



WELDING PROCEDURE QUALIFICATION RECORD

CERTIFICATO DI QUALIFICA PROCEDURA DI SALDATURA

N°

4957064-P1-01P/22

Manufacturer / Costruttore:

ITALSALDO S.r.l.

Corso Vittorio Emanuele, 231 - 93012 Gela (CL) - Italy

Place of welding / Luogo di saldatura:

Gela (CL) - Italy

Date of welding / Data di saldatura:

December, 2022

pWPS N°:

P1-01P/22

Rev.1

Reference standard / Norma di riferimento:

ASME Sec. IX Code - Last Ed.

Supplemented by / Codice Norma sup.:

NACE MR0175

Test performed in the presence of:

Prove realizzate in presenza di:

Mr. ORSINI Sergio Bureau Veritas inspector

BUREAU VERITAS

Certifies that test pieces were prepared, welded and tested satisfactorily in accordance with the requirements of the documents indicated above.

Certifica che i saggi di prova sono stati preparati, saldati e controllati con esito soddisfacente in conformità ai requisiti dei documenti sopra indicati.

Record issued on:

Certificato emesso il:

16/01/2023

EXAMINING BODY Organismo d'esame	MANUFACTURER Costruttore
Authorized representative: Ispettore autorizzato: Marco CICCARELLA Visa: Firma:  Stamp of the examining body: Timbro dell'organismo di esame: 	Represented by: Rappresentante: Visa: Firma: Stamp of the manufacturer (optional): Timbro del costruttore (opzionale):

Revision No./

Revisione n°:

0

Reason of revision /

Motivo della revisione

Other identification (as necessary):

Altre identificazioni (se necessarie):

R31141/23/MC/sd

23.SF.4957064.783

Pag. 1/18

For test coupon only

Company Name:


ITALSALDO srl
MONTAGGI INDUSTRIALI
**WELDING PROCEDURE
SPECIFICATION**
 (WPS)
 ASME Sec. IX BPV Code

WPS No.: P1-01P/22 Rev.1

Date: 27/01/2022

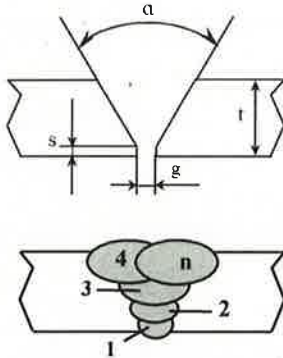
Supp. PQR-No.: 4957064-P1-01P/22

Welding Process (es)	a) GTAW	b) SMAW	c)
Type (s)	a) Manual	b) Manual	c)

JOINTS (QW-402)

Joint Design: BW/Butt Weld Single V Groove

Backing/Material (Type): a) O YES / ● NO; b) ● YES / O NO b); b) Backing type: Weld metal



Weld pass	Welding Process	Filler Metal Size (mm)		Ampère		Volt		Travel Speed mm/min
		1E	2E	1E	2E	1E	2E	
1 st	5G	GTAW	2,40		115 ÷ 125		12 ÷ 14	55 ÷ 65
2 nd	5G	SMAW	2,50		75 ÷ 85		21 ÷ 23	70 ÷ 80
3 rd	5G	SMAW	3,20		100 ÷ 110		23 ÷ 25	70 ÷ 80
4 th ÷ n	5G	SMAW	3,20		95 ÷ 105		22 ÷ 24	100 ÷ 110

Note ///

 $\alpha = 70^\circ$; $t = 11,07\text{mm}$; $g = 3+4\text{mm}$; $s = 1,5\text{mm}$; o.d. = 60,3mm**BASE METAL (QW-403)**

P-No. 1 Gr.-No. 1 to P-No. 1 Gr.-No. 1

Spec. Type – Grade	ASTM A 106 GR.B – K03006
to Spec. Type & Grade	ASTM A 106 GR.B – K03006
Chem. Anal. & Mech. Prop.	--
To Chem. Anal. & Mech. Prop.	--
Base metal (mm/inches)	Groove: 11,07mm/0,435" Fillet: N.A.
Pipe dia.: (mm/inches)	Groove: 60,3mm/2" Fillet: N.A.
Other	None

POSTWELD HEAT TREATMENT (QW-407)

Temp. Range (°C):	None
Time Range (h):	N.A.
Heat rate (°C/h):	N.A.
Cool rate (°C/h):	N.A.
Other	None

FILLER METAL (QW-404)

	a)	b)	c)
Spec. No. (SFA)	AWS A5.18	AWS A5.1	
AWS No. (Class)	ER70S-3	E7018-1 H4	
A-No.	1	1	
F-No.	6	4	
Size (mm)	2,40	2,50 ÷ 3,20	
Product form	Bare Solid	--	
F.M. Trade Name	CARBOROD	TENAX 35S	
Manufacturer	LINCOLN ELECTRIC	LINCOLN ELECTRIC	
Thk range Groove (mm)	3	8,07	
Thk range Fillet (mm)	N.A.	N.A.	
Flux Trade Name	N.A.	N.A.	
Manufacturer	N.A.	N.A.	
Electr. -Flux (Class)	N.A.	N.A.	
Other	None		

GAS (QW-408)

	Percent Composition Gas(es) %	Flow Rate (l/min)
Plasma	N.A.	N.A.
Shield. a)	Argon 99,99	11+13
Shield. b)	N.A.	N.A.
Trailing	None	None
Backing	None	None
GAS for OFW	N.A.	N.A.
Other	None	

ELECTRICAL CHARACTERISTICS (QW-409)

	a)	b)	c)
Current	DC	DC	
Polarity	EN	EP	
Mode of Met. Transf. for GMAW	N.A.		
Tungst. Electr. Type & Size	SFA 5.12 EWTh-2 Ø 2,4mm		
Electr. Wire feed speed range	N.A.		
Other:	None		

POSITIONS (QW-405)

Position(s) of groove	5G
Welding Progression	● Up ○ Down ○ N.A.
Position(s) of fillet	N.A.
Other	None

PREHEAT (QW-406)

Preheat Temp. (°C)	20 (Room Temperature)
Interpass Temp. (°C)	200 Max
Preheat maintenance (°C)	None
Other	None

TECHNIQUE (QW-410)

String or Weave Bead	String and Weave
Orifice or Gas Cup Size	8mm
Initial & Interpass Clean.	Brushing and grinding
Method of Back Gouging	N.A.
Contact Tube to Work Dist.	N.A.
Oscillation	Ampl. -- Freq. --
Multiple/Single Pass per Side	● Multiple ○ Single ○ N.A.
Multiple/Single Electrodes	○ Multiple ● Single ○ N.A.
t Pass<1/2"	● Yes ○ No ○ N.A.
Sup. Powder	○ Yes ● No ○ N.A.
Alloy elements	○ Yes ● No ○ N.A.
Other Peening:	None

Company Name:


ITALSALDO srl
MONTAGGI INDUSTRIALI
PROCEDURE QUALIFICATION RECORD
(PQR)
ASME Sec. IX
BPV Code

SHEET 1 OF 2

PROCEDURE QUALIFICATION
RECORD (PQR) Nr.

4957064-P1-01P/22

Rev.

0

Date

16-01-2023

WPS No.

P1-01P/22

Rev.

1

Date

27-12-2022

WELDING PROCESS (ES)

a)

GTAW

b)

SMAW

c)

Type (s)

a)

Manual

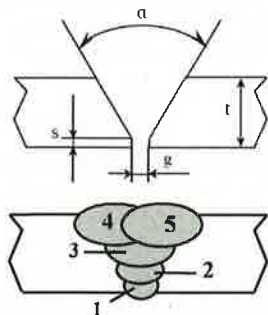
b)

Manual

c)

Joints (QW-402)

Joint Design : BW Butt Weld, Single V groove


 $\alpha = 70^\circ$; $t = 11,07\text{mm}$; $s = 1,50\text{mm}$; $g = 3,50\text{mm}$; O.D. = 60,30mm

Weld pass and position	Welding Process	Filler Metal Size (mm)		Ampère		Volt		Travel Speed mm/min
		1E	2E	1E	2E	1E	2E	
1 st 5G	GTAW	2,40		120		13		60
2 nd 5G	SMAW	2,50		80		22		75
3 rd 5G	SMAW	3,20		105		24		75
4 th +5 th 5G	SMAW	3,20		100		23		105

Heat Input (KJ/mm): 1st = 1,56; 2nd = 1,41; 3rd = 2,016; 4th + 5th = 1,314
Groove Design of Test Coupon

(For combination qualifications, the deposited weld metal shall be recorder for each filler metal or process used)

BASE METAL (QW-403)

P-No. 1 Gr.-No. 1 to P-No. 1 Gr.-No. 1

Spec. Type & Grade

ASTM A 106 GR.B - K03006 (*)

to Spec. Type & Grade

ASTM A 106 GR.B - K03006 (*)

Thick. of Test Coupon (mm/inches)

11,07mm/0,435"

Diam. of Test Coupon (mm/inches)

60,3mm / 2" (Outside Diameter mm / inches)

(*) Heat No. 92549 Certificate TUBOS REUINODS, S.A. - AMURRIO No. 0000154154

FILLER METAL (QW-404)

Spec. No. (SFA)

AWS No. (Class)

A-No.

F-No.

Size of filler metal (mm)

Product form

F.M. Trade Name

Manufacturer

Thk range Groove (mm)

Thk range Fillet (mm)

Flux Trade Name

Manufacturer

Electr. -Flux (Class)

Other

a)	b)	c)
AWS A5.18	AWS A5.1	
ER70S-3	E7018-1 H4	
1	1	
6	4	
2,40	2,50 + 3,20	
Bare Solid	--	
CARBOROD	TENAX 35S	
LINCOLN ELECTRIC	LINCOLN ELECTRIC	
3	8,07	
N.A.	N.A.	
a)	b)	c)
N.A.	N.A.	
N.A.	N.A.	
N.A.	N.A.	

a) Lot/Batch No. C1TG200401;

b) Ø2,5 Lot/Batch No. 34821002; Ø3,2 Lot/Batch No. C3MS20Q720

POSITIONS (QW-405)

Position(s) of groove

Welding Progression

Position(s) of fillet

Other

5G			
● Up	○ Down	○ NA	
N.A.			
None			

PREHEAT (QW-406)

Preheat Temp. (°C)

Interpass Temp. (°C)

Preheat maintenance (°C)

Postheat (°C)

20 (Room temperature)
200 Max
None
None

POSTWELD HEAT TREATMENT (QW-407)

Temp. Range (°C):

None

Time Range (h):

N.A.

Heat rate (°C/h):

N.A.

Cool rate (°C/h):

N.A.

Other

None

GAS (QW-408)

Percent Composition

Gas(es) %

Flow Rate

(l/min)

Plasma

Shield a)

Shield b)

Trailing

Backing

GAS for OFW

Other

N.A.	N.A.
Argon 99,99	12
N.A.	N.A.
None	None
None	None
N.A.	N.A.

None

ELECTRICAL CHARACTERISTICS (QW-409)

Current

Polarity

Mode of Met. Transf. for GMAW

Tungst. Electr. Type & Size

Electr. Wire feed speed range

Other

a)	b)	c)
DC	DC	
EN	EP	
N.A.	N.A.	
a) SFA 5.12 EWTh-2 Ø 2,4mm		
N.A.		

None

TECHNIQUE (QW-410)

String or Weave Bead

Orifice or Gas Cup Size

Initial & Interpass Clean.

Method of Back Gouging

Contact Tube to Work Dist.

Oscillation

Multiple/Single Pass per Side

Multiple/Single Electrodes

t Pass < 1/2"

Sup. Powder

Alloy elements

Other

String & Weave

8mm

Brushing and grinding

None

N.A.

Ampl. -- Freq. --

● Multiple ○ Single ○ N.A.

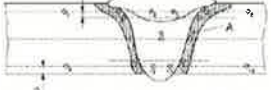
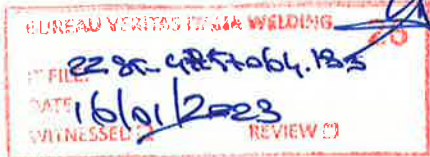
○ Multiple ● Single ○ N.A.

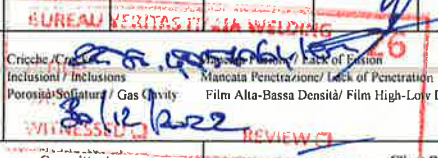
○ Not ○ N.A.

● Not ○ N.A.

● Not ○ N.A.

None

Company Name:  ITALSALDO srl MONTAGGI INDUSTRIALI		PROCEDURE QUALIFICATION RECORD (PQR)		ASME Sec. IX BPV Code																																																																											
				SHEET 2 OF 2																																																																											
PROCEDURE QUALIFICATION RECORD (PQR) Nr.		4957064-P1-01P/22		Rev. 0	Date 16-01-2023																																																																										
TENSILE TEST (QW-150)																																																																															
SPECIMEN Nr.	Width / Diameter mm.	THICKNESS mm.	AREA mm ²	ULTIMATE TOTAL LOAD N	ULTIMATE UNIT STRESS N/mm ²																																																																										
TRANSVERSE REDUCED QW-462.1(b) - 03G-T1	18,80	10,80	203,04	63993	490,30																																																																										
TRANSVERSE REDUCED QW-462.1(b) - 03G-T2	19,10	10,70	204,37	63994	484,50																																																																										
Type of failure & Location																																																																															
Ductile, base metal																																																																															
Ductile, base metal																																																																															
Test No. 03G																																																																															
GUIDE-BEND TEST (QW-160)																																																																															
Type & Figure Nr.				Result																																																																											
TRANSVERSE FACE QW-462.3(a) - 03G BF1				180° SATISFACTORY																																																																											
TRANSVERSE FACE QW-462.3(a) - 03G BF2				180° SATISFACTORY																																																																											
TRANSVERSE ROOT QW-462.3(a) - 03G BR1				180° SATISFACTORY																																																																											
TRANSVERSE ROOT QW-462.3(a) - 03G BR2				180° SATISFACTORY																																																																											
Test No. 03G																																																																															
TOUGHNESS TEST (QW-170)																																																																															
Sp. Size (mm)	Notch Locations	Notch Type	Test T _i (°C)	Impact Tests			Drop Weight Break (Y/N)																																																																								
				Values / Average (Joule)	% Shear	Lateral Expansion ≥ 0,38mm																																																																									
10x10x55	W.M.	KV	-20	130 – 123 – 122/ 125	---	---	☐ Yes ☐ No																																																																								
10x10x55	H.A.Z.	KV	-20	165 – 175 – 171/ 170,3	---	---	☐ Yes ☐ No																																																																								
Test No. 03G																																																																															
FILLET WELD TESTS (QW-180)																																																																															
Result – Satisfactory ☐ Yes ☐ No Penetration into Parent Metal ☐ Yes ☐ No Macro – Results: None																																																																															
OTHER TESTS																																																																															
Type of test: Visual examination: satisfactory																																																																															
Macrographic examination (QW-183) :  Satisfactory - Absence of cracks, cavities, inclusions, lack of fusion/penetration.				Hardness Test according to NACE MR0175 :  <table border="1" style="width:100%; text-align: center; font-size: small;"> <thead> <tr> <th>Pos. / Pos</th> <th>BM</th> <th colspan="2">HAZ</th> <th colspan="2">WM</th> <th colspan="2">HAZ</th> <th>BM</th> </tr> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> </tr> </thead> <tbody> <tr> <td>TOP</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>HV10</td> <td>160</td> <td>185</td> <td>188</td> <td>186</td> <td>190</td> <td>192</td> <td>199</td> <td>158</td> </tr> <tr> <td>CENTER</td> <td></td> <td></td> <td>17</td> <td></td> <td>18</td> <td></td> <td>19</td> <td></td> </tr> <tr> <td>HV10</td> <td></td> <td></td> <td>190</td> <td></td> <td>192</td> <td></td> <td>187</td> <td></td> </tr> <tr> <td>BOTTOM</td> <td></td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td>13</td> <td>14</td> <td>15</td> </tr> <tr> <td>HV10</td> <td></td> <td>162</td> <td>188</td> <td>195</td> <td>201</td> <td>200</td> <td>197</td> <td>184</td> </tr> </tbody> </table>				Pos. / Pos	BM	HAZ		WM		HAZ		BM		1	2	3	4	5	6	7	8	TOP									HV10	160	185	188	186	190	192	199	158	CENTER			17		18		19		HV10			190		192		187		BOTTOM		9	10	11	12	13	14	15	HV10		162	188	195	201	200	197	184
Pos. / Pos	BM	HAZ		WM		HAZ		BM																																																																							
	1	2	3	4	5	6	7	8																																																																							
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HV10	160	185	188	186	190	192	199	158																																																																							
CENTER			17		18		19																																																																								
HV10			190		192		187																																																																								
BOTTOM		9	10	11	12	13	14	15																																																																							
HV10		162	188	195	201	200	197	184																																																																							
Welder's Name: PALENA Antonio Welding Test conducted by: Corso Vittorio Emanuele 231, 93012 Gela (CL) – Italy Penetrant Test by: TECNOSET S.r.l. Radiographic Test by: TECNOSET S.r.l. Laboratory Test by: QUALITY SIDER VERIFICATION S.r.l. – 81025 Mariglianese (CE) - Italy				Stamp No.: PA Penetrant Test No.: 03-2022 Radiographic Test No.: 01-2022 Laboratory Test No.: 21003G																																																																											
We, certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of the Section IX of the ASME Boiler Pressure Vessel Code last Ed.				Certify by:																																																																											
Date: 16/01/2023				Manufacturer (Stamp and Signature)																																																																											
Tested by (No.Bo.) 				Date:																																																																											

	Azienda certificata: UNI EN ISO 9001: 2015 Azienda certificata: UNI EN ISO 14001:2015 Azienda certificata: UNI EN ISO 45001: 2018		Certificato n° 03-2022 Verbal n°							
	Controllo Radiografico <i>Radiographic Testing</i>		Del 30/12/2022 Date Pagina di 1 di 1 Sheet of 1 of 1							
Cliente: ITALSALDO SRL Customer:		Ordine di lavoro: Order of Job:		Commessa: Job n°:						
Impianto: Plant:		Località: Gela (CL) Place:		Costruttore: Manufacturer:						
Oggetto: QUALIFICHE PROCEDIMENTI DI SALDATURA (WPQR) Object:										
CONDIZIONI D'ESAME / CONDITIONS OF EXAMINATION										
DISEGNO / Drawing	MATERIALE / Material ASTM A 106 Gr.B	SPESSORE / Thickness 11,07 mm	DN 60,3 mm							
Proc. Saldatura / Welding Proc. 141+111	COND.SUP. / Surface Condition Come saldato / As welded	STATO DI LAV. / Working Step	ESTENSIONE CONTROLLO / Extension Control							
NORME DI RIFERIMENTO / Norms of Reference										
Norm of Reference for the Test: UNI EN ISO 17636-1		Norm of Reference for the Acceptance Levels: UNI EN ISO 10675-1 ☒ 1 ☐ 2 ☐ 3		Examination Procedure n°07 rev.00						
ATTREZZATURA - METODO DI CONTROLLO <i>Equipment - Method of Test</i>										
App. a Raggi X: X-Ray Equipment X:	Matricola: Serial Number:	kV:	Corrente (mA): Current (mA):	Macchia Focale (mm): Focal spot Size (mm):						
App. a Raggi Y: X-Ray Equipment Y: SENTINEL 880 DELTA D16987	Matricola: Serial Number: 48396M/26187MX	Sorgente: Source: Ir-192	Attività (Ci): Activity (Ci): 30	Dimensione fisica della fonte (mm): Source physycal Size (mm): 2X2,7						
Penetrametro: Penetrometer: ☒ 10FEEN	Lato Film Film Side ☒ H	Tipo di pellicola: Film Type: CARESTREAM D4	10X16: 15	10X24: 10X48: 30X40: Totale 15						
ESITO DEL CONTROLLO <i>Result of Test</i>										
SALDATURA N° Weld n°	Posizione Film Film position	DN	Sp. Th.	WPS	Punzone Welder Id.	W	Densità Density	IQI	Giudizio Result	Note
W 8	A-B	60,3	11,07		P A	W 16	2,5	10 FEN-EN	C	Pos. PH
"	B-C	"	"		"	"	2,5	"	"	"
"	C-D	"	"		"	"	2,6	"	"	"
"	D-E	"	"		"	"	2,5	"	"	"
"	E-A	"	"		"	"	2,5	"	"	"
W 9	A-B	60,3	11,07		P A	W 16	2,5	10 FEN-EN	C	Pos. PH
"	B-C	"	"		"	"	2,5	"	"	"
"	C-D	"	"		"	"	2,6	"	"	"
"	D-E	"	"		"	"	2,6	"	"	"
"	E-A	"	"		"	"	2,5	"	"	"
W 10	A-B	60,3	11,07		P A	W 16	2,6	10 FEN-EN	C	Pos. PC
"	B-C	"	"		"	"	2,5	"	"	"
"	C-D	"	"		"	"	2,5	"	"	"
"	D-E	"	"		"	"	2,5	"	"	"
"	E-A	"	"		"	"	2,6	"	"	"
C= Conforme/Conforming NC= Non Conforme/ Not Conforming RX= Conferma Difetto/Confirmation Defect NX= Film NA/ Film NA NR= Riparare / To Repair NT= Tagliare/ To Cut 										
Operatore livello 2 EN ISO 9712 Operator level 2 EN ISO 9712		Cliente Customer		Committente Client		Client O.N.				
 OPERATORE QUALIFICATO 2° LIVELLO MT-PT-RT-UT QUALIFIED OPERATOR 2° LEVEL MT-PT-RT-UT		ITALSALDO SRL				 MAURIZIO CASCO International Welding Inspector 2° LIVELLO VT-PT-MT-RT				
Mod M CRT REV.00										

		Azienda certificata: UNI EN ISO 9001: 2015 Azienda certificata: UNI EN ISO 14001:2015 Azienda certificata: UNI EN ISO 45001: 2018		Certificato n° 01-2022 Verbal n°	
		Controllo Con Liquidi Penetranti <i>Penetrant Testing</i>		Del 30/12/2022 Date	
				Pagina di 1 di 1 Sheet of 1 of 1	
Cliente ITALSALDO SRL Customer		Ordine di lavoro Order of Job		Commessa Job n°	
Impianto Plant		Località GELA (CL) Place		Costruttore Manufacturer	
Oggetto QUALIFICHE PROCEDIMENTI DI SALDATURA (TUBI) Object					
CONDIZIONI D'ESAME / CONDITIONS OF EXAMINATION					
DISEGNO / Drawing		MATERIALE / Material		SPESSORE / Thickness	
		Guarda esito del controllo / See Result of test		Guarda esito del controllo / See Result of test	
TEMPERATURA / Test Temp		COND.SUP. / Surface Condition		STATO DI LAV. / Working Step	
T. Ambiente / T. Room		Spazzolato / Brushed		Come saldato / As Welded	
				100%	
NORME DI RIFERIMENTO / Norms of Reference					
Norm of Reference for the Test: UNI EN ISO 3452-1		Norm of Reference for the Acceptance Levels: UNI EN ISO 23277 ☒ 1 ☐ 2 ☐ 3		Examination Procedure n°03 rev.00	
ATTREZZATURA - METODO DI CONTROLLO <i>Equipment - Method of Test</i>					
Tipo Penetrante Type Penetrant		Fluorescente ☐ Fluorescent		A contrasto di colore ☒ To contrast of color	
				Doppio impiego ☐ Double employment	
Marca Penetrante Trade Mark Penetrant		RED WW CGM		Lotto Penetrante Batch Penetrant	
		21/314		Data Lotto Penetrante Date Batch Penetrant	
		09-23		Pulizia Preliminare Pre Cleaning	
				Acqua / Water ☐ Solvente / Solvent ☒ Stracci / Rag ☒	
METODO APPLICAZIONE PENETRANTE: Method Penetrating Application		Spray		Controllo: Luce Naturale ☒ Inspection: Natural Light	
		Luce Bianca ☐ White Light		Lampada Wood ☐ Wood's lamp	
		Tempo di penetrazione Time of Penetration		10 min	
Rimozione Penetrante Removal Penetrant		Acqua ☐ Water		Emuls Lipofilo ☐ Lipofilo Emuls	
		Solvente Liquido ☒ Liquid Solvent		Emuls Idrofilo ☐ Idrofilo Emuls	
		Acqua e Solvente ☐ Water and Solvent			
Marca Remover Trade Mark Remover		Velnet Solnet		Lotto Remover Batch Remover	
		351/21		Data Lotto Remover Date Batch Remover	
		12-23			
Metodo di applicazione Remover Method remover Application		Spray		Metodo di applicazione Emulsionante Method Emulsifying Application	
				Tempo di Emulsionatura Time To Emulsifying Application	
				Asciugatura Drying	
		Aria Libera Free Air			
Rivelatore Developer		Secco ☐ Dry		Idrosolubile ☐ Soluble in water	
		Idrosospensione ☐ Suspension in water		Solvente ☒ Solvent	
		Impieghi Extra ☐ Extra Employments			
Marca Rivelatore Trade mark Developer		Rotrivel		Lotto Rivelatore Batch Developer	
		067/22		Data lotto Rivelatore Date Batch Developer	
		03-24		Metodo di applicazione Rivelatore Method Developer Application	
		Spray		Tempo di sviluppo Rivelatore Time of Development Developer	
		30 min			
Marca Lampada a luce Nera Light Black Lamp		Modello Lampada a luce Nera Light Black Lamp		Numero di serie Lampada a luce Nera Serial Number Light Black Lamp	
				Intensità Lampada a luce Nera Intensity Light Black Lamp	
				N° Certificato e Scadenza Taratura Lampada a luce Nera N° Certificate and Validity of calibration	
ESITO DEL CONTROLLO <i>Result of Test</i>					
Saldatura n° Weld n°	Materiale Material	Processo di saldatura Welding Process	DN	Spessore Thickness	Punzone Welder id
W1	ASTM A 106 Gr.B	141	21,3	2,77	P A
W2	ASTM A 106 Gr.B	141	21,3	2,77	P A
W3	ASTM A 106 Gr.B	141	21,3	2,77	P A
W4	ASTM A 106 Gr.B	141	21,3	2,77	P A
W5	ASTM A 106 Gr.B	141	21,3	2,77	P A
W6	ASTM A 312 TP 316	141+111	60,3	11,07	P A
W7	ASTM A 312 TP 316	141+111	60,3	11,07	P A
W8	ASTM A 106 Gr.B	141+111	60,3	11,07	P A
W9	ASTM A 106 Gr.B	141+111	60,3	11,07	P A
W10	ASTM A 106 Gr.B	141+111	60,3	11,07	P A
Giudizio Result					
Note					
Pos PC					
Pos PC					
Pos PC					
Pos PC					
Pos PC					
Pos PH					
Pos PH					
Pos PH					
Pos PH					
Pos PC					
Pos PC					
ESITO CONTROLLO/Test Result CONFORME/Conforming ☒ NON CONFORME/Not Conforming ☐					
NOTE/Note DIFETTI/Defects					
Operatore livello 2 EN ISO 9712 Operator level 2 EN ISO 9712		Cliente Customer		Commitente Client	
OPERATORE QUALIFICATO 2° LIVELLO MT-PT-RT-UT QUALIFIED OPERATOR 2° LEVEL MT-PT-RT-UT		Client O.N.		COMMITTEE CLIENT	
OPERATORE QUALIFICATO 2° LIVELLO MT-PT-RT-UT QUALIFIED OPERATOR 2° LEVEL MT-PT-RT-UT		COMMITTEE CLIENT		COMMITTEE CLIENT	
Mod M CPT REV.00					



Quality Sider Verification srl

prove e controlli su materiali metallici
e giunti di saldatura



LAB N° 1765 L

RAPPORTO DI PROVA N.	23003G	DATA	16/01/2023	CAMPIONE N.	03G	PAGINA	1	DI	6
Test Report No.		Date		Sample No.		Page		of	

Laboratory of Marcanise, SS 265 km 27+500 - 81025 Marcanise (CE) t. +39 0823 609920 e-mail info@qsvsrl.com website www.qsvsrl.com

ORDINE / Order
Data ordine / Order date 22.SF.4957064.783 Rev.1

UTENTE / User

RIFERIMENTO / Reference
Data riferimento / Reference date 22.SF.4957064.783 Rev.1

ITALSALDO S.r.l.
Corso Vittorio Emanuele 231
93012 - Gela (CL)

DATA DI RICEZIONE
Reception date 05/01/2023

DATA DI ACCETTAZIONE
Acceptance date 05/01/2023

OGGETTO Campione per prove di qualifica del procedimento di saldatura in accordo alla ASME IX-2021
Subject Sample for welding procedure qualification tests according to ASME IX-2021

ELENCO DELLE PROVE / List of tests	Metodo / Method	Saggio / Test	Pagina / Sheet
Prova di trazione / Tensile test	ASME IX-2021 QW 150	03G-T	2
Prova di piegamento / Bend test	ASME IX-2021 QW 160	03G-B	3
Prova di resilienza / Impact test	ASME IX-2021 QW 170	03G-I	4
Esame macroscopico / Macroscopic examination	ASME IX-2021 QW 183-184	03G-MA	5
Prova di durezza / Hardness test	ANSI/NACE MR0175/ISO 15156:2015	03G-H	6

L'accreditamento è legato esclusivamente alle prove incluse nell'elenco allegato al certificato n° 1765 L disponibile sul sito web www.accredia.it. Le prove non accreditate da Accredia sono caratterizzate dall'asterisco (*) / The accreditation is related solely to the tests included in the list annexed to the certificate n° 1765 L available on the website www.accredia.it. The tests not accredited by Accredia are characterized by asterisk (*)

Angelo Criscuolo
Direttore Tecnico / Technical Manager

La firma digitale o la firma autografa sul rapporto certifica la sua validità. L'originalità del rapporto è garantita dalla tracciabilità nel sistema della PEC utilizzata per la sua consegna al cliente / The digital or hand-written signature on the report certifies its validity. The report originality is guaranteed by the traceability of the Certified E-mail system used for delivery to customer

La regola decisionale utilizzata dal laboratorio quando fornisce dichiarazioni di conformità a norme o specifiche è riportata nel sito web <http://qsvsrl.com/> / The decision rule used by the laboratory when providing declarations of compliance with standards or specifications is shown in <http://qsvsrl.com/> website.

Il campionamento è effettuato dal Cliente e non è oggetto di accreditamento; i risultati delle prove si riferiscono al campione così come ricevuto. / Sampling is carried out by the customer and is not subject to accreditation; test results refer to the sample as received.

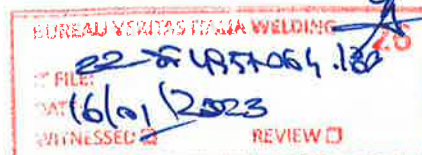
Il Laboratorio è responsabile di ogni informazione riportata nel presente rapporto di prova ad eccezione delle informazioni fornite dal Cliente rispetto alle quali declina ogni responsabilità / The Laboratory is responsible for any information reported in this test report except for the information provided by the Customer with respect to which it disclaims any responsibility

CARATTERISTICHE DEL CAMPIONE DICHIARATE DAL CLIENTE / features of sample declared by customer

	Description	Dimension	Supplier	Heat/Lot	Certificate	Date
Parent material1	ASTM A106 GR.B	Ø 60,3 x 11,07 mm				
Parent material2	ASTM A106 GR.B	Ø 60,3 x 11,07 mm				
Joint type	BW	Welding process	GTAW+SMAW	Welding position		5G
WPS	P1-01P/22 Rev.1	Welder		Stamp.		

Other features:

Il presente rapporto di prova riguarda esclusivamente il campione esaminato, non può essere riprodotto neanche parzialmente senza l'autorizzazione del Laboratorio ed è conservato in copia conforme all'originale nell'archivio del Laboratorio I tempi di conservazione dei rapporti, dei documenti e delle parti dei saggi e delle provette sono riportate nel sito web <http://qsvsrl.com/> / This test report only concerns the examined sample, it can not be even partially reproduced without the authorization of the Laboratory and his certified copy is stored in the original in the archive of the Laboratory. The storage times of reports, documents and parts of the sample and the test piece are shown in http://qsvsrl.com website





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e giunti di saldatura



LAB N° 1765 L

RAPPORTO DI PROVA N. 23003G DATA 16/01/2023 CAMPIONE N. 03G PAGINA 2 DI 6
Test Report No. Date Sample No. Page of

Laboratory of Marcianise, SS 265 km 27+500 - 81025 Marcianise (CE) t. +39 0823 609920 e-mail info@qsvsrl.com website www.qsvsrl.com

PROVA DI TRAZIONE SECONDO

Tensile test according to

ASME IX-2021 QW150

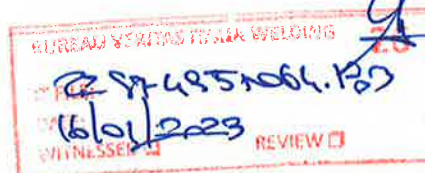
ID. SAGGIO Identification test		DIMENSIONE SAGGIO Specimen size			RESISTENZA A TRAZIONE Tensile strenght						TEMP.
PROVA N. Test No.	SENSO Direction	SPESS. Thk. (mm)	LARGH. Width (mm)	AREA Area (mm²)	F _m (N)	R _m $\frac{N}{mm^2}$	Posizione di rottura Location of fracture		Aspetto della frattura Fracture appearance		
Valori richiesti / Required values						≥ 415	In saldatura In weld	Fuori saldatura Out weld	Duttile Ductile	Fragile Fragile	
03G-T1	T	10,8	18,8	203,04	63993	490,3		X	X		
03G-T2	T	10,7	19,1	204,37	63994	484,5		X	X		22

MD 8A RP TT W

Data inizio prova 16/01/2023 Data fine prova 16/01/2023 Tecnico qualificato FRANCESCO MICCO Apparecchiatura SA 008
Test's start date Test's end date Qualified technician Equipment

Dichiarazione di conformità / Declaration of conformity

I valori di resistenza a trazione (R_m) sono conformi ai requisiti previsti per il giunto di saldatura dalla normativa ASME IX-2021 con riferimento, per i requisiti del materiale, alla normativa ASTM A106 GR.B / Results of tensile strength (R_m) are compliance to ASME IX-2021 requirements for the welded joint and to ASTM A106 GR.B requirements for material.





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LAB N° 1765 L

RAPPORTO DI PROVA N. 23003G DATA 16/01/2023 CAMPIONE N. 03G PAGINA 3 DI 6
Test Report No. Date Sample No. Page of
Laboratory of Marcianise, SS 265 km 27+500 - 81025 Marcianise (CE) t. +39 0823 609920 e-mail info@qsvsrl.com website www.qsvsrl.com

PROVA DI PIEGAMENTO SECONDO

Bend test according to

ASME IX-2021 QW160

SAGGIO Identification		DIMENSIONE PROVETTA Specimens Size			CARATTERISTICHE E RISULTATI DELLA PROVA DI PIEGA Features and bend test results				
Prova N. Test No.	Senso Direction	Spessore Thickness (mm)	Larghezza Width (mm)	Lunghezza Length (mm)	Tipo Type	Mandrino Former (mm)	Dist.appoggi Roller dist. (mm)	Angolo Bend Angle	Risultato Result
03G-BF1	T	11	19	300	FACE	44	69	180°	Assenza di difetti Absence of defects
03G-BF2	T	11	19	300	FACE	44	69	180°	Assenza di difetti Absence of defects
03G-BR1	T	11	19	300	ROOT	44	69	180°	Assenza di difetti Absence of defects
03G-BR2	T	11	19	300	ROOT	44	69	180°	Assenza di difetti Absence of defects

MD 8A RP BT W

Data inizio prova 16/01/2023 Data fine prova 16/01/2023 Tecnico qualificato FRANCESCO Apparocchiatura SA 026
Test's start date Test's end date Qualified technician MICCO Equipment

Dichiarazione di conformità / Declaration of conformity

L'esame visivo del tratto piegato non ha evidenziato difetti e pertanto il risultato della prova di piegamento è conforme ai requisiti previsti per il giunto di saldatura dalla normativa ASME IX-2021/ The visual inspection of the bend has shown no defects and the bend test result are compliance to ASME IX-2021 requirements





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prove e controlli su materiali metallici
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LAB N° 1765 L

RAPPORTO DI PROVA N. 23003G DATA 16/01/2023 CAMPIONE N. 03G PAGINA 4 DI 6
Test Report No. Sample No. Page of

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PROVA DI RESILIENZA SECONDO

Charpy impact test according to

ASME IX-2021 QW170

SAGGIO Test	SENSO Direction	POSIZIONE Position	TIPO Type	TEMP. Temp.	DIMENS. Size	VALORI Single values			MEDIA Average
No.				(°C)	(mm)	(J)			(J)
						1	2	3	
Valori richiesti / Required values						≥ 21 J			≥ 21 J
03G-IW1	T	VWT 0/0,5	KV ₂	-25	7,5x10	115	120	106	113,7
03G-IH2	T	VHT 1/0,5	KV ₂	-25	7,5x10	168	175	192	178,3

MD 8A RP IT W

Data inizio prova **16/01/2023** Data fine prova **16/01/2023** Tecnico qualificato **FRANCESCO** Apparecchiatura **SA 002**
Test's start date Test's end date Qualified technician **MICCO** Equipment

Dichiarazione di conformità / Declaration of conformity

I valori di energia assorbita (J) sono conformi ai requisiti previsti per il giunto di saldatura dalla normativa ASME IX-2021 con riferimento, per i requisiti del materiale, alla normativa ASTM A106 GR.B / Values of absorbed energy (J) are compliance to ASME IX-2021 requirements for the welded joint and to ASTM A106 GR.B requirements for material

Legenda della designazione / Key of designation

1° V=Charpy V-notch; U= Charpy U-Notch

2° W=notch in the weld metal. The reference line is the center line of the weld; H=notch in the heat affected zone. The reference line is the fusion or joint line

3° T = notch's axis crosses thickness; S = notch's axis is parallel to surface;

4° the distance of the notch centre from the reference line;

5° the distance from the weld joint face side to the nearer face of test specimen





Quality Sider Verification srl

prove e controlli su materiali metallici
e giunti di saldatura



LAB N° 1765 L

RAPPORTO DI PROVA N.

23003G

DATA

Date

16/01/2023

CAMPIONE N.

Sample N°.

03G

PAGINA

Page

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DI

of

6

Laboratory of Marcianise, SS 265 km 27+500 - 81025 Marcianise (CE) t. +39 0823 609920 e-mail info@qsvsrl.com website www.qsvsrl.com

PROVA DI DUREZZA SECONDO

Hardness test according to

UNI EN ISO 9015-1:2011

SAGGIO <i>Test</i>	03G-H	
TIPO DI DUREZZA <i>Hardness type</i>	HV10	
VALORE MAX <i>Required value</i>	248 HV10	

MD 8A RP HT NACE1 W

Pos. / Pos.	BM	HAZ		WM		HAZ		BM
TOP	1	2	3	4	5	6	7	8
HV10	160	185	188	186	190	192	199	158
CENTER		17		18		19		
HV10		190		192		187		
BOTTOM	9	10	11	12	13	14	15	16
HV10	162	188	195	201	200	197	184	169

Data inizio prova

16/01/2023

Data fine prova

16/01/2023

Tecnico qualificato
Qualified technician

FRANCESCO
MICCO

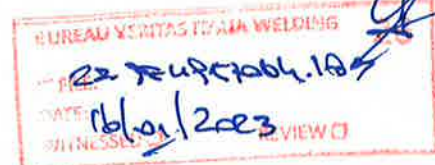
Apparecchiatura
Equipment

SA 045

Dichiarazione di conformità / Declaration of conformity

I valori di durezza (HV10) sono conformi ai requisiti previsti, per il giunto di saldatura, dalla normativa ASME IX-2021 / *Values of hardness (HV10) are compliance to ASME IX-2021 requirements for the welded joint*

FINE RAPPORTO / END REPORT





TUBOS REUNIDOS, S.A. - AMURRIO

EN 10204:2004 / 3.1

**CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE
ABNAHMEPRÜFZEUGNIS NACH
CERTIFIÉ DE QUALITÉ**



Nº 0000154154 Rev. 0

PAG. 1/ 3

CLIENTE: JANNONE TUBI S.R.L.
CUSTOMER
BESTELLER
CLIENT

PRODUCTO: TUBERIA SIN SOLDADURA LAMINADA EN CALIENTE
ARTICLE HOT FINISHED SEAMLESS TUBES
PRÜFGEGENSTAND
FOURNETURE

EXTREMOS: BISELADOS
ENDS BEVELLED ENDS
ENDEN
EXTRÉMITÉ

NORMA / GRADO: ASTM/ASME A/SA 53.04a/106.04b API 5
APL STANDARD AND GRADE L 2004 PSL1
SPEZIFIKATION / STAHL GR. B
NORME ET QUALITÉ

ESPEC. ADICIONALES: NACE MR0175.2002. (HRC ≤ 22).
ADDITIONAL SPECS.
ANFORDERUNGEN
SPECIFIC. ADDITIONNELLES

DIMENSIONES: 60,3 X 11 MM. X
DIMENSIONS 10-11,8 M.
ABMESSUNGEN
DIMENSIONS

PEDIDO/PARTIDA: SO 1740
P. ORDER / ITEM 000016
BESTELLER NR / POS.
Nº COMMANDE / POSTE

REF. FABRICA: 0300007486
WORK ORDER 000074
WERKS NR.
Nº INTERNE

PROTECCION SUPERF: SIN PROTECCIÓN
EXT. COATING BARE
RSTSCHUTZ
PROT. SUPERFICIEL

REQUISITOS SUP.:
SUP. REQUIREMENTS
ZUSÄTZLICHE ERFORDERL.
CONDITIONS REQUIS SUP.

PROCESO FUSION: HORNO ELECTRICO
MELTING PROCESS ACERO TOTALMENTE CALMADO
ERSCHIMELZUNGSART ELECTRIC FURNACE // FULLY KILLED
PROCÉDÉ FUSION

FABRICACION DE PALANQUILLA : COLADA CONTINUA
BILLETS MANUFACTURE CONTINUOUS CASTING
KNÜPPEL FERTIGUNG STRANGGUSS VERFAHREN
FABRICATION DE LA BILLETE COULÉE CONTINUE

MARCAS: ESTAMPADO
MARKING / DIE STAMPING/POINCONAGE
KENNZEICHNUNG
MARQUAGE

HN (COLADA)

PINTADO / STENCILED/PAINTED

TR 5L-0011 (SELLO API) (MM/AA) ASTM/ASME A/SA53 A/SA106 60,30 11,00 B
PSL1 S 2500,0 PSI (LONG. TUBO EN MTS) M HN (COLADA)

CODIGO COLOR / COLOUR CODE

TRAT. TERMICO: NORM. BRUTO LAM. ENFR. AL AIRE / AS ROLLED.
HEAT TREATMENT APROX. 920 °C
WÄRMEBEHANDLUNG
TRAITEMENT THERMIQUE

ALBARANES: 80161580

COPIA CONFORME ALL'ORIGINALE

TUBOS REUNIDOS GARANTIZA QUE TODOS LOS TUBOS CUBIERTOS POR ESTE CERTIFICADO CUMPLEN LOS REQUISITOS DEL PEDIDO Y CON LAS ESPECIFICACIONES ARRIBA MENCIONADAS.
TUBOS REUNIDOS CERTIFY THAT ALL THE TUBES COVERED BY THIS CERTIFICATE COMPLY WITH ORDER REQUIREMENTS AND ABOVE MENTIONED SPECIFICATIONS.
DIE GESTELLTEN ANFORDERUNGEN SIND IT ANLAGE ERFÜLLT.
TUBOS REUNIDOS GARANTIT QUE TOUS LES TUBES OBJET DU PRESENT CERTIFICAT, SONT CONFORMES AUX STIPULATIONS DE LA COMMANDE ET AUX SPECIFICATIONS DESSUS MENTIONNES.

AMURRIO 14.02.2014

CONTROL DE CALIDAD DE TUBOS REUNIDOS
TUBOS REUNIDOS (QUALITY CONTROL)

I. URRUTIKOETXEN



TUBOS REUNIDOS, S.A. - AMURRIO

EN 10204:2004 / 3.1

CERTIFICADO DE CALIDAD MILL TEST CERTIFICATE ABNAHMEPRÜFZEUGNIS NACH CERTIFIÉ DE QUALITÉ



Nº 0000154154 Rev. 0

PAG. 2/ 3

DESCRIPCION SUMINISTRO / DESCRIPTION OF DELIVERY / UMFANGDERLIEFERUNG / DESCRIPTION DE LA LIVRAISON

ITEM FABRICA T.R. ITEM WERKS POS. POSITION INTERNE	ITEM CLIENTE CLIENTS ITEM BESTELLER POS. POSTE DU CLIENT	LONG.INDIV (M) INDIVIDUAL LENGTH LÄNGE INDIVIDUELL LONGITUDE UNITAIRE	COLADA CAST NR. SCHMELZE NR. N°COULÉE	Nº TUBOS QUANTITY STÜCKZAHL NOMBRE	LONG.TOTAL(M) LENGTH LÄNGE LONGITUDE	PESO(KG) WEIGHT MASSE POIDS	PROBETAS N° SPECIMEN NR. PROBE NR. ESSAI N°
000016	2	10,000 - 11,800	92549	109	1.193,600	13056	1 - 2
TOTAL				109	1.193,600	13056	

ENSAYOS NO DESTRUCTIVOS / N.D.T. / ZERSTÖRUNGSFREIE WERKSTOFFPRÜFUNG / CONTROLES NON DESTRUCTIFS

ENSAYO / TEST / PRÜFUNG / ESSAI	%CONTROL/TEST RATE(%) %KONTROLL / %CONTROLE	REQUISITOS/REQUIREMENT/ ANFORDERUNGEN/ SPÉCIFICATION	RESULTADO/ RESULT / ERGEBNIS/ RESULTAT
VISUAL Y DIMENSIONAL/VISUAL & DIMENSIONAL INSP./BESICHTIGUNG UND AUSMESSUNG /ASPECT ET DIMENSIONS	100%		O.K.
P.HIDROSTATICA /HYDROTEST /WASSERDRUCK VERSUCH/ ÉPREUVE HYDRAULIQUE	100%	2500,0 PSI 5 SEC.	O.K.
INSP. POR PASO DE ANILLO /RING GAUGE INSPECTION/ RINGPRÜFUNG / CONTROL D'ANNEAU	100%		O.K.

ENSAYOS TECNOLOGICOS Y METALURGICOS / TECHNOLOGICAL AND METALLURGICAL TEST

DOBLADO / BENDING/ AC/ A/SA53/SA106/SL -OK
BIEGEVERSUCH / COURBÉE

ANALISIS DE COLADA / CAST ANALYSIS / SCHMELZANALYSE / ANALYSE DE COULÉE

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	Al	Ti	Nb	B	C.E.
MIN.	0,00	0,29	0,10	0,000	0,000										
MAX.	0,27	1,06	0,50	0,030	0,030	0,400	0,400	0,100	0,500	0,050	0,060	0,050	0,020	0,0010	
92549	0,14	0,73	0,25	0,015	0,005	0,120	0,090	0,020	0,220	0,001	0,004	0,001	0,007	0,0001	0,31

ANALISIS DE PRODUCTO / PRODUCT ANALYSIS / STÜCKANALYSE / ANALYSE DE PRODUIT

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	Al	Ti	Nb	B	(1)	(2)	C.E.
MIN.	0,00	0,29	0,10	0,000	0,000												
MAX.	0,27	1,06	0,50	0,030	0,030	0,400	0,400	0,100	0,500	0,050	0,060	0,050	0,020	0,0010	1,00	0,15	
92549	0,17	0,74	0,25	0,016	0,005	0,130	0,090	0,020	0,230	0,001	0,001	0,001	0,002	0,0001	0,47		0,34
92549	0,15	0,74	0,25	0,016	0,005	0,120	0,090	0,020	0,230	0,001	0,002	0,001	0,003	0,0001	0,46	0,01	0,32

(1) Cr + Ni + Mo + Cu + V

CONTROL DE CALIDAD DE TUBOS REUNIDOS
TUBOS REUNIDOS (QUALITY CONTROL)

AMURRIO 14.02.2014

I. URRUTIKOETXEA



TUBOS REUNIDOS, S.A. - AMURRIO

EN 10204:2004 / 3.1

**CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE
ABNAHMEPRÜFZEUGNIS NACH
CERTIFIÉ DE QUALITÉ**



Nº 0000154154 Rev. 0

PAG. 3/ 3

ANALISIS DE PRODUCTO / PRODUCT ANALYSIS / STÜCKANALYSE / ANALYSE DE PRODUIT

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	Al	Ti	Nb	B	(1)	(2)	C.E.
MIN.	0,00	0,29	0,10	0,000	0,000												
MAX.	0,27	1,06	0,50	0,030	0,030	0,400	0,400	0,100	0,500	0,050	0,060	0,050	0,020	0,0010	1,00	0,15	

(2) Nb + Ti + V

**ENSAYO DE TRACCION
TENSILE TEST / ZUGVERSUCH / ESSAI DE TRACTION**

**ENSAYO DE IMPACTO - CHARPY V
IMPACT TEST / KERBSCHLAGZÄHIGK / ESSAI DE RESILIENCE**

Nº	L/T	DIMENSION	L.ELAST. YIELD POINT STRECKGR L.ELASTIQ. (N/mm2)	R.TRACC. T.STRENGTH ZUGFESTIG. RESISTANCE (N/mm2)	ALARG. ELONG. DEHNUNG ALLONG. (%)(**)	DUREZA HARDNESS HÄRTE DURETÉ (HRB)	L/T	DIMENS (mm)	T ^a (°C)	RESILIENCIA IMPACT TEST KERBSCHLAGZÄHIGK RESILIENCE (julios)	A.DUCTIL SHEAR AREA (%)	ESTRICCION RED. AREA (%)
			241	414		99			-5	27		
1	L	18,60 x 10,000	345	487	40	78						
2	L	18,80 x 10,000	334	490	40	77	L	10 7,50	-5	212 173	184	

(*) : L=LONGITUDINAL // T=TRANSVERSAL

(**): Lo = 2" (50,8 mm)

ANEXO / ANNEX

T.R. S.A. HAS A QUALITY MANAGEMENT SYSTEM APPROVED BY AENOR
IN AGREEMENT WITH POINT 4.3 ANNEX I OF THE PED 97/23/EC

CONTROL DE CALIDAD DE TUBOS REUNIDOS
TUBOS REUNIDOS (QUALITY CONTROL)

AMURRIO 14.02.2014

I. URRUTIKOETXEA

Inspection Certificate 3.1

LINCOLN
ELECTRIC
THE WELDING EXPERT

Product Line **TIG**
Product **CARBOROD**
Size(s) mm **2.4X1000XTUB05**
Item No. **T24T005R1S11**
Lot/Batch **C1TG200401**

Class **AWS A5.18: ER 70S-3**
EN ISO 636-A: W 42 4 W2Si

Customer Ref **ODA con e-mail cliente x PROMO Q4**
Our Reference **814868272**
Quantity **220.0 KG**
Customer **FAIT SRL**

EX SS 114 C.DA TARGIA 54
SIRACUSA 96100
Italia

Chemical analysis (%)

According to EN10204 3.1

C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Al	Ti+Zr
0.079	0.58	1.22	0.008	0.005	0.03	0.02	0.01	0.01	<0.01	<0.01	0.020

Mechanical tests, all weld metal

According to EN10204 2.2

Tensile testing

Impact testing

Cond.	Temp. °C	ReL MPa	Rm MPa	A5 %
AW	21	456	547	31

Cond.	Temp. °C	KV J
AW	-40	47

Remarks

The product identified above has been manufactured, tested and supplied in compliance with a certified ISO 9001 Quality Assurance Programme.

Company
Lincoln Electric Italia srl
Via Fratelli Canepa 8
16010 Serra Riccò
Italy

Lincoln Electric Italia S.r.l. a socio unico
Sede secondaria - Stabilimento F.I.O. (M3)
Via Nazionale, 32 - Loc. Corsica
80100 Capua (VT) - Italia

Printed
By
Function
Date

Massimo Dall'Agnola
Warehouse
27/OCT/2020

Cert. No.
01192759
ZEU_CMN , 1



METRODE

SPECIAL

LINCOLN ELECTRIC EUROPE BV

Nieuwe Dukenburgseweg 20
6534 AD NIJMEGEN
Netherlands

Telefono: 31 24 3 522911
Fax: 31 24 3 522202
Internet: www.lincolnelectriceurope.com

Page 1 of 1



Product Certificate

Cliente:
Customer:
SICILSALDO SPA (GELA)

ZONA IND.LE SECONDA STRADA
C.A PALUMBO F.SCO
93012 GELA (CL)
Italy

Certificato N°:
Certificate No.:
30286506

Ordine N°:
Order No.:
300 del 20/06/2018

Bolla N°:
Delivery Note:

Reference Number:
W000380286

Quantità:
Quantity:
23220.00

UM:
PC

Designazione:
Trade Name:
TENAX 35S
2.50X0300XCBOX

Lotto N°:
Batch No.:
348211002

Classificazione:
Classification:
AWS A5.1 E7018-1 H4
EN ISO 2560-A: E 42 5 B 3 2 H5

Gas:
Gas:

Si confermano le proprietà sotto riportate per i consumabili di saldatura da noi forniti
We confirm following properties for the welding filler metals delivered by us.

Analisi chimica del deposito / Chemical Analysis:
In accordo a / Certificate Type EN 10 204-3.1 WELD METAL

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V
0,06	1,18	0,40	0,014	0,005	0,020	0,029	0,005	0,002	0,018
Cu									
0,033									

Proprietà meccaniche del deposito / Mechanical Properties:
In accordo a / Certificate Type EN 10 204-2.2 WELD METAL

Tensile Test according to EN ISO 6892-1					Impact Strength Test according to EN ISO 148--1		
Test Temp.	Snervamen to Yield Strength	Trazione Tensile Tensile Strength N/mm ²	Allungamento Elongation %	Z %	Test Temp. °C	Resilienza Impact Strength Joule(Charpy-V)	Trattamento Termico Heat Treatment
+20	ReH N/mm ² 490	541	29		-50	148	AS WELDED

Daniel Toncelli
QC Manager - Due Carrare Plant
Data/ Date: 21/06/2018

Inspection Certificate 3.1

LINCOLN
ELECTRIC
THE WELDING EXPERT

Product Line **Electrode**
Product **TENAX 35S**
Size(s) mm **3.2mm**
Item No. **W000380291**
Lot/Batch **C3MS20Q720**

Class **AWS A5.1 E7018-1 H4**
EN-ISO 2580-A E 42 5 B 3 2 H5

Customer Ref **da QT 20570005 e-mail ARENA**
Our Reference **814451988**
Quantity **2557.8 KG**
Customer **FAIT SRL**

EX SS 114 C.DA TARGIA 54
SIRACUSA 96100
Italia

Chemical analysis (%)

According to EN10204 3.1

C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	V
0.054	0.44	1.32	0.013	0.004	0.03	0.04	0.01	<0.01	0.04	0.03

Mechanical tests, all weld metal

According to EN10204 2.2

Tensile testing

Impact testing

Cond.	Temp. °C	Rp0.2 MPa	Rm MPa	A5 %	Cond.	Temp. °C	KV J
AW	20	490	541	30	AW	-50	148

Remarks

The product identified above has been manufactured, tested and supplied in compliance with a certified ISO 9001 Quality Assurance Programme.

Company
Lincoln Electric Italia srl
Via Fratelli Canepa 8
16010 Serra Riccò
Italy

Luciano Pippa

Printed
By
Function
Date
Luciano Pippa
Warehouse
15/JUL/2020

Cert. No.
01099314
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METRODE

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