H/AH	JALIFICATION RECORD (WQR)		
the pressure equipment safety authority	Moroz	ABSA File No.: W-12763	-
Welder's Name:	LIOLOT	ABSA File No.: VV \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Stamp No.:
dentification of WPS followed b	y welder during weld	ling of test coupon: #100	_W.P. Reg. # WP

Identification of WPS	followed by welder dur	ring welding of test c	oupon <u>: #100</u>	W	.P. Reg. # WI	P1312.2
Base material(s) weld	ded: SA-106-B P	1	Γhickness: 11.07m	nm 🔃 🖂 Te	est Coupon [] Prod. Weld
	Testi	ing Conditions and	Qualification Lim	its		
We	elding Variables (QW-	-	Actual Va	I	Range	Qualified
	Weldi	ng Process(es) Used	d: SMAW		SMAW	
Type of W	/elding (i.e., Manual, Se	emi-Automatic) Used	d: Manual		Manual	
	Base Metal P Numb	er: P1 To P Numbe	r: P1 to P1		P1 to P	1
☐ Plate	🛮 Pipe (enter dia	meter if pipe or tube): _60.3mm O.D.	į	25mm and ove	er
Back	ing (metal, weld metal,	double-welded, etc.): <u> </u>	lone	With	None
Filler Metal or	Electrode Specification	n(s) (SFA) (info only): <u>5.1 5</u>	.1		
Filler M	etal or Electrode Class	ification(s) (info only): <u>E6010</u> E	7018		
	Filler Metal or Ele	ectrode F-Number(s)): <u>F3</u> F	4	F3	F4
Filler Type (solid/m	etal or flux cored/powd	ler) (GTAW or PAW):N	I/A		N/A
	Consumable Inse	rt for GTAW or PAW	/:N	I/A		N/A
Deposit Thickness t	for each process or ele	ctrode type, etc. (in.)): <u>3.2mm</u> 7	.9mm	6.4mm	15.8mm
Process/Electrode 1:	3 layers minimun	n⊠Yes □ No F	Process/Electrode 2:	3 la	yers minimum 🏻	☑ Yes ☐ No
	Welding Positio	n (2G, 6G, 3F, etc.):	6	G		All
	Vertical Progression	(Uphill or Downhill):	A	.ll		All
	or Inert Gas Backing for (N	/A		N/A
	spray/globular or pulse to		N	//A		N/A
GTAW	Current Type/Polarity ((AC, DCEP, DCEN):	N	/A		N/A
•		Resu	lts			
Visual Examination of	f Fit-Up; Root Gap <u>: 3m</u>	m Tack Weld:	s: <u>3 (Length</u> : 9mr	n <u>Numl</u>	<u>oer</u> : 3)	
Root Pass (Describe	Discontinuity if Unacce	ptable):				
Completed Weld (Des	scribe defects if unacce	eptable):				
Bend Test: ⊠ Transv	erse Root and Face [Q	W-462.3(a)] 🗌 Long	itudinal Root and F	ace [QW-462	2.3(b)] 🗆 Side	e [QW-462.2]
☐ Pipe Bend Specime	n, corrosion-resistant overlag	y [QW-462.5(c)]	Plate Bend Specim	en, corrosion-r	esistant overlay [0	QW-462.5(d)]
☐ Macro Test for Fusion	sion [QW-462.5(b)]		Macro Test for Fu	usion [QW-46	2.5(e)]	
Type	Result	Туре	Result	Туре	9	Result
2 Root Bends	Pass/Acceptable					
<u>[2 Face Bends</u> (For alternative qualifi	Pass/Acceptable ication of groove welds	by volumetric exam	ination to QW-191)			
R.T. Results:	calleri or groove words	by voidinothio oxam	U.T. Results: _	'		
	Test (Describe location,	nature and size of any		necimen):		
	of Defects:			·		
Appearance-Fillet Size	e (leg.): X	inch. Coi	nvexity:	inch, or Con	cavitv:	inch.
	- (g./, <u></u>					
		Record Info				
Film or Specimens Ev	valuated by: P IV		_	ompany: Di	V Gasfield Se	nvices
Welding supervised b		<u> </u>		ompany. <u>Ita</u>	v Gasileid Se	IVICES
Mechanical tests cond			Lahor	atory test no	· N/A	
	-			-		tootool in
	tements in this record				a, welded allo	tested III
	equirements of Section MIZATION: RJV Gasf				· August 10.20	115
Certified by:	INIZATION. RJV Gast			expiry Date. Date		2013
· /	inguad): D.1\# 212		No. E-00176			
P.Q. Card No. (vvnen Test Coupor D. No.:	issued): RJV# 3\3		Performance Test		SEP II	9 2013
Lest CollognNLD No :			Date Coupon is to I	pe retained t	O:	

UD(U

the pressure equipment safety-authority		
Welder's Name: Dallas Hotfman ABS	6A File No.: W-27746	Stamp No.:
Identification of WPS followed by welder during welding of tes		V.P. Reg. # WP- 1312.2
Base material(s) welded: SA-106-B P1	,	est Coupon Prod. Weld
	nd Qualification Limits	
Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Variables (QW-330) Welding Process(es) Us		_
Type of Welding (i.e., Manual, Semi-Automatic) Us		SMAW
Base Metal P Number: P1 To P Num		Manual D4
		P1 to P1
☐ Plate ☐ Pipe (enter diameter if pipe or tu	·	25mm and over
Backing (metal, weld metal, double-welded, e	·	With None
Filler Metal or Electrode Specification(s) (SFA) (info or		-
Filler Metal or Electrode Classification(s) (info or	**	-
Filler Metal or Electrode F-Number	• /	F3 F4
Filler Type (solid/metal or flux cored/powder) (GTAW or PA		N/A
Consumable Insert for GTAW or PA		N/A
Deposit Thickness for each process or electrode type, etc. (6.4mm 15.8mm
Process/Electrode 1: 3 layers minimum ⊠ Yes ☐ No		yers minimum 🛭 Yes 🔲 No
Welding Position (2G, 6G, 3F, etc		All
Vertical Progression (Uphill or Downhi		All
Fuel Gas for OFW or Inert Gas Backing for GTAW, PAW, GMA		N/A
Transfer Mode (spray/globular or pulse to short circuit- GMAV		N/A
GTAW Current Type/Polarity (AC, DCEP, DCE)	N):N/A	N/A
Res	sults	
Visual Examination of Fit-Up; Root Gap: 3mm Tack We	elds: <u>3 (Length</u> : 9mm <u>Num</u>	<u>ber</u> : 3)
Root Pass (Describe Discontinuity if Unacceptable):		
Completed Weld (Describe defects if unacceptable):		
Bend Test: ☑ Transverse Root and Face [QW-462.3(a)] ☐ Lo	ngitudinal Root and Face [QW-46	32.3(b)]
☐ Pipe Bend Specimen, corrosion-resistant overlay [QW-462.5(c)]	☐ Plate Bend Specimen, corrosion-	
☐ Macro Test for Fusion [QW-462.5(b)]	☐ Macro Test for Fusion [QW-46	
	<u> </u>	
Type Result Type 2 Root Bends Pass/Acceptable	Result Typ	e Result
2 Face Bends Pass/Acceptable		
(For alternative qualification of groove welds by volumetric exa	•	
R.T. Results:	U.T. Results:	
Fillet Weld - Fracture Test (Describe location, nature and size of a	· · · · · · · · · · · · · · · · · · ·	
Length and Per Cent of Defects:i	nches	
Macro Test-Fusion:		
Appearance-Fillet Size (leg.): X inch. 0	Convexity: inch. or Cor	ncavity: inch.
Other Tests:		
Record In	formation	
Film or Specimens Evaluated by: RJV	Company: R.	IV Gasfield Services
Welding supervised by: Dale Lanuik		
Mechanical tests conducted by: N/A	Laboratory test no	p.: N/A
We certify that the statements in this record are correct and the	at the test coupons were prepare	d welded and tested in
accordance with the requirements of Sestion IX of the ASME E		-
	AOQP No.: 7040 Expiry Date	
	le No. E-00176 Date	1110 2 5 2013
P.Q. (ard No. (When issued): RJV# 314		
	_ Performance Test Reference N	aca a 6 3012
Test Coupon I.D. No:	_ Date Coupon is to be retained	(O: 3E) 2 0 80 10

Welder's Name:	bernie Sor	bara ABSA	File No.:W	- 6819	Stamp I	No.:
	followed by welder du			54	 W.P. Reg. #	
Base material(s) welc	•	21	-	1.07mm D	_	Prod. Weld
()		ting Conditions and			_ ,	
We	Iding Variables (QW	•		ual Values	Rand	ge Qualified
110	•	ing Process(es) Use		adi Talaco	SMAW	go quaiiioa
Type of M	vve.a elding (i.e., Manual, S)	•			Manual	
Type of VV	•	ber: P1 To P Numbe			P1 to	P1
☐ Plate		ameter if pipe or tube		D	25mm and	
	ing (metal, weld metal	• •		None	With	None
	Electrode Specification			5.1	VVIGI	140110
	etal or Electrode Class			E7018		
I IIICI WA		lectrode F-Number(s		F4	F3	F4
Filler Type (solid/m	etal or flux cored/pow	•		N/A	10	N/A
i iller Type (solid/ill		ert for GTAW or PAV		N/A		N/A
Denosit Thickness t	for each process or ele			7.9mm	6.4mm	15.8mm
Process/Electrode 1:	· .	·	Process/Electro			m ⊠ Yes □ No
Process/Electrode 1.		m				All
	•	n (Uphill or Downhill)		All		All
Fuel Gas for OEW	or Inert Gas Backing for			N/A		N/A
	pray/globular or pulse to		•	N/A		N/A
,	Current Type/Polarity	·		N/A		N/A
017.00	ourient Typeri olarity	Resu		14//1	I	
Visual Examination of	Fit Un: Boot Con: 2n			· Omm N	lumber: 3)	
	*		•		idilibei. 3)	
Root Pass (Describe	-					
Completed Weld (Des		,				2.1
Bend Test: ☑ Transv	-	• • •	-			
☐ Pipe Bend Specime					sion-resistant overl	ay [QW-462.5(d)]
☐ Macro Test for Fu:	sion [QW-462.5(b)]		☐ Macro Test	for Fusion [Q\	N-462.5(e)]	
Туре	Result	Туре	Result		Туре	Result
2 Root Bends 2 Face Bends	Pass/Acceptable Pass/Acceptable					
(For alternative qualifi		s by volumetric exan	nination to QW	<i>I</i> -191)		
R.T. Results:			U.T. Results			
Fillet Weld - Fracture			y crack or tearir	ng of specimen):	
Length and Per Cent						
Macro Test-Fusion:	,	<u> </u>				
Appearance-Fillet Size	e (leg.): X	inch. Co	onvexity:	inch. or	Concavity:	inch.
Other Tests:						
		Record Infe	ormation			
Film or Specimens Ev	valuated by: R.IV			Company	r: RJV Gasfield	Services
Welding supervised b						
Mechanical tests cond		•		Laboratory te	st no.: N/A	
We certify that the sta	•	l are correct and that		· ·		and tested in
						and tosted in
accordance with the requirements of Section IX of the ASME Boiler and Pressure Vessel Code. ACCREDITED OBGANIZATION: RJV Gasfield Services AOQP No.: 7040 Expiry Date: August 19,2015						
Certified by:)		No. E-00176			0 4 2013
/ · 	isqued): D IV# 216					V
P.Q. Card No. (When			Performance			4 2013
Test Coupon I.D. No.:			Date Coupon	is to be retain	ned to: DEC	THE STATE OF THE S



HR)H					
the pressure equipment safety authority Welder's Name:	RUDYK ABS	A File No.: W =	14996	Stamp No	P
Identification of WPS followed by wel				/.P. Reg. # W	
Base material(s) welded: SA-106-B		Thickness: 11.07		_	Prod. Weld
	Testing Conditions an	d Qualification L	imits		
Welding Variables	=		Values	Range	Qualified
	Welding Process(es) Us			SMAW	·
Type of Welding (i.e., Mar	•			Manual	
	Number: P1 To P Numb			P1 to I	 ⊃1
	iter diameter if pipe or tub			25mm and o	ver
	metal, double-welded, et		None	With	None
Filler Metal or Electrode Spec		•	5.1		
-	Classification(s) (info on		E7018		
	al or Electrode F-Number		F4	F3	F4
Filler Type (solid/metal or flux core		· · —	N/A		N/A
•	le Insert for GTAW or PA		N/A		N/A
Deposit Thickness for each process	s or electrode type, etc. (i	n.): 3.2mm	7.9mm	6.4mm	15.8mm
Process/Electrode 1: 3 layers r	ninimum ⊠ Yes 🔲 No	Process/Electrode	2: 3 la	yers minimum	✓ Yes ☐ No
Welding	Position (2G, 6G, 3F, etc.	.):	6G		Alf
Vertical Progr	ession (Uphill or Downhil	l):	All		All
Fuel Gas for OFW or Inert Gas Back	ing for GTAW, PAW, GMAV	V:	N/A		N/A
Transfer Mode (spray/globular or p	oulse to short circuit- GMAW	/):	N/A		N/A
GTAW Current Type/P	olarity (AC, DCEP, DCEN	l):	N/A		N/A
	Res	ults			
Visual Examination of Fit-Up; Root G	ap <u>: 3mm</u> Tack We	lds: <u>3 (Length</u> : 9	mm <u>Numl</u>	<u>ber</u> :3) _	
Root Pass (Describe Discontinuity if U					
Completed Weld (Describe defects if					
Bend Test: ☑ Transverse Root and F		ngitudinal Root and	d Face (QW-46)	2.3(b)] 🔲 Si	de [QW-462.2]
☐ Pipe Bend Specimen, corrosion-resista		☐ Plate Bend Spec			
☐ Macro Test for Fusion [QW-462.5(I	* *	☐ Macro Test for			
Type Result	Type	Result	Туре		Result
2 Root Bends Pass/Acceptable	Турс	result	170		TOOGIC
2 Face Bends Pass/Acceptable		main ation to ONA 46			
(For alternative qualification of groove	e weids by volumetric exa	U.T. Results:	<i>э</i> 1)		
R.T. Results:			f an a sim an \;		
Fillet Weld - Fracture Test (Describe lo					
Length and Per Cent of Defects: Macro Test-Fusion:					
Appearance-Fillet Size (leg.):	Y inch C	`onveyity:	inch, or Con	cavity:	inch.
	X more c	onvexity	111011. 01 0011	Cavity.	
Other rests		£ 4 i			
Eller on One singura Englants dibas D.N.		formation	Camananii D.I	V Coofield S	'anticoa
Film or Specimens Evaluated by: RJ\			Company: <u>RJ</u>	v Gastieid S	ervices
Welding supervised by: Dale Lanuik			oratory test no	- N/Λ	
Mechanical tests conducted by: N/A		<u> </u>	="		11
We certify that the statements in this					a testea in
accordance with the requirements of					2045
ACCREDITED ORGANIZATION: R.					6 2013
Certified by:		le No. <u>E-00176</u>	Date	_	À 90.4
P.Q. Card No. (When issued): RJV#	<u> 510</u>	_ Performance Te			6 2014
Test Coupan I.D. No.:		_ Date Coupon is t	to be retained t	to: JAN U	A 74.2

the pressure equipment safety of	uthority 🕶	DER QUALIFICA				AB-76A 2010-09
Welder's Name:	hane Ba	DVSh ABSA	A File No.:	2799	Stamp No.	<u> </u>
Identification of WPS		during welding of test			.P. Reg. # WF	P- <u>1312.2</u>
Base material(s) wel	ded: <u>SA-106-B</u>	P1	Thickness: 11.07m	nm 🔲 Te	est Coupon [Prod. Weld
• •	Te	sting Conditions an	d Qualification Lim	nits	•	
We	۰. Iding Variables (Q۷	-	Actual V	1	Range	Qualified
		lding Process(es) Use			SMAW	
Type of V		Semi-Automatic) Use			Manual	
, ,	- '	nber: P1 To P Numb			P1 to P	1
☐ Plate	⊠ Pipe (enter o	liameter if pipe or tub	e): 60.3mm O.D.		25mm and ove	er
Back	ing (metal, weld met	al, double-welded, etc	D.): N	Vone	With	None
Filler Metal or	Electrode Specificat	tion(s) (SFA) (info on	y): 5.1 5	5.1		
Filler M	etal or Electrode Cla	ssification(s) (info onl	y): E6010 E	= 7018		
	Filler Metal or	Electrode F-Number(s): <u>F</u> 3 F	=4	F3	F4
Filler Type (solid/m	netal or flux cored/po	wder) (GTAW or PAV	V):	N/A		N/A
	Consumable In	sert for GTAW or PA	W:	N/A		N/A
Deposit Thickness	for each process or e	electrode type, etc. (ir	1.): <u>3.2mm</u> 7	7.9mm	6.4mm	15.8mm
Process/Electrode 1:	3 layers minim	ium 🛛 Yes 🔲 No	Process/Electrode 2:	3 lay	yers minimum 🛭	☑ Yes 🔲 No
	Welding Posi	tion (2G, 6G, 3F, etc.):6	SG		All
	Vertical Progressi	on (Uphill or Downhill):A	All		All
Fuel Gas for OFW	or Inert Gas Backing fo	or GTAW, PAW, GMAW	<i>I</i> :N	N/A		N/A
Transfer Mode (s	spray/globular or pulse	to short circuit- GMAW):N	√A		N/A
GTAW	Current Type/Polarit	y (AC, DCEP, DCEN):	N/A		N/A
Visual Examination o Root Pass (Describe Completed Weld (De Bend Test: ☑ Transv	Discontinuity if Unac scribe defects if unac	ceptable):	ds: <u>3 (Length</u> : 9mr			 ⊋ [QW-462.2]
☐ Pipe Bend Specime	n, corrosion-resistant ove	rlay [QW-462.5(c)]	☐ Plate Bend Specim	nen, corrosion-re	esistant overlay [0	QW-462.5(d)]
☐ Macro Test for Fu	sion [QW-462.5(b)]	[☐ Macro Test for Full	usion [QW-46	2.5(e)]	
Type 2 Root Bends	Result Pass/Acceptable	Туре	Result	Туре)	Result
2 Face Bends	Pass/Acceptable					
(For alternative qualif R.T. Results:	ication of groove wel	ds by volumetric exar	mination to QVV-191, U.T. Results:)		
Fillet Weld - Fracture	Test (Describe location	on, nature and size of ar	ny crack or tearing of s	specimen):		
Length and Per Cent						
Macro Test-Fusion:						
Appearance-Fillet Siz			onvexity:	inch. or Cond	cavity:	inch.
Other 163ts						
Film or Specimens Ev	valuated by: RJV	Record Inf	_	Company: <u>RJ</u>	V Gasfield Se	rvices
Welding supervised b	y: Dale Lanuik					<u></u>
Mechanical tests con-	ducted by: N/A		Labo	ratory test no	o.: <u>N/A</u>	
We certify that the sta	atements in this reco	rd are correct and tha	t the test coupons w	vere prepared	d, welded and	tested in
accordance with the r						
ACCREDITED ORGA	NIZATION: RJVG	asfield Services /	AOQP No.: <u>7040</u>	_Expiry Date:)15
Certified by:)	Examiner File	e No. <u>E-00176</u>	Date	DEC 17	2013
P.Q. Card No. (When	issued): RJV# 32	10	Performance Test	Reference N		3000
Test Coupen I.D. No.			Date Coupon is to	be retained to	o:JAN	7 2014

KUSHNIV ABSA File No.: W- 17008 Stamp No.: N Welder's Name: Identification of WPS followed by welder during welding of test coupon: #115 W.P. Reg. # WP-1312.2 Base material(s) welded: SA-106-B P1_ Thickness: 11.07mm Testing Conditions and Qualification Limits Welding Variables (QW-350) **Actual Values** Range Qualified Welding Process(es) Used: SMAW **SMAW** Type of Welding (i.e., Manual, Semi-Automatic) Used: Manual Manual Base Metal P Number: P1 To P Number: P1 to P1 P1 to P1 ☐ Plate ☐ Pipe (enter diameter if pipe or tube): 60.3mm O.D. 25mm and over Backing (metal, weld metal, double-welded, etc.): None None Filler Metal or Electrode Specification(s) (SFA) (info only): 5.1 5.1 Filler Metal or Electrode Classification(s) (info only): E6010 E7018 Filler Metal or Electrode F-Number(s): F3 F4 F3 F4 Filler Type (solid/metal or flux cored/powder) (GTAW or PAW): N/A N/A Consumable Insert for GTAW or PAW: N/A N/A Deposit Thickness for each process or electrode type, etc. (in.): 3.2mm 7.9mm 6.4mm 15.8mm Process/Electrode 1: 3 layers minimum

☐ Yes ☐ No Process/Electrode 2: 3 layers minimum

✓ Yes

✓ No Welding Position (2G, 6G, 3F, etc.): 1G Flat Vertical Progression (Uphill or Downhill): Flat Flat Fuel Gas for OFW or Inert Gas Backing for GTAW, PAW, GMAW: N/A ŅΑ Transfer Mode (spray/globular or pulse to short circuit- GMAW): N/A N/A GTAW Current Type/Polarity (AC, DCEP, DCEN): N/A N/A Results Visual Examination of Fit-Up; Root Gap<u>: 3mm</u> Tack Welds: <u>3 (Length</u>: 9mm <u>Numbe</u>r: 3) Root Pass (Describe Discontinuity if Unacceptable): Completed Weld (Describe defects if unacceptable): _ Bend Test: ☑ Transverse Root and Face [QW-462.3(a)] ☐ Longitudinal Root and Face [QW-462.3(b)] ☐ Side [QW-462.2] ☐ Pipe Bend Specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate Bend Specimen, corrosion-resistant overlay [QW-462.5(d)] ☐ Macro Test for Fusion [QW-462.5(b)] ☐ Macro Test for Fusion [QW-462.5(e)] Result Result Type Type 2 Root Bends Pass/Acceptable 2 Face Bends Pass/Acceptable (For alternative qualification of groove welds by volumetric examination to QW-191) U.T. Results: Fillet Weld - Fracture Test (Describe location, nature and size of any crack or tearing of specimen): Length and Per Cent of Defects: Macro Test-Fusion: Appearance-Fillet Size (leg.): X _____ inch. Convexity: inch. or Concavity: inch. Other Tests: **Record Information** Film or Specimens Evaluated by: RJV Company: RJV Gasfield Services Welding supervised by: Dale Lanuik Mechanical tests conducted by: N/A Laboratory test no.: N/A 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. ACCREDITED ORGANIZATION: BJV Gasfield Services AOQP No.: 7040 Expiry Date: August 19,2015 Certified by: Examiner File No. E-00176 JAN 1 0 2014 Date: P.Q. Card No. (When issued): RJV# Performance Test Reference No.: Test Coupon I.D. No.:_ Date Coupon is to be retained to:___

AB-76A 2010-09 WELDER QUALIFICATION RECORD (WQR) Jeremy Tchir ABSA File No.: W- 2828 Stamp No.: Welder's Name: Identification of WPS followed by welder during welding of test coupon: #115 W.P. Reg. # WP- 1312.2 Base material(s) welded: SA-106-B P1 _____ Thickness: 11.07mm ☐ Test Coupon ☐ Prod. Weld Testing Conditions and Qualification Limits Welding Variables (QW-350) **Actual Values** Range Qualified Welding Process(es) Used: SMAW **SMAW** Type of Welding (i.e., Manual, Semi-Automatic) Used: Manual Manual Base Metal P Number: P1 To P Number: P1 to P1 P1 to P1 ☐ Plate ☐ Pipe (enter diameter if pipe or tube): 60.3mm O.D. 25mm and over Backing (metal, weld metal, double-welded, etc.): None None Filler Metal or Electrode Specification(s) (SFA) (info only): 5.1 5.1 Filler Metal or Electrode Classification(s) (info only): E6010 E7018 Filler Metal or Electrode F-Number(s): F3 F4 F3 F4 Filler Type (solid/metal or flux cored/powder) (GTAW or PAW): N/A N/A Consumable Insert for GTAW or PAW: N/A N/A Deposit Thickness for each process or electrode type, etc. (in.): 3.2mm 7.9mm 6.4mm 15.8mm Process/Electrode 1: 3 layers minimum

✓ Yes

✓ No Process/Electrode 2: 3 layers minimum

✓ Yes

✓ No Welding Position (2G, 6G, 3F, etc.): 6G Vertical Progression (Uphill or Downhill): ΑII All Fuel Gas for OFW or Inert Gas Backing for GTAW, PAW, GMAW: N/A N/A Transfer Mode (spray/globular or pulse to short circuit- GMAW): N/A N/A GTAW Current Type/Polarity (AC, DCEP, DCEN): N/A N/A Results Visual Examination of Fit-Up; Root Gap: 3mm Tack Welds: 3 (Length: 9mm Number: 3) Root Pass (Describe Discontinuity if Unacceptable): Completed Weld (Describe defects if unacceptable): ___ Bend Test: ☑ Transverse Root and Face [QW-462.3(a)] ☐ Longitudinal Root and Face [QW-462.3(b)] ☐ Side [QW-462.2] ☐ Pipe Bend Specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate Bend Specimen, corrosion-resistant overlay [QW-462.5(d)] ☐ Macro Test for Fusion [QW-462.5(b)] ☐ Macro Test for Fusion [QW-462.5(e)] Result Type Result Type 2 Root Bends Pass/Acceptable 2 Face Bends Pass/Acceptable (For alternative qualification of groove welds by volumetric examination to QW-191) R.T. Results: U.T. Results: Fillet Weld - Fracture Test (Describe location, nature and size of any crack or tearing of specimen); Length and Per Cent of Defects: ______ inches Macro Test-Fusion: Appearance-Fillet Size (leg.): X ____ inch. Convexity:____ inch. or Concavity:____ inch. Other Tests: **Record Information** Film or Specimens Evaluated by: RJV Company: RJV Gasfield Services Welding supervised by: Dale Lanuik Mechanical tests conducted by: N/A Laboratory test no.: N/A 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.

Certified by:

Test Coupon I.D. No.:

P.Q. Card No. (When issued): RJV# 322

ACCREDITED ORGANIZATION: RJV Gasfield Services AOQP No.: 7040 Expiry Date: August 19,2015

Examiner File No. E-00176

_____ Performance Test Reference No.:

Date Coupon is to be retained to: FEB 1 6 2014

JAN 1 6 2014

Date:



the pressure equipment safety a	authority					
Welder's Name: Mar	vin Boe	ABSA	A File No.: <u>W-69</u> 4	13	Stamp No.:	_M
Identification of WPS	followed by welder	during welding of test	coupon: #107	V	V.P. Reg. # WF	<u>- 1312.2</u>
Base material(s) wel	ded: <u>SA-106-B</u>	21	Thickness: 18.2	<u>:6mm</u> ⊠ T	est Coupon 🗌] Prod. Weld
	Te	sting Conditions an	d Qualification L	imits.		
W	elding Variables (Q\	-		l Values	Range	Qualified
		lding Process(es) Use	ed: G.M.A.W	S.M.A.W	G.M.A.W	S.M.A.W
Type of V		Semi-Automatic) Use		Manual	Man/Sem Aut	Manual
	.	Number To P Numb		•	P1 to P1	
☐ Plate	e ⊠ Pipe (enter o	diameter if pipe or tub	e): 168mm O.D.		73mm /	73mm
Back	ing (metal, weld met	al, double-welded, etc	c.): None	Metal	With/Without	with
Filler Metal o	r Electrode Specifica	tion(s) (SFA) (info onl	y): 5.18	5.1		
Filler M	letal or Electrode Cla	ssification(s) (info onl	y): ER70S-6	E7018		
	Filler Metal or	Electrode F-Number(s): <u>F6</u>	F4	F6	F4
Filler Type (solid/n	netal or flux cored/po	wder) (GTAW or PAV	V):	N/A		N/A
	Consumable In	sert for GTAW or PA	W :	N/A		N/A
Deposit Thickness	for each process or	electrode type, etc. (ir	1.): <u>3.2mm</u>	15mm	3.5mm	30mm
Process/Electrode 1:	3 layers minim	num 🛛 Yes 🔲 No	Process/Electrode	2: 3 la	yers minimum 🛭	☑Yes ☐ No
	Welding Posi	ition (2G, 6G, 3F, etc.): <u>1G</u>	1G	1G	1G
	Vertical Progressi	on (Uphill or Downhill): Flat	Flat	Flat	Flat
Fuel Gas for OFW	or Inert Gas Backing for	or GTAW, PAW, GMAW	/: CO2/Argon		CO2/Argon	
Transfer Mode (spray/globular or pulse	to short circuit- GMAW): Short Circ.D.C.	D.C. Reverse	Short Circ. D.C.	D.C. Reverse
GTAW	Current Type/Polari	ty (AC, DCEP, DCEN):	N/A		N/A
		Res	ults			
Visual Examination of	of Fit-Up; Root Gap <u>: 4</u>	<u>4mm</u> Tack Wel	ds: <u>3 (Length</u> : 9	mm <u>Num</u>	<u>ber</u> : 3)	
Root Pass (Describe	Discontinuity if Unac	cceptable):				
Completed Weld (De	scribe defects if una	cceptable):				
Bend Test: ☑ Trans	verse Root and Face	[QW-462.3(a)]	ngitudinal Root an	d Face [QW-46	32.3(b)] 🔲 Side	e [QW-462.2]
☐ Pipe Bend Specime			☐ Plate Bend Spe			
☐ Macro Test for Fu	usion [QW-462.5(b)]	[☐ Macro Test for	Fusion [QW-4	62.5(e)]	
Type	Result	Туре	Result	Тур	e	Result
3 Face Bends	Pass/Acceptable			. , , ,		
3 Root Bends	Pass/Acceptable	lds by volumetric exar	mination to O\M_1	01)		
R.T. Results:			U.T. Results:			
•		on, nature and size of a		•		
	•		-			
Macro Test-Fusion:	or Defects	in				
Annearance-Fillet Siz	re (leg.):	K inch. C	onvexity:	inch or Cor	ncavity:	inch.
J. 10010.		Record Int				
Film or Charleson F	ualuatad bus Dala La			Com	nonus BIV Caa	Field Continue
Film or Specimens E			 	_ Com	pany. Rov Gas	Field Services
Welding supervised to Mechanical tests con				horatory test n	ο : N/Δ	
						tested in
-		rd are correct and tha				tested in
		ion IX of the ASME B				115
		asfield Services /				
Certified by:			e No. <u>E-00176</u>	•	e: <u>April 11,2014</u>	<u> </u>
P.Q. Card No. (Wher			_ Perrormance Te - Date Coupon is		-	014
TEST COUNTRALLS NO	· 8/I		LISTE L'ALINANIE	to be retained	10: May 11 7!	114

the pressure equipment safety author

Welder's Name: Jordar	•	ABSA F	ile No.: C19261	L	Stamp No.:	R
		ABSA File No.: C19261		 /.P. Reg. # WP		
Identification of WPS followed by welder during welding of test coupon: #115 W.P. Reg. # WP- 1312.2 Base material(s) welded: SA-106-B P1 Thickness: 14.02mm X Test Coupon Prod. Welco						
base material(s) welded.						
AA7 - 1 -12 -		g Conditions and	Quaimication Lii Actual \		Range G)ualified
Weldii	ng Variables (QW-3			values	S.M.A.W.	tuannea
T (14(-1-)		g Process(es) Used				
4 .	ling (i.e., Manual, Ser	mi-Automatic) Osed To P Number	•	P1	Manual P1 to	P1
	e Metal P Number:			LT	25mm and c	
	X Pipe (enter diam			None	With	None
•	(metal, weld metal, d		· · · · · · · · · · · · · · · · · · ·	5.1	VVICII	TVOIIC
	ectrode Specification			E7018		
Filler Meta	l or Electrode Classifi				E2	F4
		ctrode F-Number(s)		F4	F3	F4 N/A
Filler Type (solid/meta				N/A N/A		
		t for GTAW or PAW			2.64mm	N/A
Deposit Thickness for				12.7mm	-	Maximum_
Process/Electrode 1:	3 layers minimum		rocess/Electrode 2		yers minimum 🛚	
	_	(2G, 6G, 3F, etc.):			Fla	G
	/ertical Progression (Flat	Fla	
	Inert Gas Backing for G			N/A		N/A
	ay/globular or pulse to s			<u>N/A</u>		N/A
GTAW Cu	rrent Type/Polarity (A			N/A		<u>N/A</u>
		Resul				
Visual Examination of Fi	t-Up; Root Gap <u>: 3mr</u>	m Tack Welds	:: <u>3</u> (L	.ength: <u>9mm</u>	Number: <u>_ 3</u>)
Root Pass (Describe Dis	continuity if Unaccep	otable):	<u> </u>			
Completed Weld (Descri	be defects if unaccer	otable):			<u> </u>	
Bend Test: ☑ Transvers	e Root and Face [QV	V-462.3(a)] 🗌 Long	itudinal Root and	f Face [QW-46	62.3(b)] 🔲 Side	(QW-462.2)
☐ Pipe Bend Specimen, o	orrosion-resistant overlay	[QW-462.5(c)]	Plate Bend Speci	imen, corrosion-	resistant overlay [C	(W -4 62.5(d)
☐ Macro Test for Fusion			Macro Test for	Fusion [QW-46	62.5(e)]	
Type	Result	Туре	Result	Тур	e	Result
2 Face Bends P	ass/Acceptable	.,,,,,,				
2 Root Bends P	ass/Acceptable	hvalumatria avami	nation to OW 10	11)		
(For alternative qualification	tion of groove welds i	by volumetric exami	U.T. Results:	11)		
R.T. Results:						
Fillet Weld - Fracture Te						
Length and Per Cent of I	Defects:	inc	168			
Macro Test-Fusion: Appearance-Fillet Size (in also Car		inch or Cou	ncovity:	inch.
			ivexity	_ 111011. 01 001	ilcavity	111011.
Other Tests:						
		Record Info		_		
Film or Specimens Evalu	uated by: <u>Dale Lani</u> u	<u>uk</u>		Company: R	JV Gas Field S	<u>ervices</u>
Welding supervised by:						
Mechanical tests conduc			Lab			/A
We certify that the stater	nents in this record ອ	are correct and that	the test coupons	were prepare	d, welded and	tested in
accordance with the requ	uirements of Section	IX of the ASME Boi	ler and Pressure	Vessel Code		
ACCREDITED ORGANI	ZATION: RJV Gas Fig	eld Services A	DQP No.: <u>7040</u>	Expiry Date	e: <u>August 19,</u>	2015
Certified by:		Examiner File	No. <u>E-00176</u>	Dat	e: <u>June 12</u>	,2014
P.Q. Card No. (When iss	sued): RJV# 325		Performance Te	st Reference i	No.: <u>R</u>	
Test Coupon I.D. No.:	_		Date Coupon is t	to be retained	to: July 12	,2014



Welder's Name: Jason Mo	ore	ABSA	File No · W-29	041	Stamp No.:	. К
Identification of WPS follow					0tamp 140 /.P. Reg. # WP	
Base material(s) welded: _S					est Coupon	
base material(s) welded.					est Coupon _] 1 100. Weld
		sting Conditions and			J	0
Welding	Variables (QV			l Values	_	Qualified
		Iding Process(es) Use			S.M.A.W.	
		Semi-Automatic) Use		. D1	Manual P1 to	P1
	letal P Numbe				25mm and	
		diameter if pipe or tube				
		al, double-welded, etc		None	With	None
	•	tion(s) (SFA) (info only		5.1	-	
		ssification(s) (info only		E7018	-	E4
		Electrode F-Number(s		F4	F <u>3</u>	F4
Filler Type (solid/metal o				N/A		N/A
		sert for GTAW or PAV		N/A	2.64mm	N/A
Deposit Thickness for each	•			12.7mm		Maximum
Process/Electrode 1:	•		Process/Electrode		yers minimum 🛭	
	_	tion (2G, 6G, 3F, etc.)		1G Flat		. <u>G</u>
	-	on (Uphill or Downhill)			Fla	
Fuel Gas for OFW or Iner			-	N/A		N/A
•		to short circuit- GMAW)		N/A		N/A
GTAW Curre	nt Type/Polarii	ty (AC, DCEP, DCEN)		N/A		N/A
		Resu				
Visual Examination of Fit-U						<u></u>)
Root Pass (Describe Discor	_					
Completed Weld (Describe						
Bend Test: X Transverse F	≀oot and Face	[QW-462.3(a)]	gitudinal Root ar	nd Face [QW-46	2.3(b)] 🗌 Side	∋ [QW-462.2]
☐ Pipe Bend Specimen, corro	sion-resistant ove	erlay [QW-462.5(c)]] Plate Bend Spe	ecimen, corrosion-	resistant overlay [0	QW-462.5(d)]
☐ Macro Test for Fusion [C	≀W-462.5(b)]		Macro Test fo	r Fusion [QW-46	62.5(e)]	
Туре	Result	Type	Result	Тур	е	Result
2 Face Bends Pass,	/Acceptable		-			
2 Root Bends Passa (For alternative qualification	/Acceptable of groove wel	lds hv volumetric exan	nination to QW-1			
R.T. Results:	or groove we	do by voidiniou io oxaii	U.T. Results:	,		
Fillet Weld - Fracture Test (I	Describe locatic	n nature and size of any		of specimen):		
Length and Per Cent of Def				or opcomion,		
Macro Test-Fusion:						
Appearance-Fillet Size (leg.)·)	C inch. Co	nvexity:	inch, or Cor	ncavity:	inch.
Other Tests:						
0.1101 100101		Record Inf				
Film on One simone Fuelunts	ad hur Dala L			Company: B	N/ Coc Field C	on dees
Film or Specimens Evaluate		апіик		_ Company. <u>K</u>	JV Gas Fleid 5	ervices
Welding supervised by: Dal			La	phorotony toet n	o : N	/^
Mechanical tests conducted						
We certify that the statemen						testeu in
accordance with the require						2015
ACCREDITED ORGANIZAT	' <u>'</u>					
Cortinoa oy.			No. <u>E-00176</u>		e: <u>June 12</u>	ب <u>۲</u> 014
P.Q. Card No. (When issued		26	Performance Te		•	2014
Toot Coupon III No:	K		Date Coupon is	to be retained.	to July 17	.2014

the pressure equipment safety a		DER QUALIFICA	TION RECORD	(WQR)		AB-76A 2010-09
Welder's Name: Ch	•	ABSA	File No.: W-3022	7	Stamp N	o.:L
		luring welding of test c				VP- <u>1312.2</u>
Base material(s) wel			hickness: 14.02n	nm 🛛 Te	est Coupon	Prod. Weld
		sting Conditions and	Qualification Lim	its		
We	elding Variables (QV	-	Actual V		Rang S.M.A.W	e Qualified
Type of V		Semi-Automatic) Used			Manual	
	Base Metal P Numbe			P1	P1	to P1
		iameter if pipe or tube)			25mm an	d over
		al, double-welded, etc.)		Vone	With	None
		ion(s) (SFA) (info only)		5.1		
Filler M	etal or Electrode Clas	ssification(s) (info only)	: E6010	E7018		
	Filler Metal or	Electrode F-Number(s)	F3	F4	F3	F4
Filler Type (solid/n	netal or flux cored/por	wder) (GTAW or PAW)	:	N/A		N/A
	Consumable In	sert for GTAW or PAW	:	N/A		N/A
Deposit Thickness	for each process or e	electrode type, etc. (in.)	: <u>1.32mm</u>	12.7mm	2.64mm	Maximum
Process/Electrode 1:	3 layers minim	um 🛛 Yes 🗌 No 🕒	rocess/Electrode 2:	3 lay	ers minimun	n⊠ Yes ☐ No
	Welding Posit	ion (2G, 6G, 3F, etc.):		1G		1G
	Vertical Progression	on (Uphill or Downhill):		Flat		Flat
Fuel Gas for OFW	or Inert Gas Backing fo	or GTAW, PAW, GMAW:		N/A		N/A
Transfer Mode (spray/globular or pulse	to short circuit- GMAW):		N/A	.	N/A
GTAW	Current Type/Polarity	y (AC, DCEP, DCEN):		N/A		N/A
Root Pass (Describe Completed Weld (De	Discontinuity if Unactoribe defects if unac	Resul mm Tack Welds ceptable): ceptable): [QW-462.3(a)]	:: <u>3</u> (Le			
	n, corrosion-resistant over		Plate Bend Specim			
☐ Macro Test for Fu			Macro Test for Fu			
	Result	Туре	Result	Туре	· · · · · · · · · · · · · · · · · · ·	Result
Type 2 Face Bends	Pass/Acceptable	Турс	resuit	Турс		rtoodit
2 Root Bends	Pass/Acceptable	de le constant de la constant	motion to OMI 404)			
R.T. Results:	ication of groove wer	ds by volumetric exami	U.T. Results:			
	Tool /Danish India	n, nature and size of any				
				pecamen)		
Macro Test-Fusion:	or Defects.	incl	ies			
	e (lea). Y	inch. Cor	wavity:	inch or Con	- avitur	inch.
Other Tests:		mon. oor		india di Conc	oavity	
Film or Specimens Ev		Record Info	rmation	ompany DI	/ Con Field	Comicos
Welding supervised b		muk	C	ompany: <u>RJ\</u>	/ Gas Fleiu	Services
Mechanical tests cond			Labor	atory test no		N/A
		d are correct and that t		-	•	
		on IX of the ASME Boil	•		, welueu all	a tostou III
		Field Services AC			August 1	2015
Certified by:	NILATION.INV Gas					
P.Q. Card No. (When	issued): RJV# 327	Examiner File I		Date:		12,2014
•	1334647.	**************************************	Performance Test I			2 2014
Test Coupon I.D. No.:	L		Date Coupon is to l	de retained to); <u> July J</u>	.,,2014



the pressure equipment safety a	uthority					
Welder's Name: Dal	las Hoffman	AB\$A	File No.: W-2	7746	Stamp No	o.:T
Identification of WPS	followed by welder of	during welding of test of	coupon <u>:</u> #115	W	/.P. Reg. # W	/P- <u>1312.2</u>
Base material(s) welc	ded: SA-106-B	P1	Thickness: 14	.02mm 💢 T	est Coupon	Prod. Weld
	Te	sting Conditions and	l Qualification	Limits		
We	elding Variables (QV	•		al Values	Range	Qualified
		, Iding Process(es) Use	d: S.M.A.W.		S.M.A.W.	
Type of W		Semi-Automatic) Use			Manuai	
	Base Metal P Numbe			o P1		to P1
☐ Plate	☑ Pipe (enter o	diameter if pipe or tube	e): 73mm O.	D.	25mm and	dover
Back	ing (metal, weld met	al, double-welded, etc	.):	None	With	None
		tion(s) (SFA) (info only		5.1		
		ssification(s) (info only		E7018		
	Filler Metal or	Electrode F-Number(s	s): F3	F4	F3	F4
Filler Type (solid/n	netal or flux cored/po	wder) (GTAW or PAW	/):	N/A		N/A
7.	-	sert for GTAW or PAV		N/A		N/A
Deposit Thickness	for each process or e	electrode type, etc. (in	.): 1.32mm	12.7mm	2.64mm	Maximum
Process/Electrode 1:			Process/Electrod		yers minimum	X Yes No
	•	tion (2G, 6G, 3F, etc.)	•		[.	1G
	Vertical Progressi	on (Uphill or Downhill)		Flat	F	lat
Fuel Gas for OFW	or Inert Gas Backing for	or GTAW, PAW, GMAW	:	N/A		N/A
Transfer Mode (spray/globular or pulse	to short circuit- GMAW)	:	N/A		_N/A
GTAW	Current Type/Polarit	y (AC, DCEP, DCEN)	:	N/A		N/A
		Resu	ılts			
Visual Examination of	f Fit-Up; Root Gap: 3	3mm Tack Weld	ls: 3	(Length: 9mm	Number:_	3)
		ceptable):				,
Completed Weld (Des	•					
		[QW-462.3(a)]	gitudinal Root :	and Face IOW-46	i2.3(b)]. □ Si	de (OW-462 21
☐ Pipe Bend Specime			_	pecimen, corrosion-		
☐ Macro Test for Fu		* -	-	or Fusion [QW-46		[4.11 102.0(4)]
	. , , -					Dooult
Type 2 Face Bends	Result Pass/Acceptable	Туре	Result	Тур	e	Result
2 Root Bends	Pass/Acceptable					
	ication of groove wel	ds by volumetric exan				
R.T. Results:			U.T. Results:			
		n, nature and size of any		g of specimen):		
	of Defects:	ind	ches			
Macro Test-Fusion:_		(inch. Co				
				inch. or Cor	ncavity:	inch.
Other Tests:						
		Record Inf	ormation			
Film or Specimens Ev	/aluated by: <u>Dale La</u>	aniuk		Company: <u>R</u>	<u>IV Gas Field</u>	Services
Welding supervised b						
Mechanical tests con-	ducted by: <u>N/A</u>	<u></u>	[_aboratory test n	o.:	<u>N/A</u>
We certify that the sta	atements in this recor	rd are correct and that	the test coupo	ns were prepare	d, welded an	d tested in
		ion IX of the ASME Bo				
ACCREDITED ORGA	WIZATION: RJV Gas	Field Services A	OQP No.: <u>704</u> 0	Expiry Date	e: <u>August 19</u>	9,2015
Certified by:)	Examiner File	No. E-00176	Date	e: <u>June 1</u>	2,2014
P.Q. Card No. (When	issued): RIV# 3	28	Performance	Test Reference N	No.:T	·
Toet Coupon I D. No.				is to he retained		2 2014

H24H
the pressure equipment safety authority

the pressure equipment safety a						
Welder's Name: Jac	ob Regeir	ABSA	A File No.: C-198	386	Stamp N	o.:J
Identification of WPS	followed by welder of	during welding of test	coupon: #115	V	V.P. Reg. # V	VP- <u>131</u> 2.2
Base material(s) welc	ded: SA-106-B	P1	Thickness: 14.0	02mm 🛛 🗓 T	est Coupon	Prod. Weld
	Te	sting Conditions an	d Qualification	Limits		
We	elding Variables (QV	•		al Values	Range	e Qualified
•••	Welding Process(es) Used: S.M.A.W				S.M.A.W	
Type of V		Semi-Automatic) Use	•		Manual_	
	Base Metal P Numbe			o P1		to P1
☐ Plate		liameter if pipe or tub			25mm an	d over
_		al, double-welded, etc	•	None	With	None
	• .	tion(s) (SFA) (info onl		5.1	***************************************	
		ssification(s) (info onl		E7018	1	
		Electrode F-Number(F4	F3	F4
Filler Type (solid/n		wder) (GTAW or PAV		*		N/A
, ,	•	sert for GTAW or PA		N/A		N/A
Deposit Thickness		electrode type, etc. (ir		12.7mm	2.64mm	•
Process/Electrode 1:	*	um 🛛 Yes 🗌 No	Process/Electrode		vers minimum	ı⊠ Yes □ No
1 100000/Electrode 1.	-	tion (2G, 6G, 3F, etc.				1G
	_	on (Uphill or Downhill	•	Flat		Flat
Fuel Gas for OFW	-	or GTAW, PAW, GMAV	•	N/A		N/A
	· -	to short circuit- GMAW		N/A		N/A
		y (AC, DCEP, DCEN		N/A		N/A
	71	Res				
Visual Examination o	f Fit-Up: Root Gap: 3			Lenath: 9mm	Number:	3)
Root Pass (Describe						
Completed Weld (De	-					
Bend Test: X Trans			aditudinal Poot a	nd Face IOW 46	2 3/h)1	ide IOW-462 21
			☐ Plate Bend Spe			
☐ Pipe Bend Specime		*	☐ Plate Bellu Spe ☐ Macro Test fo			y [GVV-402.5(u)]
☐ Macro Test for Fu						
Type 2 Face Bends	Result Pass/Acceptable	Туре	Result	Тур	e	Result
2 Root Bends	Pass/Acceptable					
(For alternative qualif	ication of groove wel	ds by volumetric exa	mination to QW-1	191)		
R.T. Results:			U.T. Results:			
Fillet Weld - Fracture	Test (Describe location	n, nature and size of ar	ny crack or tearing	of specimen):		
Length and Per Cent	of Defects:	ir	ches			
Macro Test-Fusion:_		<u> </u>				
Macro Test-Fusion:_ Appearance-Fillet Siz	xe (leg.): >	< inch. C	onvexity:	inch. or Co	ncavity <u>:</u>	inch.
Other Tests:						
		Record In	formation			
Film or Specimens Ev	valuated by: Dale La	aniuk		Company:_R	JV Gas Field	Services
Welding supervised b					•	
Mechanical tests con				aboratory test n	o.:	N/A
We certify that the sta						
accordance with the						
ACCREDITED ORGA						9,2015
Certified by:			e No. E-00176	Dat		26,2014
P.Q. Card No. (When	RIV# 32	9	Performance T			
Toot Coupon LD, No.	133060)		_ Ferrormance i Data Coupon is			26 2014

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the pressure equipment safety authority	

Welder's Name: lan	Males	ABSA F	ile No.: W323	305	Stamp No.	:U		
		uring welding of test co			/.P. Reg. # WP- 1312.2			
Base material(s) weld			hickness: 14.0	D2mm 💢 Te	est Coupon [Prod. Weld		
	Tes	ting Conditions and	Qualification l	Limits				
We	lding Variables (QW	'-350)	Actual Values			Range Qualified		
	Weld	ling Process(es) Used:	S.M.A.W.		S.M.A.W.			
Type of W	/elding (i.e., Manual, S	Semi-Automatic) Used:	Manual		Manual			
В	Base Metal P Number	: To P Number:	P1 To	D P1	P1 to	<u>P1</u>		
☐ Plate	🛛 Pipe (enter di	ameter if pipe or tube):	73mm O.D		25mm and	<u>over</u>		
Backi	ng (metal, weld meta	l, double-welded, etc.):		None	With	None		
Filler Metal or	Electrode Specification	on(s) (SFA) (info only):	5.1	5.1				
Filler Me	etal or Electrode Clas	sification(s) (info only):	E6010	E7018				
	Filler Metal or E	Electrode F-Number(s):	F3	F4	F3	F4		
Filler Type (solid/m	ietal or flux cored/pov	vder) (GTAW or PAW):		N/A		N/A		
	Consumable Ins	ert for GTAW or PAW:		N/A		N/A		
Deposit Thickness t	ior each process or el	ectrode type, etc. (in.):	1.32mm	12.7mm	2.64mm_	<u>Maximum</u>		
Process/Electrode 1:	3 layers minimu	ım 🛛 Yes 🗌 No 💮 Pı	ocess/Electrode	e 2: 3 la	yers minimum 🛭	X Yes 🔲 No		
	Welding Positi	on (2G, 6G, 3F, etc.):		1G	1	LG		
	Vertical Progressio	n (Uphill or Downhill):		Flat	Fla	at		
Fuel Gas for OFW	or Inert Gas Backing for	r GTAW, PAW, GMAW:		N/A		N/A		
Transfer Mode (s	spray/globular or pulse t	o short circuit- GMAW):		N/A		N/A		
GTAW	Current Type/Polarity	(AC, DCEP, DCEN):		N/A		N/A		
		Result	ts					
Visual Examination of	i Fit-Up; Root Gap <u>: 3</u>	mm Tack Welds	:_3(Length: 9mm	Number: <u>3</u>	3)		
Root Pass (Describe	Discontinuity if Unacc	eptable):						
Completed Weld (Des	scribe defects if unacc	ceptable):						
,		QW-462.3(a)] 🔲 Longi	tudinal Root ar	nd Face [QW-46	2.3(b)] 🔲 Side	e [QW-462.2]		
☐ Pipe Bend Specime				ecimen, corrosion-r				
☐ Macro Test for Fus		•		r Fusion [QW-46				
Type	Result	Туре	Result	Туре		Result		
2 Face Bends	Pass/Acceptable	Турс	Roduit	Тур	,	- Troodit		
2 Root Bends	Pass/Acceptable			104)				
	cation of groove weld	ls by volumetric exami		191)				
R.T. Results:			U.T. Results:					
		, nature and size of any		of specimen):				
	of Defects:	inch	ies					
Macro Test-Fusion:					31	inala		
		inch. Con	vexity:	inch. or Con	cavity:	inch.		
Other Tests:								
		Record Info	mation					
Film or Specimens Ev	/aluated by: <u>Dale La</u>	niuk		Company: <u>_RJ</u>	<u>V Gas Field S</u>	ervices		
Welding supervised b	y. Dale Laniuk							
Mechanical tests cond	ducted by: N/A		La	aboratory test no	o.:N	<u>/A</u>		
We certify that the sta	tements in this record	d are correct and that t	he test coupon	is were prepared	d, welded and	tested in		
accordance with the re	equirements of Section	n IX of the ASME Boil	er and Pressur	re Vessel Code.				
ACCREDITED ORGA	NIZATION: RJV Gas	<u>Field Services</u> AC	QP No.: 7040	Expiry Date	: August 19,	2015		
Certified by:		Examiner File I	No. <u>E-0</u> 0176	Date	e: July 14,	2014		
P.Q. Card No. (When	issued): RJV# 33	<u>0</u>	Performance To	est Reference N	lo.: U			
Test Coupon I.D. No.:	D4==-0			s to be retained		t 16,2014		

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		DER QUALIFIC			·	AB-76A 2010-09
		DE AB	SA File No.:	1-69	43 Star	mp No.:
Identification of WPS						g. # WP- 1312.2
Base material(s) weld	•	P1	· · · · · · · · · · · · · · · · · · ·	11.07mm		ıpon ☐ Prod. Weld
base material(s) well	,			<u></u>	_ M Test Cot	ipon 🔟 Flod. Weld
10/0		ting Conditions a			_	Danna Occalistad
we	lding Variables (QW	ing Process(es) U		ctual Value		Range Qualified
Type of W	vveid elding (i.e., Manual, S	- ' '			SMAV	
Type of W	Base Metal P Numl	•		1	Manual P1 t	to P1
☐ Plate	Pipe (enter dia					and over
	ng (metal, weld metal	= *		None	With	None
	Electrode Specification			5.1	VVIUI	Notie
	etal or Electrode Class					
1 IIICI MIC		lectrode F-Numbe		E7018		Γ4
Filler Type (solid/m	etal or flux cored/pow			F4 N/A	F3	F4 N/A
r mer Type (sond/in	•	ert for GTAW or P				
Denocit Thickness f	or each process or ele			N/A	6 Amm	N/A
Process/Electrode 1:	•	*	. ,	7.9mm		15.8mm
Process/Electrode 1.	•	m ⊠ Yes □ No on (2G, 6G, 3F, et	Process/Elec		3 layers mir	nimum 🛛 Yes 🔲 No
	Vertical Progression			6G All		All
Fuel Gas for OFW o	or Inert Gas Backing for		•	N/A		All N/A
	oray/globular or pulse to			N/A N/A		N/A N/A
	Current Type/Polarity		· ·	N/A		N/A
OTAW	ourient Type/Tolanty	•	esults	INIM		N/A
Visual Examination of Root Pass (Describe I Completed Weld (Des Bend Test: ☑ Transve ☐ Pipe Bend Specimer ☐ Macro Test for Fus	Discontinuity if Unacco cribe defects if unacco erse Root and Face [0 n, corrosion-resistant overla	eptable): ceptable): QW-462.3(a)]	ongitudinal Ro	ot and Face	[QW-462.3(b)] orrosion-resistant	☐ Side [QW-462.2] overlay [QW-462.5(d)]
					[QW-462.5(e)]	
Type 2 Root Bends	Result Pass/Acceptable	Туре	Resul	τ	Туре	Result
2 Face Bends	Pass/Acceptable					
(For alternative qualifice R.T. Results: Fillet Weld - Fracture The Cent of Macro Test-Fusion:	Fest (Describe location	, nature and size of	U.T. Resu any crack or tea	ılts: aring of specii		
Appearance-Fillet Size	(lea.): X	inch	Convexity	inch	or Concavity	inch.
Other Tests:					. o. oooo <u>.</u>	
			nformation			
Film or Specimens Eva	aluated by: R IV			Comp	any: P IV Caef	ield Services
Welding supervised by	*				ally. <u>INDV Gasi</u>	ieid Sei vices
Mechanical tests cond					y test no.: N/A	
We certify that the stat accordance with the re ACCREDITED ORGAI	ements in this record quirements of Section	are correct and the IX of the ASME	nat the test cou Boiler and Pre	upons were personal	orepared, welde el Code.	ed and tested in
Certified by:	140	Examiner F	ile No. E-001		Date: NOV	and the second second
P.Q. Card No. (When i	ssued): RJV# 33			ce Test Refe		M
Test Coupon LD. No					tained to: DF1	C 1 4 2014

ABA the pressure equipment safety authority

Welder's Name: Trev	or McKain	ABSA File No.: <u>C-26252</u>				Stamp No.: W	
Identification of WPS	PP P CIAMOR N				W.P. Reg. # WP- 1312.2		
Base material(s) welded: SA-106-B and P1 Material Thickness: 14						-	Prod. Weld
		Testing Conditions a	and Qualifica	tion Limits	•		
We	lding Variable			Actual Values	1	Range	Qualified
		Welding Process(es) L			GMA		SMAW
Type of W	elding (i.e., Ma	nual, Semi-Automatic) U		Manual	Mani		Manual
Ba	ise Metal P Nui	mber: P1toP1 To P Nun	nber: SA-106	-B SA-106	-B P1	-	P1
☐ Plate	🛛 Pipe (e	nter diameter if pipe or to	ube): 73mm	73mm	25m	m & Over	25mm & Over
		metal, double-welded, e		Weld Me	tal N/A		Weld Metal
		cification(s) (SFA) (info o		5.18/5.1			
Filler Me	etal or Electrode	e Classification(s) (info c	nly): <u>ER70S-6</u>	E7018			
		al or Electrode F-Numbe	` ,	F4	F6		F4
Filler Type (solid/m	etal or flux core	d/powder) (GTAW or PA	\W):				
		le Insert for GTAW or P					
Deposit Thickness f	or each proces	s or electrode type, etc.	(in.): <u>2.6mm</u>	Maximum	2.6m	m_	Maximum
Process/Electrode 1:	-	minimum 🗌 Yes 🛛 No	Process/Elec	ctrode 2:	3 layers n	ninimum 🛭	Yes No
		Position (2G, 6G, 3F, et		6G	6G		6G
		ession (Uphill or Downh		Uphill	Uphil	<u> </u>	Uphill
		ing for GTAW, PAW, GMA			CO ²		
		oulse to short circuit- GMA		D.C. D.C. Reve	erse Short	Circ, D.C.	D.C. Reverse
GTAW	Current Type/P	olarity (AC, DCEP, DCE	N):				
			sults				
		ap <u>: 4mm </u>			<u>Number:</u> 3)	
		Jnacceptable):					
Completed Weld (Des	cribe defects if	unacceptable):					
Bend Test: ☑ Transve	erse Root and F	ace [QW-462.3(a)] 🛛 Lo	ongitudinal Ro	ot and Face [Q	W-462.3(b)]	☐ Side	[QW-462.2]
☐ Pipe Bend Specimen	, corrosion-resista	nt overlay [QW-462.5(c)]		Specimen, com			
☐ Macro Test for Fus	ion [QW-462.5(I)]	☐ Macro Te	st for Fusion [0	QW-462.5(e)]	
Туре	Result	Туре	Resul	t	Туре		Result
	Acceptable						
	Acceptable cation of groove	welds by volumetric exa	amination to C)\/\/ _~ 191)			
R.T. Results:	and. of groots	moldo by volumotho ext	U.T. Resu	•			
Fillet Weld - Fracture 1	est (Describe lo	cation, nature and size of			n).		
Length and Per Cent of	f Defects:		nches				
Macro Test-Fusion:					<u> </u>		
	(leg.):	X inch. (Convexity:	inch o	r Concavity		inch.
Other Teacher					Company	•	111011.
	• ***		formation				
Film or Specimens Eva	duated by: R.IV			Compan	v: BIV Gov	ofiold Com	viaca
Welding supervised by					y: <u>RJV Gas</u>	illeig Selv	vices
		Laniuk	<u> </u>	_ Laboratory te	et no :		
		ecord are correct and th				المسامعات	
accordance with the re	guirements of 9	ecold are correct and th	at the test cot	ipons were pre	pared, well	aed and to	ested in
accordance with the requirements of Section IX of the ASME Boiler and Pressure Vessel Code. ACCREDITED ORGANIZATION: RJV Sasfield Services AOQP No.: 7040 Expiry Date: August 12,2017							
Certified by		,					
	20110d): D 1\140	···	le No. <u>E-001</u>		Date: April		
P.Q. Card No. (When is				e Test Referer			
rest Coupon I.D. No.:_	VV		_ Date Coupo	on is to be retai	ned to: <i>_N</i>	lay 6,201	5