



DET NORSKE VERITAS

Ref.: 03/2011

WELDING PROCEDURE QUALIFICATION TEST

According to (code, standard)

EN ISO 15614-1:2004/A1:2008

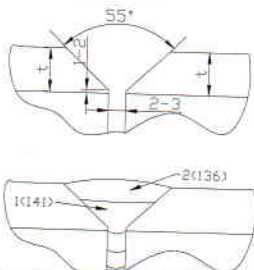
Manufacturer's welding procedure No.
G 03

Manufacturer **Cermar Sp. z o.o., ul. Sienna 5a, 70-542 Szczecin** Place and date **Szczecin, Poland, 2011-07-20**

Purchaser's spec. No. - Project -

Requirements beyond code/standard **DNV-OS-C401: October 2010; NORSOK M-101 rev.4; NORSOK M-601 Edition 5**

Joint preparation and welding sequence (Sketch).
State rolling direction, if applicable



BASE MATERIAL SPECIFICATION AND GROUPING

X2CrNiMoN25.7.4; 1.4410; UNS S32750 / Group 10.2

Grade	C %	C eq %	Grade	C %	C eq %
1.4410	0.014	-	-	-	-

If applicable, the following C eq based on ladle analysis is to be calculated:

$$C_{eq} = C + \frac{Mn}{6} + \frac{Cr+Mo+V}{5} + \frac{Cu+Ni}{15} \%$$

Welding process(es) **141 / 136** Welding position **PA** Single-/double sided welding **Single sided**

WELDING CONSUMABLES:

Index	Consumable(s), trade name	Code designation
A	Metrode ZERON 100X	W 25 9 4 N L acc. EN ISO 14343-A
B	Metrode SUPERCORE Z100XP	TS 2594-F M21 1 acc. EN ISO 17633-B
C		

WELDING PARAMETERS

Pass No.	Index	Diam. mm	Gas composition	Gas L/min	Current polarity	Amps	Volts	Travel speed mm/min	Wire feed mm/min	Heat input kJ/mm
1	A	2.4	I1	18-20	DC/-	123	11	33,8	-	1,44
2	B	1.2	M21	22-25	DC/+	148	22	163	-	0,96
1	A	2.4	I1	18-20	DC/-	123	10	34,5	-	1,28
2	B	1.2	M21	22-25	DC/+	153	22	168	-	0,96

Other information (weaving, backing, groove preparation, gouging, grinding, etc.):

Backing gas (100% Ar) flow 15-18 l/min.

I1 - 100%Ar ; M21 - 80%Ar+20%CO2 acc. EN ISO 14175

Two test pieces were welded.

SPECIAL REQUIREMENTS: Preheat min. -°C Interpass max **150°C** PWHT -°C Time - Hr(s)

Heating/cooling rate - Baking of electrodes - Others -

WELDING CARRIED OUT BY **Polak Adam / Maślak Leszek** TEST PIECE MARKED **1.1 BW; 1.2 BW**

EXTENT OF APPROVAL: Base material(s) **Gr. 10 (ISO 15608)** Positions: **PA / 1G, 1F**

Plate / wall thickness **3 - 12 mm** Diam. **≥ 57,1 mm** Other limitations **as per relevant standard in use.**

We certify that the statements in this record are correct and that the test weld was prepared, welded and heat treated in accordance with the specified Code/Standard and/or purchaser's requirements.

Manufacturer's signature and stamp
mgr inż. Wiesław Wymiałat
GLÓWNY SPAWALNIK WELDING ENGINEER

MICHAŁ ZGLICZYŃSKI
DNV's survey station and surveyor's signature
SURVEYOR

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