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TS EN ISO/IEC 17020
AB-0100-M

WELDİNG PROCEDURE QUALIFICATION RECORD (PQR)
(SECTION IX, ASME BOILER AND PRESSURE VESSEL CODE)

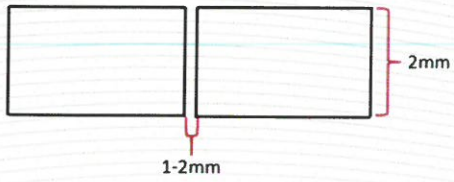
TÜV NORD

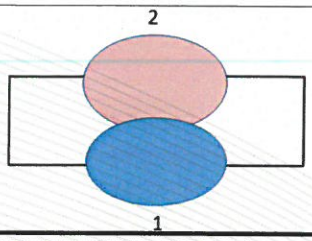
CERTIFICATE NO: WPQR-TUVNORD-2022/5787

Procedure Qualification Record No: WPQR-ASME-02

Company Name : PROKOM Komp. ve End . Sızd. ürün.San. ve Tic.Ltd. Ştı	Adress : Kocaeli Kobi OSB,Köseler Mah. 6. Cad No:4/1 Dilovası/KOCAELİ
Welding Process(es): GTAW	Type(s): Manual

JOINTS (QW-402) Groove Design of Test Coupon





BASE METALS (QW-403)

Material Spec.	A/SA–240		
Type or Grade, or UNS Number	304 / 304L		
P. No./Gr.No	8 / 1	*to*	8 / 1
Thickness of Test Coupon	2mm		
Diameter of Test Coupon	-		
Max. Pass Thickness(≤ 13 mm)	-		
Other:			

POSTWELD HEAT TREATMENT (QW-407)

Temperature	-
Time	-
Other:	

GAS (QW-408)

	Percent Composition		
	Gas(es)	Mixture	Flow Rate
Shielding - GTAW	Argon	%99,99	9-12 l/min.
Shielding - FCAW	-	-	-
Trailing	-	-	-
Backing	-	-	-

FILLER METALS (QW-404)

	GTAW	-
SFA Specifitacion	5.9	-
AWS Classification	ER308L	-
Trade Name	BOHLER TIG N 308L	-
Filler Metal F-No.	6	-
Weld Metal Analysis A-No.	8	-
Size of Filler Metal	2mm	-
Filler Metal Product Form	Solid	-
Supplemental Filler Metal	-	-
Weld Metal Thickness	2mm	-
Flux Type	-	-
Flux Trade Name	-	-
Other(QW-404.14)	With Filler Metal	-

ELECTRICAL CHARACTERISTICS (QW-409) GTAW

Current	DC
Polarity	DCEN
Amps.	60-100
Volts	10-12
Tungsten Electrode Size	2mm
Heat Input	7371,4 – 15085,7 J/mm
Mode of Metal Transfer for GMAW (FCAW)	-
Other	-

POSITION (QW-405)

Position of Groove	1G
Weld Progression (Uphill, Downhill)	Uphill
Other	-

PREHEAT (QW-406)

Preheat Temperature(Min.)	20°C
Interpass Temperature(Max.)	150°C
Other	-

TECHNIQUE (QW-410) -

Travel Speed(mm)	4,77 – 4,88
String or Weave Bead	N/A
Oscillation	N/A
Multi/ Single Pass (per side)	Single
Single or Multiple Electrodes	Single
Initial and Interpass Cleaning	Fullfilled
Method of Back Gouging	N/A
Other(QW-410.11 / QW-410.64)	-

Actual Values

Weld Layers	Process	Filler Metal Class	Filler Metal Dia. (mm)	Current Type / Polarity	Current Ampere Range (A)	VoltRange (V)	Travel Speed (mm/min.)	Heat Input (KJ / mm)
1	GTAW		2	DCEN	60 - 70	10 - 11	4,88	0,737 – 0,946
2	GTAW	-	2	DCEN	70 - 100	11 - 12	4,77	0,968 – 1,508
-	-	-	-	-	-	-	-	-

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WELDİNG PROCEDURE QUALIFICATION RECORD (PQR)
(SECTION IX, ASME BOILER AND PRESSURE VESSEL CODE)

TÜV NORD

Procedure Qualification Record No: WPQR-ASME-02

Tensile- Tests (QW-150) (T22.164)

Specimen No	Width (mm)	Thickness (mm)	Area (mm^2)	UltimateTotal Load *(N)*	UltimateUnit Stress *(N/mm^2)*	Type of Failure&Location
1	-	2	38	24,05	632,89	Material
2	-	2	38	4,68	649,47	Material

Guided-Bend Tests (QW-160) (B22.224)

Type and Figure No.	Mandrel Dia.	Bending Angle	Result
Face Bend : 01	8	180°	Acceptable
Face Bend : 02	8	180°	Acceptable
Root Bend : 03	8	180°	Acceptable
Root Bend : 04	8	180°	Acceptable

Toughness tests (QW-170) ()

Specimen No.	Notch Location	Specimen Size (mm)	Test Temp. (ºC)	Impact Values (Joule)	Impact Values % Shear	Impact Values Mils (in.) or mm	Drop Weight Break (Y / N)
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
			Avarage HAZ	-			
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
			Avarage HAZ	-			
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
			Avarage WELD	-			

Comments :

Fillet – Weld Test (QW-180)

Result- Satisfactory: ☐ Yes ☒ No Penetration into Parent Metal: ☐ Yes ☒ No

Macro - Result

Other Tests

Type of Test :	Visual Examination	Liquid Penetrant Test	Radiographic Examination	Hardnes Test	Macro Test
Report No :	172.VT - 001	-		-	-
Result :	Acceptable	-	Acceptable	-	-

Deposit Analysis -

Other -

Welder's Name	Umut GÜLYAZ – W2
Welding test conducted by	Muhammed B. ARSLAN - TÜV NORD (TÜV Teknik Kontrol ve Belgeledirme A.Ş.)
Mechanical tests conducted by	Vera Kalite Tahr ve Tahr. Mua. Hiz. LTD.ŞTİ. Lab. Test No. As Above

We certify that the statements in this record are corrected and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code. This certificate is issued under the scope of ISO/IEC 17020 accreditation by TÜRKAK. The accreditation status would be verified via https://secure.turkak.org.tr/kapsam/search under accreditation number of AB-0100-M.

Certified By: TÜV NORD Turkey Teknik Kontrol ve Belgelendirme A.Ş.(Nobo 2354)

Authorized Expert: Muhammed B. ARSLAN **SIGNATURE :** **Date : 02.12.2022**

Approved By: Oğuzcan ALTUĞ **SIGNATURE :** **Date : 02.12.2022**

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WELDİNG PROCEDURE QUALIFICATION RECORD (PQR)
(SECTION IX, ASME BOILER AND PRESSURE VESSEL CODE)

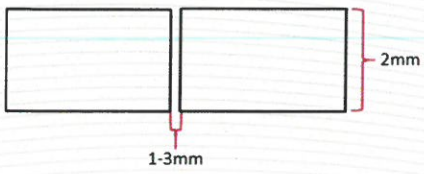
TÜV NORD

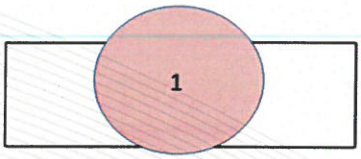
CERTIFICATE NO: WPQR-TUVNORD-2022/5786

Procedure Qualification Record No: WPQR-ASME-01

Company Name : PROKOM Komp.r ve End . Sızd. ürün.San. ve Tic.Ltd. Ştı	Adress :Kocaeli Kobi OSB,Köseler Mah. 6. Cad No:4/1 Dilovası/KOCAELİ
Welding Process(es): GTAW	Type(s): Manual

JOINTS (QW-402) Groove Design of Test Coupon





BASE METALS (QW-403)

Material Spec.	A/SA–240		
Type or Grade, or UNS Number	304 / 304L		
P. No./Gr.No	8 / 1	*to*	8 / 1
Thickness of Test Coupon	2mm		
Diameter of Test Coupon	-		
Max. Pass Thickness(≤ 13 mm)	-		
Other:			

POSTWELD HEAT TREATMENT (QW-407)

Temperature	-
Time	-
Other:	

GAS (QW-408)

	Percent Composition		
	Gas(es)	Mixture	Flow Rate
Shielding - GTAW	Argon	%99,99	9-12 l/min.
Shielding - FCAW	-	-	-
Trailing	-	-	-
Backing	Argon	%99,99	3-6 l/min.

FILLER METALS (QW-404)

	GTAW	-
SFA Specifitacion	5.9	-
AWS Classification	ER308L	-
Trade Name	BOHLER TIG N 308L	-
Filler Metal F-No.	6	-
Weld Metal Analysis A-No.	8	-
Size of Filler Metal	2mm	-
Filler Metal Product Form	Solid	-
Supplemental Filler Metal	-	-
Weld Metal Thickness	2mm	-
Flux Type	-	-
Flux Trade Name	-	-
Other(QW-404.14)	With Filler Metal	-

ELECTRICAL CHARACTERISTICS (QW-409) GTAW

Current	DC
Polarity	DCEN
Amps.	70-90
Volts	10-12
Tungsten Electrode Size	2mm
Heat Input	9280,0 – 14317,7 J/mm
Mode of Metal Transfer for GMAW (FCAW)	-
Other	-

POSITION (QW-405)

Position of Groove	1G
Weld Progression (Uphill, Downhill)	Uphill
Other	-

PREHEAT (QW-406)

Preheat Temperature(Min.)	20°C
Interpass Temperature(Max.)	-
Other	-

TECHNIQUE (QW-410) -

Travel Speed(mm)	4,52
String or Weave Bead	N/A
Oscillation	N/A
Multi/ Single Pass (per side)	Single
Single or Multiple Electrodes	Single
Initial and Interpass Cleaning	Fullfilled
Method of Back Gouging	N/A
Other(QW-410.11 / QW-410.64)	-

Actual Values

Weld Layers	Process	Filler Metal Class	Filler Metal Dia. (mm)	Current Type / Polarity	Current Ampere Range (A)	VoltRange (V)	Travel Speed (mm/min.)	Heat Input (KJ / mm)
1	GTAW		2	DCEN	70-90	10-12	4,52	0,928 – 1,431
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

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WELDİNG PROCEDURE QUALIFICATION RECORD (PQR)
(SECTION IX, ASME BOILER AND PRESSURE VESSEL CODE)

TÜV NORD

Procedure Qualification Record No: WPQR-ASME-01

Tensile- Tests (QW-150) (T22.163)

Specimen No	Width (mm)	Thickness (mm)	Area (mm^2)	UltimateTotal Load *(N)*	UltimateUnit Stress *(N/mm^2)*	Type of Failure&Location
1	-	2	38	25,02	658,42	Material
2	-	2	38	25,31	666,05	Material

Guided-Bend Tests (QW-160) (B22.223)

Type and Figure No.	Mandrel Dia.	Bending Angle	Result
Face Bend : 01	8	180°	Acceptable
Face Bend : 02	8	180°	Acceptable
Root Bend : 03	8	180°	Acceptable
Root Bend : 04	8	180°	Acceptable

Toughness tests (QW-170) ()

Specimen No.	Notch Location	Specimen Size (mm)	Test Temp. (ºC)	Impact Values (Joule)	Impact Values % Shear	Impact Values Mils (in.) or mm	Drop Weight Break (Y / N)
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
			Avarage HAZ	-			
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
			Avarage HAZ	-			
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
			Avarage WELD	-			

Comments :

Fillet – Weld Test (QW-180)

Result- Satisfactory: ☐ Yes ☒ No Penetration into Parent Metal: ☐ Yes ☒ No

Macro - Result

Other Tests

Type of Test :	Visual Examination	Liquid Penetrant Test	Radiographic Examination	Hardnes Test	Macro Test
Report No :	172.VT - 001	-		-	-
Result :	Acceptable	-	Acceptable	-	-

Deposit Analysis -

Other -

Welder's Name: Umut GÜLYAZ – W2

Welding test conducted by: Muhammed B. ARSLAN - TÜV NORD (TÜV Teknik Kontrol ve Belgeledirme A.Ş.)

Mechanical tests conducted by: Vera Kalite Tahr ve Tahr. Mua. Hiz. LTD.ŞTİ. Lab. Test No. As Above

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Certified By: TÜV NORD Turkey Teknik Kontrol ve Belgelendirme A.Ş.(Nobo 2354)

Authorized Expert: Muhammed B. ARSLAN **SIGNATURE :** **Date : 02.12.2022**

Approved By: Oğuzcan ALTUĞ **SIGNATURE :** **Date : 02.12.2022**

TÜV NORD Turkey Tek. Kont. ve Belg. A.Ş.