

QUALIFICATION OF A WELDING PROCEDURE (WPQR)

CERTIFICATE 07 202 9040Z0031/9/V/0037


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Manufacturer's Welding Procedure Insp. Authority: TÜV NORD Systems GmbH & Co. KG
 WPS No: DSM 141 T BW 8.1/1.2 01 WPQR-No.: DSM 141 T BW 8.1/1.2 01 Revision: 0
 Manufacturer: DSM Dansk Smede og Maskinteknik A/S Akte Nr.: 9040P0031/9/V/0037
 Address: Nordre Industrivej 23, DK-6000 Rødding
 Code / Testing Standard: PED 97/23 EC / EN ISO 15613 / AD 2000 HP 2/1

RANGE OF APPROVAL	EN ISO 15613	AD 2000 - HP 2/1
Welding Process:	EN ISO 4063 -141 puls	DIN EN ISO 4063 -141 puls
Weld type/execution*:	T, BW bs	T, BW bs
Groove shape:	According to EN 9692-1; 1.3	V butt weld
Parent metal / group	CR ISO 15608 grp. 8.1 / 1.2	AD 2000 HP 0 Grp. 8.1 / 1.2
Parent Metal thickness:	1: 3,0 mm.	1: 3,0 mm.
Filler Metal Type Designation:	EN ISO 14343 / W 23 12 2L	Suitibility tested according to VdTÜV 1153
Gas/ flux	Shielding gas: EN ISO 14175 I1 Backing gas: EN ISO 14175 I1	Shielding gas: EN ISO 14175 I1 Backing gas: EN ISO 14175 I1
Type of Welding Current:	DC/-	DC/-
Heat input:	0,4 - 0,6 KJ/mm.	0,4 - 0,6 KJ/mm.
Welding Positions:	PA	PA
Preheat temperature:	Rt	Rt
Interpass temperature:	≤ 100°	≤ 100°
Post Weld Heat Treatment:	Without	Without
SCOPE EXTENSION/ LIMITATION:	Temperature restrictions according to the used base and filler material (See VdTÜV-datasheet of welding consumables and VdTÜV W. Blatt of base material) have to be considered	
Temperature limitation:	As base material.	
SPECIAL ADVICE FOR MANUFACTURING	This procedure qualification test is based on a production test and is only valid in conjunction with WPQR no.: DSM 141 T BW 8.1/1.1 01	
EVIDENCE FOR QUALITY ASSURANCE	For lower temperature application the proof of toughness has to be conducted additionally by procedure qualification test and/or workmanship tests.	
Note: Supplementary testing and repetition based on production tests are specified in AD 2000-Merkblatt HP 2/1 chapter 3.10. If the production is interrupted for more than one year and positive results of quality assurance measures (i. e. production tests) can not be demonstrated the application of the procedure qualification is temporal limited until: 09/2010		

Certified that test welds were prepared, welded and tested satisfactorily in accordance with the requirements of the code / testing standard indicated above.
 Hamburg, 29.09.2009

Enclosure: WPS


 K. Dinslage
 Notified body for Pressure Vessels
 Of TÜV NORD Systems GmbH & Co. KG
 Identification No. 0045
 (CEOC Member Organisation)

*Abbreviations see back page

WS_30_D2_E_01

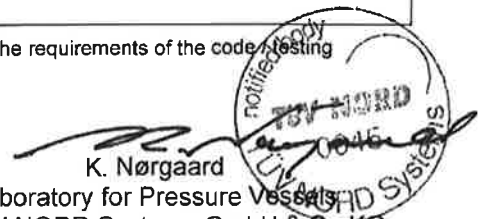
QUALIFICATION OF A WELDING PROCEDURE (WPQR)
CERTIFICATE 07 202 9040Z0158/1/V/0037

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Manufacturer's Welding Procedure Insp. Authority: TÜV NORD Systems GmbH & Co. KG
WPS No: 135.T.BW.1.1.02 WPQR-No.: 135.T.BW.1.1.02 Revision: 0
Manufacturer: Dansk Smede og Maskinteknik A/S Lot no.: TDK 31100082
Address: Nordre Industrivej 23, DK-6630 Rødding
Code / Testing Standard: PED 97/23 EC / EN ISO 15614-1 / AD 2000 HP 2/1

RANGE OF APPROVAL	EN ISO 15614-1
Welding Process:	EN ISO 4063 -135
Weld type/execution*:	BW, FW, P, T, ss nb, ss mb, bs, ml
Groove shape:	EN ISO 9692-1; 1.3; single V-joint with root gap
Parent metal / group	CEN ISO/TR 15608 table 1 Grp. 1.1 ; AD 2000 HP0 Grp.1.1
Parent Metal thickness:	BW: t: 3,0 – 14,2 mm. FW: t: 3,5 – 8,5 mm. Throat thickness: all
Pipe Outside Diameter:	≥ 84,0 mm.
Filler Metal Type Designation:	EN ISO 14341 / G2 Ni 2 ; AD 2000 HP 2/1: Suitibility tested according to VdTÜV Merkblatt 1153
Gas/ flux/ backing	Shielding gas: EN ISO 14175 – M21
Type of Welding Current:	DC/+
Heat input:	0,57 - 1,33 KJ/mm.
Welding Positions:	PA, PB ; AD 2000 HP2/1: PA
Preheat temperature:	20°C
Interpass temperature:	≤ 80°C
Post Weld Heat Treatment:	Without
SCOPE EXTENSION/ LIMITATION:	Temperature restrictions according to the used base and filler material (See VdTÜV-datasheet of welding consumables and VdTÜV W. Blatt of base material) have to be considered
Temperature limitation:	As base material.
SPECIAL ADVICE FOR MANUFACTURING	--
EVIDENCE FOR QUALITY ASSURANCE	For lower temperature application the proof of thougness has to be conducted additionally by procedure qualificationtest and/or workmanship tests.
Note: Supplementary testing and repetition based on production tests are specified in AD 2000-Merkblatt HP 2/1 chapter 8.2. If the production is interrupted for more than one year and positive results of quality assurance measures (i. e. production tests) can not be demonstrated the application of the procedure qualification is temporal limited until: 10/2012	

Certified that test welds were prepared, welded and tested satisfactorily in accordance with the requirements of the code / testing standard indicated above.
Hamburg, 07.10.2011



K. Nørgaard
Laboratory for Pressure Vessels
Of TÜV NORD Systems GmbH & Co KG
Identification No. 0045
(CEOC Member Organisation)

Enclosure: WPS

*Abbreviations see back page



CONFÉDÉRATION EUROPÉENNE
D'ORGANISMES DE CONTRÔLE



QUALIFICATION OF A WELDING PROCEDURE (WPQR)

CERTIFICATE 07 202 Z0584/7/DSM 11A

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3 **Manufacturer's Welding Procedure** Insp. Authority: TÜV NORD Systems GmbH & Co. KG
4 **WPS No:** DSM 11A **WPQR-No.:** -- **Revision:** 0
5 **Manufacturer:** Dansk Smede og Maskinteknik A/S **Akte Nr.:** 3037P058470-DSM 11A
6 **Address:** Nordre Industrivej 23, DK-6630 Rødding
7 **Code / Testing Standard:** PED 97/23 EC / EN ISO 15614-1 / AD 2000 HP 2/1

8	RANGE OF APPROVAL	EN ISO 15614-1	AD 2000 - HP 2/1
9	Welding Process:	EN ISO 4063 -141	EN ISO 4063 -141
10	Weld type/execution*:	T, P, BW, FW, ss nb, ss mb, bs	T, P, BW, FW, ss nb, ss mb, bs
11	Groove shape:	According to EN 9692-1 ; 1.3	V - Butt joint
12	Parent metal / group	CR ISO 15608 table 1 grp. 1	AD 2000 W1 / AD 2000 HP0, Group 1
13	Range of approval:	t: 1,47 – 2,73 mm.	t: 1,47 – 2,73 mm.
14	Pipe Outside Diameter:	25,0 mm.	25,0 mm.
15	Filler Metal Type Designation:	EN 12070 / W Mo Si	EN 12070 / W Mo Si Suitability tested according to VdTÜV 1153
16	Gas/ flux	Shielding gas: EN 439-I1	Shielding gas: EN 439-I1
17	Type of Welding Current:	DC-	DC-
18	Heat input:	0,3 – 0,4 KJ/mm.	0,3 – 0,4 KJ/mm.
19	Welding Positions:	PA	PA
20	Preheat temperature:	Rt	Rt
21	Interpass temperature:	--	--
22	Post Weld Heat Treatment:	--	--
23	SCOPE EXTENSION/ LIMITATION:	Temperature restrictions according to the used base material (See VdTÜV W. Blatt of base material) have to be considered.	
24	Temperature limitation:	As base material	
25	SPECIAL ADVICE FOR MANUFACTURING	None	
26	EVIDENCE FOR QUALITY ASSURANCE	For lower temperature application the proof of toughness has to be conducted additionally by procedure qualification test and/or workmanship tests.	
27	Note: Supplementary testing and repetition based on production tests are specified in AD 2000-Merkblatt HP 2/1 chapter 3.10. If the production is interrupted for more than one year and positive results of quality assurance measures (i. e. production tests) can not be demonstrated the application of the procedure qualification is temporal limited until: 09/2008.		

28 Certified that test welds were prepared, welded and tested satisfactorily in accordance with the requirements of the code / testing standard indicated above.

29 Hamburg, 19.09.2007

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31 Enclosure: WPS DSM 11A
3037P058470-MET



32 *Abbreviations see back page