



DATA: **23/12/2015**
PROTOCOLLO N.: **RSSE/PNX/VPV/50901**

A:
FACIPIERI S.R.L.
Via Cavour 13/B
36053 Gambellara (VI) - Italy

DA:
PRODUCT CERTIFICATION
Via della Pila 13
30175 Venezia
ITALY

PRATICA: **2015VEPO38**

OGGETTO:
CERTIFICAZIONE DI PRODOTTO: QUALIFICA SALDATORI E PROCEDIMENTI

In seguito al parere favorevole espresso dal Comitato Tecnico RINA per la qualifica dei saldatori e procedimenti, Vi trasmettiamo i certificati relativi alla pratica: **N. 2015 VE 38 PO:**

- n. 1 certificato saldatore PO10
- n. 1 WPQR n. 03/A

Cordiali saluti.

Vesna Pavic

Vesna Pavic

PRODUCT CERTIFICATION
NORTH EAST ITALY
RINA SERVICES S.P.A.

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WELDER APPROVAL CERTIFICATE
ACCORDING TO UNI EN ISO 9606-1:2013



No. **15VE00038PO10**

Designation	UNI EN ISO 9606-1 135-P P FW FM2 S t6 PB sl		
Welder	RAPIKI BLENDAR		
Born in	DURRES-ALBANIA	on	06/12/1989
Identification	AR8771464	Method of Identification	C.I. Stamp No. RB
Employed by	FACIPIERI S.R.L. - GAMBELLARA (VI)		
WPS used by welder during welding of test coupon: 04P/2015		Job knowledge: not tested	

Welding variables	Test piece	Range of qualification
Welding process(es)	135-P	135; 138
Transfer mode	Pulsed-arc	Spray, globular and pulsed-arc
Product type	Plate	Plates and pipes
Type of weld	FW	Fillet weld
Parent Metal group (ISO/TR 15608)	1.3	1 to 11
Filler material group(s)	FM2	FM1, FM2
Filler material type	Solid wire	Solid wire/electrode core: M
Shielding gas (EN ISO 14175)	M21	All compatible
Type of current and polarity	DC EP	All compatible
Material thickness (mm)	6	>= 3
Pipe outside diameter (mm)	N.A.	75 and over
Welding position(s)	PB	PA, PB
Weld details / Layer technique	sl	sl

Type of test							
Visual	Acceptable	Radiographic	Not tested	Magnetic particle	Not tested	Penetrant	Not tested
Macro	Acceptable	Fracture	Not tested	Bend	Not tested		

This certificate is valid from **2 February 2015** to **2 February 2018**
 Issued at **GENOVA** on **21 December 2015**

This certificate consist of 2 pages

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RINA Services S.p.A.
 Via Corsica 12 - 16128 Genova



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PRD N° 002 B	PRS N° 066 C
SCR N° 003 F	LAB N° 0832

Membro degli accordi di Mutuo riconoscimento EA e IAF
 Signatory of EA and IAF Mutual Recognition Agreements



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SGQ N° 002 A SSI N° 001 G
SGA N° 002 D DAP N° 001 H
PRD N° 002 B PRS N° 066 C
SCR N° 003 F LAB N° 0832

Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

WELDING PROCEDURE QUALIFICATION RECORD (WPQR)

N. 15VE00038PO3/A

Manufacturer **FACIPIERI S.R.L. - Gambellara (VI)**

WPQR No. **04P/2015**

Dated **21/12/2015**

Manufacturer's welding procedure (WPS) No. **04P/2015**

Dated **02/02/2015**

RANGE OF APPROVAL

Welding process **135** Type **Partly mechanized**

Joint type **Plates and Pipes FW**

Single/Multiple pass **Single**

Parent material group(s) **1-1** ISO/TR 15608
with a specified minimum yield strength \leq 420 MPa

Parent material thickness (mm) **Butt Joint = N.A. Fillet Joint $t_1 = 3$ to 12 $t_2 = 3$ to 12**

Throat thickness (mm) **3,9 to 7,8**

Weld deposit thickness (mm) **N.A.**

Outside diameter (mm) **Over 150 (PA - PB) ; over 500 (all other qualified positions)**

Filler metal type **Solid wire EN ISO 12534-A ; G55 2 M Mn 3 Ni**

Shielding gas (ISO 14175) **M21 with max. CO2 % = 20 Backing gas (ISO 14175) N.A.**

Type of welding current **DCEP Heat input kJ/cm **Min 10,9****

Welding position **All, vertical down excluded**

Preheat min. (°C) **20 Interpass temp. Max. (°C) N.A.**

Post weld heat treatment / Ageing **None**

Other information **-**

Welders name **Rapiki Bledar**

Stamp No. **RB**

Welding test conducted by **FACIPIERI S.R.L. - Gambellara (VI)**

Mechanical test conducted by **S.Marco srl - Schio (VI)**

Laboratory test No. **40779**

At presence of RINA Surveyor **L.Mantovan**

We certify that statements in this certificate are correct and that the test welds were prepared, welded and tested in accordance with the requirements of **UNI EN ISO 15614-1: 2012** Standard

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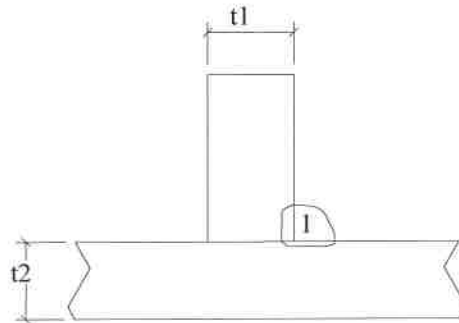
on **21/12/2015**



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JOINT DETAILS AND WELDING SEQUENCES**PLATE TO PLATE FILLET WELD IN SINGLE PASS**

Pass No.	Process	Filler metal diam. (mm)	Filler metal classification	Amps	Volt	Travel speed (cm/min)	Heat input (kJ/cm)	Other
1	135	1,0	G55 2 M Mn 3 Ni	200	26,5	17,5	14,5	-

**PARENT MATERIAL**

Material specification	SSAB DOMEX 420 MC D		
Type or grade	N.A.		
Group(s)/Subgroup(s) No. (ISO/TR 15608)	1.3 to 1.3		
Thickness (mm)	t₁=6 ; t₂=6	Throat thickness (mm)	5,2
Diameter (mm)	N.A.		
Branch connection angle	N.A.		
Other	-		

WELDING CONSUMABLES

Process	135
Trade name(s)	SAF-FRO FILCORD TENAX
Specification	EN ISO 12534-A
Classification / designation	G55 2 M Mn 3 Ni
Size (mm)	1,0
Deposited metal thickness	
Groove	N.A.
Throat	5,2 mm
Flux trade name	N.A.
Consumable insert	N.A.
Other	-



GAS			
	Gas	Mixture	Flow rate (l/min.)
Shielding	-	Ar 80% + CO2 20%	17
Trailing	-	-	-
Backing	-	-	-

POSITION	
Welding position	PB
Other	-

PREHEAT		POSTWELD HEAT TREATMENT	
Preheat temperature	20 °C	Temperature	None
Interpass temperature	N.A.	Time	N.A.
Other	-	Other	-

ELECTRICAL CHARACTERISTICS			
Current	DCEP		
Ampere (range)	See table	Volts (Range)	See table
Mode of metal transfer	Pulsed arc		
Tungsten electrode size and type	N.A.		
Other	-		

TECHNIQUE	
Travel speed (range)	See table
String or weave bead	String
Oscillation (*)	N.A.
Method of groove/edge preparation	Grinding
Interpass cleaning	N.A.
Method of back gouging	N.A.
Orifice or gas cup size	18 mm
Stand off distance (*)	N.A.
Multiple or single pass	Single
Multiple or single electrodes	Single
Torch angle (*)	N.A.
Other (*)	for fully mechanized/robotic only



HARDNESS TEST		
Location	Type/load	Maximum value
Parent metal(s)	HV10	178
H.A.Z.(s)	HV10	186
Weld metal	HV10	185

OTHER TEST


MACROGRAPHIC EXAMINATION **Acceptable**
MICROGRAPHIC EXAMINATION **Not required**

NON DESTRUCTIVE EXAMINATION

VISUAL EXAMINATION **Acceptable**
RADIOGRAPHIC EXAMINATION **Not required**
PENETRANT TEST **Acceptable**
MAGNETIC PARTICLE **Not required**
ULTRASONIC TEST **Not required**

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