

WELDING PROCEDURE QUALIFICATION RECORD (PQR)
(Section IX, ASME Boiler and Pressure Vessel Code)

TUV NORD

CERTIFICATE 09-702-01-C-10-2017-211402991

Procedure Qualification Record No: wPQR-EK-BW-01

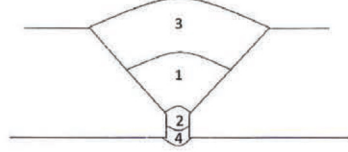
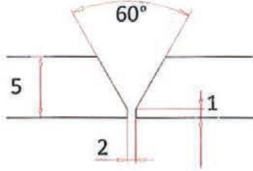
Company Name : Ekin Endüstriyel Isıtma Soğutma San. Tic. Ltd. Şti.

Adress : DES Sanayi Sitesi 107.Sk. B14 Blok No:2-4-6-8 Ümraniye/İST

Welding Process(es): GTAW

Type(s): Manual

JOINTS (QW-402) Groove Design of Test Coupon



BASE METALS (QW-403)

Material Spec.

ASTM

Type or Grade, or UNS Number

316 (X2CrNiMo17-12-2)

P. No./Gr.No

8/1 to 8/1

Thickness of Test Coupon

5

Diameter of Test Coupon

N/A

Max. Pass Thickness(≤ 13 mm)

No pass over 13mm

Other:

POSTWELD HEAT TREATMENT (QW-407)

Temperature

-

Time

-

Other:

GAS (QW-408)

Percent Composition

	Gas(es)	Mixture	Flow Rate
Shielding - GTAW	Ar	%99,9	6-9 L/min
Shielding - FCAW	-	-	-
Trailing	-	-	-
Backing	-	-	-

FILLER METALS (QW-404)

SFA Specification

GTAW

N/A

AWS Classification

A5.9

-

Trade Name

ER 308 L

-

Filler Metal F-No.

SG 308 L

-

Weld Metal Analysis A-No.

6

-

Size of Filler Metal

1

-

Filler Metal Product Form

2

-

Supplemental Filler Metal

Solid Rod

-

Weld Metal Thickness

N/A

-

Flux Type

5

-

Flux Trade Name

N/A

-

Other(QW-404.14)

N/A

-

POSITION (QW-405)

Position of Groove

1G

Weld Progression (Uphill, Downhill)

N/A

Other

-

PREHEAT (QW-406)

Preheat Temperature(Min.)

Min. 10°

Interpass Temperature(Max.)

Max. 200°

Other

-

ELECTRICAL CHARACTERISTICS (QW-409) GTAW

Current

DC

Polarity

EN

Amps.

95-110

Volts

10-12

Tungsten Electrode Size

2

Heat Input

0,61-1,71 kJ/mm

Mode of Metal Transfer for GMAW (FCAW)

N/A

Other

-

TECHNIQUE (QW-410)

Travel Speed(mm)

See below table

String or Weave Bead

String Bead

Oscillation

N/A

Multi/ Single Pass (per side)

Multi Pass

Single or Multiple Electrodes

Single

Initial and Interpass Cleaning

Grinding and Brushing

Method of Back Gouging

Grinding

Other(QW-410.11 / QW-410.64)

-

Actual Values

Weld Layers	Process	Filler Metal		Type / Polarity	Current		VoltRange (V)	Travel Speed (mm/sec.)	Heat Input (kJ / mm)
		Class	Dia. (mm)		Ampere Range (A)				
1	GTAW	ER 308 L	2	DC EN	105-110		11-12	1,87	0,61-0,71
2	GTAW	ER 308 L	2	DC EN	105-110		11-12	1,26	0,91-1,05
3	GTAW	ER 308 L	2	DC EN	105-110		11-12	0,77	1,5-1,71
4	GTAW	ER 308 L	2	DC EN	95-100		10-11	0,8	1,19-1,37

TÜV Teknik Kontrol ve Belgelendirme A.Ş.

Ayazmadere Cad. Pazar Sk. Bareli Plaza No: 2-4 Kat:4,Gayrettepe, İstanbul-TÜRKİYE

Telefon: +90 212 293 26 42 Fax: +90 212 293 38 44 E-mail: tuv-nord@tuv-turkey.com