



Toase-ehe Park Sanati Gohar Ofogh
Petrochemical Co.
**CONCEPTUAL, BASIC and DETAIL DESIGN
ENGINEERING OF STYRENE PARK OFFSITE**



Document Title: Welder Performance Qualification

Document No.: E1027-FPA-VD-QC-WPQ-005

Rev. R0

Page 1 of 17

STYRENE PARK OFFSITE

Document Title: Welder Performance Qualification

R0	13-08-2024	IFA	F.Baviye	N.Abnavi	N.Abnavi
Rev.	Issued Date	DESCRIPTION	PREPARED	CHECKED	APPROVED



**Toase-ehe Park Sanati Gohar Ofogh
Petrochemical Co.**
**CONCEPTUAL, BASIC and DETAIL DESIGN
ENGINEERING OF STYRENE PARK OFFSITE**



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Page 2 of 17

REVISION RECORD SHEET

Page e Pag e	Revisions							Page	Revisions						
	R0	R1	R2	R3	R4	R5	R6		R0	R1	R2	R3	R4	R5	R6
1	X							41							
2	X							42							
3	X							43							
4	X							44							
5	X							45							
6	X							46							
7	X							47							
8	X							48							
9	X							49							
10	X							50							
11	X							51							
12	X							52							
13	X							53							
14	X							54							
15	X							55							
16	X							56							
17	X							57							
18								58							
19								59							
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35								75							
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37								77							
38								78							
39								79							
40								80							



Welders Performance Qualification Record (WPQ)

Welder's Name: Gholamreza Roshania Identification No.: W-103
WPS No. Followed By Welder: FPA-WPS-105 ■ Test Coupon Production Weld
Welding Process: GTAW+SMAW Type: Manual
Base Material Welded: SA 106 Gr.B Thickness: 10.97



Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process	GTAW+SMAW	GTAW+SMAW
Type (Manual, Semi-auto,...)	Manual	Manual
Backing	NO	With or Without Backing
Base Metal P-No	P1 To P1	P1 through P15F, P34, P41 through P49
Plate/Pipe (enter diameter if pipe or tube)	Pipe (Ø168.3mm)	Plate & Pipe Ø≥73mm
Filler Metal Specification(s) SFA (info only)	5.18 & 5.1	/
Filler Metal or Electrode Classification(s) (info only)	ER70S-6 & E7018	/
Filler Metal F-No.	6 & 4	6 & 1,2,3,4 (With Backing)
Consumable Insert (GTAW or PAW)	NO	NO
Weld Deposit Thickness for Each Process	3 & 7.97	6 & 15.94
Welding Position	6G	ALL
Vertical Progression (Uphill or Downhill)	N.A.	N.A.
Inert Gas Backing (GTAW, PAW, GMAW)	N.A.	N.A.
Transfer Mode (Spray, Globular, Pulse to Short Circuit-GMAW)	N.A.	N.A.
GTAW Current Type and Polarity (AC, DCEP, DCEN)	DC-	DC-

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]

☐ Pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191) : **Acceptable: see report no. 56**

■ RT or □ UT

Fillet weld —Fracture test (QW-180)...N.A.....

Length and percent of defects.....

Macro examination (QW-184).....Fillet size (in.).....Concavity/convexity(in.).....

Other tests.....PT: ACC.....

Film or specimens evaluated by.....A. Abbasi.....Company...Puyesh Azmoon.....

Mechanical tests conducted by.....Laboratory test no.....

Welding test conducted by.....FARNIKAN QC. DEPT.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2020-09-12.....

Certified By.....





Farnikan
Engineered Solutions

Welders Performance Qualification Record (WPQ)

Welder's Name: Vali Hoseinzadeh Identification No.: W-115
WPS No. Followed By Welder: FPA-WPS-010 ☒ Test Coupon ☐ Production Weld
Welding Process: GTAW+SMAW Type: Manual
Base Material Welded: SA 312. TP.321 Thickness: 15 mm



Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process	GTAW+SMAW	GTAW+SMAW
Type (Manual, Semi-auto,...)	Manual	Manual
Backing	NO	With or Without Backing
Base Metal P-No	P8 To P8	P1 through P15F, P34, P41 through P49
Plate/Pipe (enter diameter if pipe or tube)	Pipe (Ø168.3mm)	Plate & Pipe Ø≥73mm
Filler Metal Specification(s) SFA (info only)	5.9 & 5.4	/
Filler Metal or Electrode Classification(s) (info only)	ER347 & E347-16	/
Filler Metal F-No.	6 & 5	6 & 1,5 (With Backing)
Consumable Insert (GTAW or PAW)	NO	NO
Weld Deposit Thickness for Each Process	2 & 13	4 & UNLIMITED
Welding Position	6G	ALL
Vertical Progression (Uphill or Downhill)	N.A.	N.A.
Inert Gas Backing (GTAW, PAW, GMAW)	Argon	---
Transfer Mode (Spray, Globular, Pulse to Short Circuit-GMAW)	N.A.	N.A.
GTAW Current Type and Polarity (AC, DCEP, DCEN)	DC-	DC-

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]
☐ pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191) : **Acceptable: see report no. 106** ☒ RT or ☐ UT

Fillet weld —Fracture test (QW-180)... **N.A.** Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests..... **PT: ACC.**.....

Film or specimens evaluated by..... **A. Abbasi**..... Company... **Puyesh Azmoon**.....

Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by..... **FARNIKAN QC. DEPT.**.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date... 2021-03-11

Certified By.....

Quality Control

2R
Inspection & Quality Services
Reviewed ☐ witnessed ☐
Name: **Puyesh Azmoon** No.168



Welders Operator Performance Qualification Record (WOPQ)



Welder's Name: Ahmad Zare Identification No.: W-101
WPS No. Followed By Welder: FPA-WPS-101 ☒ Test Coupon ☐ Production Weld
Welding Process: SAW Type: Semi-Automatic
Base Material Welded: SA 240 Gr.304L Thickness: 53 mm
Base Metal P or S-Number: 8 to P or S-Number: 8 Position: 1G
Plate or Pipe: Plate
Filler Metal Specification (SFA) 5.9 Filler Metal or Electrode Classification: ER308L

Testing Conditions and Qualification Limits When Using Automatic Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Automatic)		
Welding Process		
Filler Metal Used (Yes or No) (EBW or LBW)		
Continuous Drive or Inertia Welding (FW)		
Vacume or Out of Vacuum (EBW)		

Testing Conditions and Qualification Limits When Using Machine Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Machine)	Machine	Machine
Welding Process	SAW	SAW
Direct or Remote Visual Control	Direct	Direct
Automatic Arc Voltage Control (GTAW)	N.A.	N.A.
Automatic Joint Tracking		
Position(s)	1G	F Plate & $\phi \geq 73\text{mm}$
Consumable Inserts (GTAW or PAW)	N.A.	N.A.
Backing (With or Without)	Yes	With
Single or Multiple Passes Per Side	Multiple	Multiple

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]

☐ pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT
QW-462.2	ACC.	QW-462.2	ACC.		
QW-462.2	ACC.	QW-462.2	ACC.		

Alternative Volumetric Examination Results (QW-191): **Acceptable**

☒ RT or ☐ UT

Fillet weld —Fracture test (QW-180)....N.A.....

Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....

Film or specimens evaluated by..... Company...Razi-Applied Science Foundation.....

Mechanical tests conducted by..... Razi-Applied Science Foundation..... Laboratory test no....145224.....

Welding test conducted by..... FARANIKAN QC. DEPT.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2020-01-11.....

Certified By.....





Farnikan
Engineered Solutions

Welders Performance Qualification Record (WPQ)

Welder's Name: Majid Tazarvi Identification No.: W-116
WPS No. Followed By Welder: FPA-WPS-100 ■ Test Coupon Production Weld
Welding Process: GTAW+SMAW Type: Manual
Base Material Welded: SA 516 Gr.70 Thickness: 20 mm



Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process	GTAW+SMAW	GTAW+SMAW
Type (Manual, Semi-auto,...)	Manual	Manual
Backing	NO	With or Without Backing
Base Metal P-No	P1 To P1	P1 through P15F, P34, P41 through P49
Plate/Pipe (enter diameter if pipe or tube)	Plate	Plate & Pipe
Filler Metal Specification(s) SFA (info only)	5.18 & 5.1	/
Filler Metal or Electrode Classification(s) (info only)	ER70S-6+E7018	/
Filler Metal F-No.	6 & 4	6 & 1,2,3,4 (with backing)
Consumable Insert (GTAW or PAW)	NO	NO
Weld Deposit Thickness for Each Process(mm)	5 & 15	10 & unlimited
Welding Position	2G	F,H
Vertical Progression (Uphill or Downhill)	Uphill	Uphill
Inert Gas Backing (GTAW, PAW, GMAW)	N.A.	N.A.
Transfer Mode (Spray, Globular, Pulse to Short Circuit-GMAW)	N.A.	N.A.
GTAW Current Type and Polarity (AC, DCEP, DCEN)	DC-	DC-

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

- ☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]
☐ Pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191) : **Acceptable: see report no. 358**

■ RT or □ UT

Fillet weld —Fracture test (QW-180)... **N.A.**

Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....

Film or specimens evaluated by..... **A. Abbasi**..... Company... **Puyesh Azmoon**.....

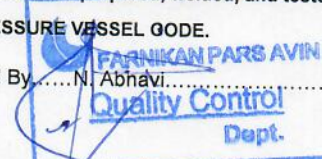
Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by..... **FARNIKAN QC. DEPT.**.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date... 2022-05-12

Certified By..... **N. Abhavi**.....





Farnikan
Engineered Solutions

Welders Performance Qualification Record (WPQ)

Welder's Name: Afshin Asiabani Identification No.: W-119
WPS No. Followed By Welder: FPA-WPS-100 ■ Test Coupon Production Weld
Welding Process: GTAW+SMAW Type: Manual
Base Material Welded: SA 516 Gr.70 Thickness: 20 mm



Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process	GTAW+SMAW	GTAW+SMAW
Type (Manual, Semi-auto,...)	Manual	Manual
Backing	NO	With or Without Backing
Base Metal P-No	P1 To P1	P1 through P15F, P34, P41 through P49
Plate/Pipe (enter diameter if pipe or tube)	Plate	Plate & Pipe
Filler Metal Specification(s) SFA (info only)	5.18 & 5.1	/
Filler Metal or Electrode Classification(s) (info only)	ER70S-6+E7018	/
Filler Metal F-No.	6 & 4	6 & 1,2,3,4 (with backing)
Consumable Insert (GTAW or PAW)	NO	NO
Weld Deposit Thickness for Each Process(mm)	5 & 15	10 & unlimited
Welding Position	3G	F,V
Vertical Progression (Uphill or Downhill)	Uphill	Uphill
Inert Gas Backing (GTAW, PAW, GMAW)	N.A.	N.A.
Transfer Mode (Spray, Globular, Pulse to Short Circuit-GMAW)	N.A.	N.A.
GTAW Current Type and Polarity (AC, DCEP, DCEN)	DC-	DC-

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

- ☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]
☐ pipe, Macro test for fusion [QW-462.5(b)] ☐ Plat, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191) : **Acceptable: see report no. 350**

■ RT or ☐ UT

Fillet weld —Fracture test (QW-180)...**N.A.**.....

Length and percent of defects.....

Macro examination (QW-184).....Fillet size (in.).....Concavity/convexity(in.).....

Other tests.....

Film or specimens evaluated by.....**A. Abbasi**.....Company...**Puyesh Azmoon**.....

Mechanical tests conducted by.....Laboratory test no.....

Welding test conducted by.....**FARNIKAN QC. DEPT.**.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2022-05-12.....

Certified By: **N. Abnavi**





Farnikan
Engineered Solutions

Welders Operator Performance Qualification Record (WOPQ)



Welder's Name: Mahmood Zare Identification No.: W-105
 WPS No. Followed By Welder: FPA-WPS-100 ☒ Test Coupon ☐ Production Weld
 Welding Process: SAW Type: Semi-Automatic
 Base Material Welded: SA 516 Gr.70 Thickness: 30mm
 Base Metal P or S-Number: 1 to P or S-Number: 1 Position: 1G
 Plate or Pipe: Plate
 Filler Metal Specification (SFA) 5.17 Filler Metal or Electrode Classification: EM12K

Testing Conditions and Qualification Limits When Using Automatic Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Automatic)		
Welding Process		
Filler Metal Used (Yes or No) (EBW or LBW)		
Continuous Drive or Inertia Welding (FW)		
Vacuum or Out of Vacuum (EBW)		

Testing Conditions and Qualification Limits When Using Machine Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Machine)	Machine	Machine
Welding Process	SAW	SAW
Direct or Remote Visual Control	Direct	Direct
Automatic Arc Voltage Control (GTAW)	N.A.	N.A.
Automatic Joint Tracking		
Position(s)	1G	F Plate & Ø≥73mm
Consumable Inserts (GTAW or PAW)	N.A.	N.A.
Backing (With or Without)	No	With or Without
Single or Multiple Passes Per Side	Multiple	Multiple

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]

☐ Pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191): **Acceptable: see report no. FPA/110**

☒ RT or ☐ UT

Fillet weld —Fracture test (QW-180).....N.A..... Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....PT: ACC.....

Film or specimens evaluated by.....A. Abbasi..... Company...Puyesh Azmoon.....

Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by.....FARNIKAN QC. DEPT.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2022-01-11..... Certified By.....N. Abbasi.....





Farnikan
Engineered Solutions

Welders Performance Qualification Record (WPQ)

Welder's Name: Sajad Abedini Identification No.: W-118

WPS No. Followed By Welder: FPA-WPS-100 ☒ Test Coupon ☐ Production Weld

Welding Process: GTAW+SMAW Type: Manual

Base Material Welded: SA 516 Gr.70 Thickness: 20



Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process	GTAW+SMAW	GTAW+SMAW
Type (Manual, Semi-auto,...)	Manual	Manual
Backing	NO(GTAW) & YES(SMAW)	With or Without Backing
Base Metal P-No	P1 To P1	P1 through P15F, P34, P41 through P49
Plate/Pipe (enter diameter if pipe or tube)	Plate	Plate & Pipe
Filler Metal Specification(s) SFA (info only)	5.18 & 5.1	/
Filler Metal or Electrode Classification(s) (info only)	ER70S-6 & E7018	/
Filler Metal F-No.	6 & 4	6 & 1,2,3,4 (With Backing)
Consumable Insert (GTAW or PAW)	NO	NO
Weld Deposit Thickness for Each Process	5 & 15	10 & unlimited
Welding Position	3G	F&V
Vertical Progression (Uphill or Downhill)	Uphill	Uphill
Inert Gas Backing (GTAW, PAW, GMAW)	N.A.	N.A.
Transfer Mode (Spray, Globular, Pulse to Short Circuit-GMAW)	N.A.	N.A.
GTAW Current Type and Polarity (AC, DCEP, DCEN)	DC-	DC-

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]

☐ pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191): **Acceptable: see report no. 348**

☒ RT or ☐ UT

Fillet weld —Fracture test (QW-180)...N.A.....

Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....

Film or specimens evaluated by..... A. Abbasi..... Company... Puyesh Azmoon.....

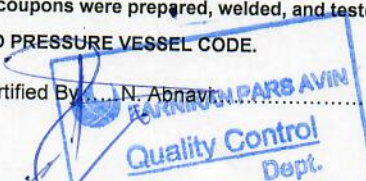
Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by..... FARANIKAN QC. DEPT.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date... 2022-05-12.....

Certified By..... N. Abnavi.....





Welders Operator Performance Qualification Record (WOPQ)

Welder's Name: Esmail Bustani Identification No.: W-109
WPS No. Followed By Welder: FPA-WPS-102 ☒ Test Coupon ☐ Production Weld
Welding Process: SAW Type: Semi-Automatic
Base Material Welded: SA 516 Gr.70 Thickness: 25mm
Base Metal P or S-Number: 1 to P or S-Number: 1 Position: 1G
Plate or Pipe: Plate
Filler Metal Specification (SFA) 5.17 Filler Metal or Electrode Classification: EM12K



Testing Conditions and Qualification Limits When Using Automatic Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Automatic)		
Welding Process		
Filler Metal Used (Yes or No) (EBW or LBW)		
Continuous Drive or Inertia Welding (FW)		
Vacuum or Out of Vacuum (EBW)		

Testing Conditions and Qualification Limits When Using Machine Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Machine)	Machine	Machine
Welding Process	SAW	SAW
Direct or Remote Visual Control	Direct	Direct
Automatic Arc Voltage Control (GTAW)	N.A.	N.A.
Automatic Joint Tracking		
Position(s)	1G	F Plate & Ø≥73mm
Consumable Inserts (GTAW or PAW)	N.A.	N.A.
Backing (With or Without)	No	With or Without
Single or Multiple Passes Per Side	Multiple	Multiple

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]

☐ pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191) : **Acceptable: see report no. FPA/115**

☒ RT or ☐ UT

Fillet weld —Fracture test (QW-180)...N.A. Length and percent of defects.....

Macro examination (QW-184).....Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....PT: **ACC.**.....

Film or specimens evaluated by.....A. Abbasi.....Company...Puyesh Azmoon.....

Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by.....FARNIKAN QC. DEPT.....


We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2020-01-11.....

Certified By.....N. Abnavi.....

FARNIKAN PARS AVIN
Quality Control
Dept.

Welders Operator Performance Qualification Record (WOPQ)

Welder's Name:	Mohammad Reza Moosayi	Identification No.: W-121	
WPS No. Followed By Welder:	FPA-WPS-102	<input type="checkbox"/> Test Coupon <input checked="" type="checkbox"/> Production Weld	
Welding Process:	SAW	Type: Semi-Automatic	
Base Material Welded:	SA 516 Gr.70	Thickness: 30mm	
Base Metal P or S-Number: 1 to P or S-Number: 1		Position: 1G	
Plate or Pipe:	Plate		
Filler Metal Specification (SFA)	5.17	Filler Metal or Electrode Classification:	EM12K

Testing Conditions and Qualification Limits When Using Automatic Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Automatic)		
Welding Process		
Filler Metal Used (Yes or No) (EBW or LBW)		
Continuous Drive or Inertia Welding (FW)		
Vacuum or Out of Vacuum (EBW)		

Testing Conditions and Qualification Limits When Using Machine Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Machine)	Machine	Machine
Welding Process	SAW	SAW
Direct or Remote Visual Control	Direct	Direct
Automatic Arc Voltage Control (GTAW)	N.A.	N.A.
Automatic Joint Tracking		
Position(s)	1G	F Plate & Ø ≥ 73mm
Consumable Inserts (GTAW or PAW)	N.A.	N.A.
Backing (With or Without)	No	With or Without
Single or Multiple Passes Per Side	Multiple	Multiple

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]
☐ Pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191): **Acceptable:**

☒ RT or ☐ UT

Fillet weld —Fracture test (QW-180).....**N.A.**..... Length and percent of defects.....
 Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....

Film or specimens evaluated by..... **A. Abbasi**..... Company... **Puyesh Azmoon**.....

Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by..... **FARNIKAN QC. DEPT.**.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date... 2022-01-14

Certified By..... **N. Abnavi**.....




Farnikan
Engineered Solutions

Welders Operator Performance Qualification Record (WOPQ)

Welder's Name: Mahmud Zare Identification No.: W-105
 WPS No. Followed By Welder: FPA-WPS-101 ☐ Test Coupon ☒ Production Weld
 Welding Process: SAW Type: Semi-Automatic
 Base Material Welded: SA 240 Gr.304L Thickness: 40 mm
 Base Metal P or S-Number: 8 to P or S-Number: 8 Position: 1G
 Plate or Pipe: Plate
 Filler Metal Specification (SFA) 5.9 Filler Metal or Electrode Classification:



Testing Conditions and Qualification Limits When Using Automatic Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Automatic)		
Welding Process		
Filler Metal Used (Yes or No) (EBW or LBW)		
Continuous Drive or Inertia Welding (FW)		
Vacume or Out of Vacuum (EBW)		

Testing Conditions and Qualification Limits When Using Machine Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Machine)	Machine	Machine
Welding Process	SAW	SAW
Direct or Remote Visual Control	Direct	Direct
Automatic Arc Voltage Control (GTAW)	N.A.	N.A.
Automatic Joint Tracking		
Position(s)	1G	F Plate & $\phi \geq 73\text{mm}$
Consumable Inserts (GTAW or PAW)	N.A.	N.A.
Backing (With or Without)	Yes	With
Single or Multiple Passes Per Side	Multiple	Multiple

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]

☐ pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT
QW-462.2	ACC.	QW-462.2	ACC.		
QW-462.2	ACC.	QW-462.2	ACC.		

Alternative Volumetric Examination Results (QW-191): **Acceptable**

☒ RT or ☐ UT

Fillet weld —Fracture test (QW-180).....N.A.....

Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....

Film or specimens evaluated by..... Company.....

Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by..... FARANIKAN QC. DEPT.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2022-01-11.....

Certified By.....





Farnikan
Engineered Solutions

Welders Performance Qualification Record (WPQ)

Welder's Name: Hamid Reza Ranjbar Identification No.: W-114
WPS No. Followed By Welder: FPA-WPS-106 ■ Test Coupon Production Weld
Welding Process: GTAW Type: Manual
Base Material Welded: SA 516 Gr.70 Thickness: 10mm



Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process	GTAW	GTAW
Type (Manual, Semi-auto,...)	Automatic	Automatic
Backing	NO	With or Without Backing
Base Metal P-No	P1 To P1	P1 through P15F, P34, P41 through P49
Plate/Pipe (enter diameter if pipe or tube)	Plate	Plate & Pipe ≥ 73 mm
Filler Metal Specification(s) SFA (info only)	5.18	/
Filler Metal or Electrode Classification(s) (info only)	ER70S-6	/
Filler Metal F-No.	6	6
Consumable Insert (GTAW or PAW)	NO	NO
Weld Deposit Thickness for Each Process(mm)	5	10
Welding Position	1G	F
Vertical Progression (Uphill or Downhill)	N.A.	N.A.
Inert Gas Backing (GTAW, PAW, GMAW)	N.A.	N.A.
Transfer Mode (Spray, Globular, Pulse to Short Circuit-GMAW)	N.A.	N.A.
GTAW Current Type and Polarity (AC, DCEP, DCEN)	DC-	DC-

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

- ☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]
☐ pipe, Macro test for fusion [QW-462.5(b)] ☐ Plat, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191) : **Acceptable: see report no. 112** ■ RT or ☐ UT

Fillet weld —Fracture test (QW-180)...N.A..... Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....

Film or specimens evaluated by..... A. Abbasi..... Company... Puyesh Azmoon.....

Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by..... FARANIKAN QC. DEPT.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2020-01-11.....

Certified By..... N. Abnavi.....





Farnikan
Engineered Solutions

Welders Operator Performance Qualification Record (WOPQ)

Welder's Name: Majid Gheysari Identification No.: W-111
 WPS No. Followed By Welder: FPA-WPS-102 ☐ Test Coupon ☒ Production Weld
 Welding Process: SAW Type: Semi-Automatic
 Base Material Welded: SA 516 Gr.70 Thickness: 30mm
 Base Metal P or S-Number: 1 to P or S-Number: 1 Position: 1G
 Plate or Pipe: Plate
 Filler Metal Specification (SFA) 5.17 Filler Metal or Electrode Classification: EM12K



Testing Conditions and Qualification Limits When Using Automatic Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Automatic)		
Welding Process		
Filler Metal Used (Yes or No) (EBW or LBW)		
Continuous Drive or Inertia Welding (FW)		
Vacume or Out of Vacuum (EBW)		

Testing Conditions and Qualification Limits When Using Machine Welding Equipment

Welding Variables (QW-361.1)	Actual Values	Range Qualified
Type of Welding (Machine)	Machine	Machine
Welding Process	SAW	SAW
Direct or Remote Visual Control	Direct	Direct
Automatic Arc Voltage Control (GTAW)	N.A.	N.A.
Automatic Joint Tracking		
Position(s)	1G	F Plate & $\phi \geq 73\text{mm}$
Consumable Inserts (GTAW or PAW)	N.A.	N.A.
Backing (With or Without)	No	With or Without
Single or Multiple Passes Per Side	Multiple	Multiple

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]
☐ Pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191): **Acceptable: see report no. FPA/116**

☒ RT or ☐ UT

Fillet weld —Fracture test (QW-180)...N.A. Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....PT: ACC.....

Film or specimens evaluated by.....A. Abbasi..... Company...Puyesh Azmoon.....

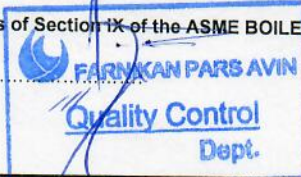
Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by.....FARNIKAN QC. DEPT.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2022-01-14.....

Certified By.....N. Abnavi.....





Farnikan
Engineered Solutions

Welders Performance Qualification Record (WPQ)

Welder's Name: Mehrdad Ghasemi Identification No.: W-123
WPS No. Followed By Welder: FPA-WPS-101 ■ Test Coupon Production Weld
Welding Process: GTAW+SMAW Type: Manual
Base Material Welded: SA 106 Gr.B Thickness: 18.26



Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process	GTAW+SMAW	GTAW+SMAW
Type (Manual, Semi-auto,...)	Manual	Manual
Backing	NO	With or Without Backing
Base Metal P-No	P1 To P1	P1 through P15F, P34, P41 through P49
Plate/Pipe (enter diameter if pipe or tube)	Pipe (Ø168.3mm)	Plate & Pipe Ø≥73mm
Filler Metal Specification(s) SFA (info only)	5.18 & 5.1	/
Filler Metal or Electrode Classification(s) (info only)	ER70S-6 & E7018	/
Filler Metal F-No.	6 & 4	6 & 1,2,3,4 (With Backing)
Consumable Insert (GTAW or PAW)	NO	NO
Weld Deposit Thickness for Each Process	4 & 15	8 & Unlimited
Welding Position	6G	ALL
Vertical Progression (Uphill or Downhill)	N.A.	N.A.
Inert Gas Backing (GTAW, PAW, GMAW)	N.A.	N.A.
Transfer Mode (Spray, Globular, Pulse to Short Circuit-GMAW)	N.A.	N.A.
GTAW Current Type and Polarity (AC, DCEP, DCEN)	DC-	DC-

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]

☐ Pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191) : **Acceptable: see report no. 350** ■ RT or ☐ UT

Fillet weld —Fracture test (QW-180)...N.A. Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....

Film or specimens evaluated by..... A. Abbasi..... Company... Puyesh Azmoon.....

Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by..... FARANIKAN QC. DEPT.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date... 2022-05-12

Certified By.....





Farnikan
Engineered Solutions

Welders Performance Qualification Record (WPQ)

Welder's Name: Mehdi Hanayi Identification No.: W-108
WPS No. Followed By Welder: FPA-WPS-100 ■ Test Coupon Production Weld
Welding Process: GTAW+SMAW Type: Manual
Base Material Welded: SA 516 Gr.70 Thickness: 20 mm



Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process	GTAW+SMAW	GTAW+SMAW
Type (Manual, Semi-auto,...)	Manual	Manual
Backing	NO	With or Without Backing
Base Metal P-No	P1 To P1	P1 through P15F, P34, P41 through P49
Plate/Pipe (enter diameter if pipe or tube)	Plate	Plate & Pipe
Filler Metal Specification(s) SFA (info only)	5.18 & 5.1	/
Filler Metal or Electrode Classification(s) (info only)	ER70S-6+E7018	/
Filler Metal F-No.	6 & 4	6 & 1,2,3,4 (with backing)
Consumable Insert (GTAW or PAW)	NO	NO
Weld Deposit Thickness for Each Process(mm)	5 & 15	10 & unlimited
Welding Position	3G	F,V
Vertical Progression (Uphill or Downhill)	Uphill	Uphill
Inert Gas Backing (GTAW, PAW, GMAW)	N.A.	N.A.
Transfer Mode (Spray, Globular, Pulse to Short Circuit-GMAW)	N.A.	N.A.
GTAW Current Type and Polarity (AC, DCEP, DCEN)	DC-	DC-

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]
☐ Pipe, Macro test for fusion [QW-462.5(b)] ☐ Plate, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191) : **Acceptable: see report no. 348**

■ RT or □ UT

Fillet weld —Fracture test (QW-180)...**N.A.**

Length and percent of defects.....

Macro examination (QW-184)..... Fillet size (in.)..... Concavity/convexity(in.).....

Other tests.....

Film or specimens evaluated by.....**A. Abbasi**..... Company...**Puyesh Azmoon**.....

Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by.....**FARNIKAN QC. DEPT.**.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2022-05-12.....

Certified By.....**N. Abbasi**.....





Farnikan
Engineered Solutions

Welders Performance Qualification Record (WPQ)

Welder's Name: Mohsen Kianmehr Identification No.: W-112
WPS No. Followed By Welder: FPA-WPS-104 ■ Test Coupon Production Weld
Welding Process: GMAW Type: Manual
Base Material Welded: SA 516 Gr.70 Thickness: 20mm



Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process	GMAW	GMAW/FCAW
Type (Manual, Semi-auto,...)	Semi-Automatic	Semi-Automatic
Backing	NO	With or Without Backing
Base Metal P-No	P1 To P1	P1 through P15F, P34, P41 through P49
Plate/Pipe (enter diameter if pipe or tube)	Plate	Plate & Pipe $\varnothing \geq 73\text{mm}$
Filler Metal Specification(s) SFA (info only)	5.18	/
Filler Metal or Electrode Classification(s) (info only)	ER70S-6	/
Filler Metal F-No.	6	6
Consumable Insert (GTAW or PAW)	NO	NO
Weld Deposit Thickness for Each Process(mm)	15	Unlimited
Welding Position	3F	F,H,V
Vertical Progression (Uphill or Downhill)	N.A.	N.A.
Inert Gas Backing (GTAW, PAW, GMAW)	N.A.	N.A.
Transfer Mode (Spray, Globular, Pulse to Short Circuit-GMAW)	Spray Arc	Spray, Globular, Pulse
GTAW Current Type and Polarity (AC, DCEP, DCEN)	N.A.	N.A.

RESULTS

Visual examination of completed weld (QW-302.4): **Acceptable**

☐ Bend test: ☐ Transverse root and face [QW-462.3(a)] ☐ Longitudinal root and face [QW-462.3(b)] ☐ Side Bend (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]

☐ pipe, Macro test for fusion [QW-462.5(b)] ☐ Plat, Macro test for fusion [QW-462.5(e)]

TYPE	RESULT	TYPE	RESULT	TYPE	RESULT

Alternative Volumetric Examination Results (QW-191): ☐ RT or ☐ UT

Fillet weld —Fracture test (QW-180)...Acc..... Length and percent of defects.....

Macro examination (QW-184)...Acc..... Fillet size (mm.)...15... Concavity/convexity(in.).....

Other tests.....PT: ACC.

Film or specimens evaluated by..... Company.....

Mechanical tests conducted by..... Laboratory test no.....

Welding test conducted by..... FARANIKAN QC. DEPT.....

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Date...2022-01-11.....

Certified By.....

FARNIKAN PARS AVIN
Quality Control
Dept.