturer]						
				VA	AA	CL	PA	WPK		E	TB	QS	AV	W	M	Reference to document in QMS (manufacturer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
12.4.4.2	Quality requirements for welds for stress category SC2		Inspection plan must be created. The description of the weld imperfections must comply with DIN EN ISO 10 042. The welded joints must be assessed in accordance with DIN EN ISO 10 042. The limit values of quality level B apply, taking into account the additional B+ requirements in accordance with DIN EN 1090-3, Section 12.4.4.2.													
Table A.2: Alternative specifications																
5.6.1	Is a surface treatment specified for mechanical fasteners?		must be specified in accordance with 5.6.1 DIN EN 1090-3													
8.2.5	Is locking of nuts required?		The nuts of non-prestressed bolts must always be locked.													

File: 3_HPQ_DBS918007_QMS Matrix_Firma_02-2017

Key:
VA - process instruction
AA - work instruction
CL - checklist
TI - test instruction

WPK - records of
factory production control

E - Purchasing area, goods receipt
TB - Technical Board
QS - quality assurance
AV - production planning and control

W - workshop production area
M - assembly production area

Page 5 of 9



HPQ

Noise barrier elements in accordance with GL 889.0007 / DBS 918 007

Overview of the implementation of the minimum requirements in the manufacturer's QMS

Deutsche Bahn AG
Infrastructure Procurement
Quality Assurance
Caroline-Michaelis-Strasse 5-11
10115 Berlin, Germany

Section DIN EN 1090- 3	Description	Documents available	Requirement	Requirement specified in/as [to be completed by manufacturer]						Implementation of the requirement in the area of [to be completed by manufacturer]						
				VA	AA	CL	PA	WPK		E	TB	QS	AV	W	M	Reference to document in QMS (manufacturer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
8.3.1	What type of screw locking is required?		Only anti-unscrewing and preload force locking devices are permitted. Approved by building control authority.													
8.3.2	Tightening method for non-slip-resistant prestressed connections		Method in accordance with DIN EN 1090-2, verification via process test													
10.3.2	Corrosion protection for aluminium surfaces in contact with aluminium and plastics		Sealing of the contact surface is specified; Section 10.3.2 of DIN EN 1090-3 and GL 804 (see module 6201) must be observed.													
10.3.3	Corrosion protection for aluminium surfaces in contact with steel and wood		The specifications in Section 10.3.3 of DIN EN 1090-3 and GL 804 (see module 6201) must be observed.													
10.3.4	Corrosion protection of aluminium surfaces in contact with concrete, masonry and plaster etc.		The specifications in Section 10.3.4 of DIN EN 1090-3 and GL 804 (see module 6201) must be observed.													
10.3.5	Sealing measures on fasteners		Must be sealed													
12.4.1	Is it necessary to check the accuracy of fit before welding?		It is necessary to check the accuracy of fit before welding.													
12.4.3.1	Supplementary tests and test methods on welds		The scope of all tests and the quality requirements must be specified.													

File: 3_HPQ_DBS918007_QMS Matrix_Firma_02-2017
Key:
VA - process instruction
AA - work instruction
CL - checklist
TI - test instruction

WPK - records of
factory production control

E - Purchasing area, goods receipt
TB - Technical Board
QS - quality assurance
AV - production planning and control

W - workshop production area
M - assembly production area



HPQ

Noise barrier elements in accordance with GL 889.0007 / DBS 918 007

Overview of the implementation of the minimum requirements in the manufacturer's QMS

Deutsche Bahn AG
Infrastructure Procurement
Quality Assurance
Caroline-Michaelis-Strasse 5-11
10115 Berlin, Germany

Section DIN EN 1090- 3	Description	Documents available	Requirement	Requirement specified in/as [to be completed by manufacturer]					Implementation of the requirement in the area of [to be completed by manufacturer]							
				VA	AA	CL	PA	WPK	E	TB	QS	AV	W	M	Reference to document in QMS (manufacturer)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
4.2.1	Quality and manufacturing documentation		The scope of all tests, the quality requirements and the content of the manufacturing documentation must be specified.													
5.2	Inspection certificates (APZ 3.1) Traceability Labelling of alloy and condition		Inspection certificate 3.1, traceability required													
6.2	Labelling/identifiability of construction materials and parts during production		Is required.													
7.1	Quality requirements for welds		Comprehensive quality requirements in accordance with DIN EN ISO 3834-2 are agreed.													
7.2.1	Welding schedule		Is required.													

File: 3_HPQ_DBS918007_QMS Matrix_Firma_02-2017

Key:

VA - process instruction
AA - work instruction
CL - checklist
TI - test instruction

WPK - records of
factory production control

E - Purchasing area, goods receipt
TB - Technical Board
QS - quality assurance
AV - production planning and control

W - workshop production area
M - assembly production area

Page 7 of 9



HPQ

Noise barrier elements in accordance with GL 889.0007 / DBS 918 007

Overview of the implementation of the minimum requirements in the manufacturer's QMS

Deutsche Bahn AG
Infrastructure Procurement
Quality Assurance
Caroline-Michaelis-Strasse 5-11
10115 Berlin, Germany

Section DIN EN 1090-3	Description	Documents available	Requirement	Requirement specified in/as [to be completed by manufacturer]						Implementation of the requirement in the area of [to be completed by manufacturer]						
				VA	AA	CL	PA	WPK		E	TB	QS	AV	W	M	Reference to document in QMS (manufacturer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
7.4.1	Welding procedure specification (WPS)		Required. Welding must be carried out using qualified procedures for which, depending on the application, a welding procedure specification (WPS) in accordance with the relevant part of DIN EN ISO 15 609, DIN EN ISO 14 555 or DIN EN ISO 15 620 must be available. For execution class EXC3, the regulations on technical knowledge in DIN EN 1090-3 Section 7.4.1 apply.													
7.4.1	Qualification of electric arc welding procedures		Required. The specifications in accordance with DIN EN 1090-3, Sections 7.4.1 and 7.4.2 apply with the application of EXC3. The qualification methods according to DIN EN ISO 15 613 or DIN EN ISO 15 614-2 must be applied.													
7.4.4	Welding coordination/welding coordination personnel		The regulations on technical knowledge in DIN EN 1090-3, Section 7.4.4 apply.													
7.5.6	Tack welds		The regulations on tack welds in DIN EN 1090-3 Sections 7.5.4 and 7.5.6 apply. Qualified welding procedure.													

File: 3_HPQ_DBS918007_QMS Matrix_Firma_02-2017

Key:
VA - process instruction
AA - work instruction
CL - checklist
TI - test instruction

WPK - records of
factory production control

E - Purchasing area, goods receipt
TB - Technical Board
QS - quality assurance
AV - production planning and control

W - workshop production area
M - assembly production area

Page 8 of 9



HPQ

Noise barrier elements in accordance with GL 889.0007 / DBS 918 007

Overview of the implementation of the minimum requirements in the manufacturer's QMS

Deutsche Bahn AG
Infrastructure Procurement
Quality Assurance
Caroline-Michaelis-Strasse 5-11
10115 Berlin, Germany

Section DIN EN 1090- 3	Description	Documents available	Requirement	Requirement specified in/as [to be completed by manufacturer]						Implementation of the requirement in the area of [to be completed by manufacturer]						
				VA	AA	CL	PA	WPK		E	TB	QS	AV	W	M	Reference to document in QMS (manufacturer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
7.5.8	Butt welds		Run-on and run-off tabs must be used to ensure full penetration welding.													
12	Tab. L.3.2 Recommended scope of additional non-destructive testing (NDT) for SC2		The scope of NDT (%) for components and structures must at least correspond to the scope specified in DIN EN 1090-3 Table K.3, using EXC3 and utilisation range UR3.													

File: 3_HPQ_DBS918007_QMS Matrix_Firma_02-2017

Key:

VA - process instruction
AA - work instruction
CL - checklist
TI - test instruction

WPK - records of
factory production control

E - Purchasing area, goods receipt
TB - Technical Board
QS - quality assurance
AV - production planning and control

W - workshop production area
M - assembly production area

Page 9 of 9