180461

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Vy	

1 Ma	anufactured and				ABSCO			BE, I	LC., 2410 I	NDUSTI	RIAL F	ROAD, SAP	ULPA,	OK 74066	
	anufactured for								(Name and add	1622 Of Midfini	action et)			400000	
_								(Na	me and address of AUROR	a di di da da j					
	cation of install	•							(Name and	address)		-	242 40	631-2	
4. Ty	pe:	(Ho	HOR riz , vert , c	r sphere			Tank	separalo	r, jkt. vessel, heat e	xh., etc.)			(Mfg's ser	ial No.)	
	N	/A			S12	-10631	-2-1			7646 (Nat'l Bd. 1				2013 (Year built)	
5. AS	SME Code, Sec	RN) tion VII	I, Div. 1	20	10 ED. 20)11a A	DD.		(Co		-		V	N/A rvice per UG-120(d)]	
	6-11 incl. to be				Edition and Ad	denda (date)]	d vesse	els, shell of hea	at exchang	ers, or o	,			
	nell (a) No. of			nigio wan	3	moto or j		(b) O	verall length (f	t & in.):		19'-8 5/8	"		
	Course(s)		1	Material	Th	ckness	T	Long. Joint (Ca	at. A)	Circ	um. Joint (Cat. A,	B, & C)	ent	
No.	Diameter, in.	Length	(ft & in.)	Spec./0	Grade or Type	Nom	Corr	Туре			Туре	Full, Spot, Non			Time
2	29" I.D.	-0"		A-516-70	3/8'	_	-	SPOT	0.85	1	SPOT	0.85		N/A N/A	
1	29" I.D.		5/8"		A-516-70	3/8'	_	+	SPOT	0.85	1	SPOT	0.85		N/A
1	16" I.D.		1 7/8"		A-516-70	3/8*			SPOT	0.85	1	SPOT	0.85		N/A
	Heads: (a) SA-516-70N (b) ECCENTRIC CONE														
/. ne	eaus. (a)		(Mat'l Spe		or Type) (H.T.	- Time & Te	mp.)			(Mat'l Spec	No , Grade or Typ	e) (H.T T	ime & Temp.)	
Location (Top, Thickness Radius Elliptical Conical Hemispherical Flat Side to Pressure Category A Rottom Ends) Min Corr Crown Knuckle Ratio Apex Angle Radius Diameter Convex Concave Type Full, Spot, None Eff.															T 54
	Bottom, Ends)		Corr.	Crown	Knuckle	Ratio	-	-	Radius	Diameter	Conv		Type	Full, Spot, None	1.00
(a)	END	5/16 3/8"	1/16"	NA NA	NA NA	2:1 NA	-	IO°	NA NA	NA NA	NA NA		S	NONE	1.00
(b)	END	-				140	1				NA.				
If remo	ovable, bolts us	ed (des	scribe of	ner fasten	ing)					Mal'I Spec. No.	, Grade, s				
8. Ty	ype of jacket _				NA				_ Jacket clo	sure		(Describe as o	NA gee & weld	bar, etc.)	
1f	bar, give dimen	sions						NA					If bol	ted, describe or	sketch.
	AWP 250		NA	ps	si at max. te	mp.	225		NA °F	Min. design	metal	temp20	°F	at 250	psi.
10 lm	finterna) Ever	Lexien	191) r. 1101-20 <i>(</i> f) ucs-66(a)(c) F	ia uc	s-66 G	(external)	(c) & ucs	-67	at test tempera	ature of	· NA	°F.
	-		iipe i o	[Indi	cate yes or no	and the cor	nponent	s) impact	iesteoj	-		N/			
	ydro. Test press					323			110011031						
	12 and 13 to be ubesheet:	CAL	E46 70	M	20	3/16"			1 7/8"			0.2500"		Bolted	
	- Is	tationary	(Mari Spe	E. No.)]	[Dia., In. (se	ubject to pro	ess)]		(Nom. thk., in.)		10	NA	(/	Altachment (welded or NA	boited)]
	-	Floating (NA Mat'l Spec	No.)]		ia., in.)			(Nom. thk., in.)		(0	Corr. Allow., in.)		(Attachment)	
13. T	ubes:	S	A-179			3/4"			065" MIN. 7			(Number)		"U"))]
Items	(Ma 14-18 incl. to be	e comp	No., Grade	inner cha			essels		The state of the s	(2.8	
	hell (a) No. o				1			(b) (Overall length (ft & in.):		0`-8 5/16	3"		
	Course(s)			Material	Th	ickness		Long. Joint (C	at. A)	Circ	cum. Joint (Cat. A		Heat Treatn	
No.	Diameter, in.	Lengti	h (ft & in.)		Grade or Typ		_				Туре	Full, Spot, No.	_		Time 1.00
1	16"	8	5/16"		SA-106-B	0.37	1/8	" S	SPOT	0.85	1	SPOT	0.8	5 1175	1.00
15. H	leads: (a)S	A-516	6-70N	H.T.@ 1	175 deg	F. for	1.00 H	ours	(b)		(Mal'l Spe	c. No., Grade or Ty		Time & Temp.)	
	T	Third	kness		dius	Elliptica		nical	Hemispherical	Flat	Si	de to Pressure	T	Category A	
	Location (Top, Bottom, Ends)	Min.	Corr.	Crown	Knuckle	Ratio				Diameter			Туре	Full, Spot, None	Eff.
(a)	END	5/16	1/8"	NA	NA	2:1		NA	NA	NA	N	A X	S	NONE	1.00
(b)															
If rem	ovable, bolts us	sed (de	scribe o	ther faster	ning)		(20)	3/4"[ia.SA-193E	7 Studs	WISA	194-2H He	avy H	ex Nuts	

16.	MAWP	330	N	A psi:	et max. te	emp	FORM 450		NA	°F Min. design n	netal temp.	-20 °Fat	330	psi.
17.	Impact test	(internal) NO,Ex	• • • • •	er ug-20(f).	ucs-66((a)(c }, Fi	a ucs-6	6 Gene	ral Note	(c) & ucs-67	at test tempe	erature of	NA	*F.
	,			Undical	e yes or no	and the com	ponent(s) in	ipaci lested	1			 AA		_
	Hydro. Test	•				429		— ⁻	roof test .		<u>L</u>	VA.		
19.	Nozzies, in	spection, a	no sarety	valve openir	igs.									,
	Ригрози			Diameter	Flange	Mate			hickness	Reinforcement		ttached	Location	
(1	nlet, Outlet, Di		No.	or Size	Type	Nozzie	Flange	Nom.	Corr,	Material	Nozzle	Flange	(Insp. Ope	n.,
	INLET/OUT		1/1	6"-150#		SA-106-B		0.4320"	1/16	NA	UW16.1	NONE,0.70	NA NA	
	OUTLE		1	6"-150#		SA-106-B			1/16	NA	UW16.1	NONE,0.70	NA NA	
	LEVEL		1	2"-150#		SA-105	SA-105		1/16	NA NA	UW16.1	NA NA	NA NA	
	LEVEL		1	2"-150#		SA-105	SA-105 NA	0.6250* 6000#	1/16	NA NA	UW16.1	NA NA	NA NA	
	DRAIN		1	1"-6000#	CPLG	SA-105			1/16	NA NA	UW16.1	NONE,0.70	NA NA	
	INLET		1	4"-300#	RF-WN	SA-106-B SA-106-B			1/8"	NA NA	UW16.1	NONE,0.70	NA NA	
-	OUTLE	1	1	4"-300#	RF-WN	SA-105-B	3A-103	0.4360	110	INA	01110.1	INCINE,U.FO		
								 				 		-
					 							 		
				11011				1		I	1	l		
20.	Supports: S		VO Li	ugs NONI	E_Legs	NONE (No.)	Other	s <u>(</u>	2)Sadd	Attached		Welded to		
21.	(List the na	er's Partial me of part,	Data Re		name and	ed and sign I identifyin	ig numbe	er)		ectors have been f	urnished for t	•	-	port:
	ECCENT	RIC CO	NE, ITE	M #6, J &	M WE	DING,	LLC., S	N: 931	86.1					
	CHANNE	L, ITEM	#14, J	& M WEL	DING, I	LLC., SI	N: 9327	3.2						
22.				n Amine/R					ITE	M NO.: G8-10	05			
	STRAIG	HT TUBE	LENG	TH 22'-0"	:= :									
Į.	Ve certify the SME Code of Certificate of Certifica	for Pressur	re Cessel	s, Section VI	II, Divisio 30,112	and that and 1.	all details	of designations of designation	Decemi	IANCE al, construction, ar ber 30 ,20 1 Signed		nip of this vesse	ei conform to	the
	-01_	11/				(Marufac		OF CUO	Mente	TON	(8	(epresentativo)	7	
o h s c	of Okla ave inspected tate that, to Division 1. Balescribed in	homa ed the pres the best o y signing t this Manuf	and emplisure ves of my known his certificaturer's acturer's ass of any	ployed by sel described wledge and licate neither	One in this Modellef, the Inspector Furthern or	y the Natice CIS INSTANTANTAL INSTANTANTAL INSTANTANTAL INSTANTAL INSTANTANTAL INSTANTANTANTAL INSTANTANTANTANTANTANTANTANTANTANTANTANTANT	SURAN BURAN er's Data cturer has his employer the Ir with this	rd of Boild ICE CO Report of s constru- oyer makenspectory	cted this ies any wo	pressure vessel insport of pressure vessel in pressure vessel in pressure vessel in pressection of the pressure vessel in press	accordance for implied,	with ASME Co concerning the anner for any p	de, Section pressure ve	essel
ļ	$\overline{7}$	7'				uthonzed ins		ID ASSE	MRIYC	OMPLIANCE	BOATO RICL ERIOG	rsements, State, Pic	VII.CO, 2212 (40.)	
r	Ve certify the equirements J Certificate	of ASME	Code, Se	ction VIII, Di	re correc	t and that	field ass ite of Aut	embly co	nstruction	of all parts of this	vessel confo	ms with the		
ι	Date		Nar	ne		(Assert				Signed		Representative)		
i i	of	t parts refe me and to ode, Secti	and emperred to a the best on VIII, E	oloyed by , has data items of my knowled Division 1. The	issued base compedge and describer nor his	RTIFICATI y the National pared the substitution the Salar Sa	E OF FIE onal Boa statemen Manufa was insp makes a	rd of Boil ts in this cturer ha	er and Promote Manufact sconstruct d subjectionty, expre	NSPECTION essure Vessel Inspurer's Data Report , not included in the cted and assemble ed to hydrostatic teessed or implied, co	with the description of this pressurest of oncerning the	r the State or P cribed pressure of shop inspect re vessel in acc	vessel ion, have be cordance pel described	si. I in
l t	his Manufac	turer's Dat	a Report	. Furthermoresing from or o	e, neithe	r the Inspe	ector nor	his emp	loyer sha	Il be liable in any	manner for a	ny personal inj	ury or prope	rty

Commissions

(Nat'l Board incl. endorsements, State, Province, and No.)

Signed

(Authorized inspector)

Date

FORM U-2 MANUFACTURER'S PARTIAL DATA REPORT

A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

	AS IXCQUI	i cu b	y the	1071	210112 01	i the r	CHILLI	Junet a	1142 X X	essure vi	wst.	Cou	C ANGL	3,000	041 12	12, 1	71113101	
1. M	anufacture	ed and	certifie	d by			1&L	1 Weldin		7862 Sout				Tulsa, O	K 741	31		
2. M	anufacture	ed for	_				<u> </u>	Fabsco,		O. Box 988	3, Sag	oulpa,						
3. La	ocation of i	nstalla	ation							`"unkr	nown		ir Purcia:					
4. T	ype:						ANGER			ame and addr			3273.1		_			
		Ĺ	Descriptio		ssel part (si 10631-2-1		piece head	l, tube bun	dle)]	FABSCO, L	ıc	(Mfg	s șerial N	0.)		2012	CRN)	
()	Vational Board	f numbe	r)	312.		ig numbe	er)	- —	(5	rawing prepar)			(Y	ear bu		
5. AS	ME Code S	Section	VIII C	iv 1	(Edition a	010/20	11A ida (date)]			(Code Case n	umber	1		fSoe	cial Serv	ice pe	r UG-120(d	m
Items	6-11 incl. i	to be c	omplete	d for s						els, shell of		-	ngers, c	• •		•	•	
	ell (a) Nu		_	-	_		-			all Length					23′-3″			
Course(s) Material Thickness Long Joint (Cat A) Circum. Joint (Cat A, B, & C) Heat Treatmer No. Diameter Length Spec,/Grade or Type Nom. Corr. Type Full, Spot, None Eff. Type Full, Spot, None Eff. Temp. Tim																		
No.	Diameter		ength		c./Grade or		Nom. 3/8"	COIT.		Full, Spot, 1		en. N/A				N/A	Temp. N/A	Time N/A
2	29" 29"		<u>8'</u> 3 5/8"		A-516GF SA516GR		3/8"	N/A N/A	1	SPOT		N/A N/A		SPC SPC		NA NA		N/A
	25 3 5 3/5 3/5 3/52510.0 9/5 11/1.																	
7. He	7. Heads: (a) SA516GR70N (b) N/A																	
(Material spec. number, grade or type) (H.T. – time & temp) (Material spec. number, grade or type) (H.T. – time & temp)																		
<u> </u>	Bottom, 1		Thick			Radius		cal Con Apex	ical Angle	Hemispherical Radius	Fla Dlam			Pressure I_		Category A Type Full, Spot, None		
			Corr.	Crown	Knuckle	2:1			N/A	N/A		Convex	Concave N/A	Type 1		SPOT	e Eff N/A	
(b)		,	5/16"	N/A		 	 -2:1	N/		19/7	147			1775	-		<u> </u>	11/1
If res	novable, b	olts us	sed (de	scribe	other fa	stenina	s)		-									
	-		•			-		,	Tacko	(Materia t closure	l spec.	numb	er, grade,	size, numi	ber)			
	pe of jacke								_Jacke	C Clustre	_		(Desc	ribe as oge	e & wel	d bar,	etc.)	
If	bar, give	dimen	sions				<u>_</u>							If	bolted	i, des	cribe or	sketch
9. M	AWP				_ at m	ax tem	p				Min.	desig	n metal	temp.		_at		psi
40 T		nternal) -	(E	xternal	7		(1	internal)	(Ex	ternal)	- tect	· tem	nerati ira	e of				
10. 1	mpact Tes	·		[Indica	ite yes or n	o and the	e compone	nt(s) Impa	t tested	· ·	<u> </u>	. ապ				•		
11. F	łydro., pne	eu., or	comb.	test p	ress			Pn	oof Te	st							. <u> </u>	
Items	s 12 and 13	to be c	complet	ed for .	tube secti	ons.												
12.7	Tubesheet													<u></u>			#	halladii
		(Sta	tionary (m	aterial sp	ec. no.)]	(Dian	neter, (subje	ect to pressu	re)] 	(Nominal thick	ness)		(Corr. All	(JW,)			t (welded or	ocueoil
12 7	Tubes	Ficati	ng (mater	al spec.	10.)]		(Diamete	3)	T	Nominal thickne	<u>ss)</u>		Corr, Allov -	r.)	,	. (At	tachment)	
		•	I spec. na.	-	** *		(0.0.)		•	ominal thickness	•	-	(Rumb	er)		[Туре	(straight or	ບ)]
Item	s 14-18 incl	. To be	comple	eted fo	r inner cl	hamber	of jacke			cannels of li	eat es	cchan	gers.				, 1	
14. 5	Sheli (a) N		ourse(s):) Over	all length:								
No.	Cour Diameter		ength	Soe	Material c./Grade or	Type	Thick Nom.	ness Corr.	Type	Long. Joint (C Full, Spot, N		Eff.	Circum. Type	Joint (Cat. Full, Spot			Heat Treat Temp.	atment Time
			.,,.,,															
		 		-									 	<u> </u>		\square		-
H		-		1-									 	<u> </u>				
									·	• •		1.00	·.	·		••••		

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FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1.	. Manufactu	red ar	ıd certi	fied by	,		J&M	Weldin	g, LL(62 South				sa, Oklah	oma 7	4131			
2.	Manufactur	ed for	_			<u>.</u> E	ABSCO S	hell and		e, <u>2</u> 4		strial	Road		pa, OK	74066				
3.	Location of	instal	ation	_					men)		"Unk	nowi								
4.	Type:						ded Cons			_	ne and add			3186.1		*****				
			[Descr	iption of	vessel part	(shell, tw 631-2W		id, tube bi			o Shell ar	•		er's serla	i number)		2012	(CRN)	ı	
_	(National Bo			——	(Drawl	ig numbe	x)				ving prepar					Ç	rear bu			
	ASME Code :			_		-	nda (date)	~	~~~~		ode Case n)			ecial Ser		er UG-12	D(d)]	
6.	Shell (a) No	of Cose(s)	ourse (s): _	Materia	1	Thick		(D) (J		l Length ng. Joint (C			Circum.	loint (Cat. A	11-7/8		Heat	reatn	nent
No.	Dlameter	<u> </u>	Length		Spec./Grad	eor	Nom.	Corr.	Туре				Eff.	Туре	Full, Spot, None		Eff'	Temp.	1	Time
1	1'3-1/4" ID × 2'5" ID	1	11-7/8	ns .	SA 516		3/8"	0	1		Spot		85	-	-		-	-		-
7. Heads: (a) N/A (b) N/A (Material spec. number, grade or type) (H.T. – time & temp) (Material spec. number, grade or type) (H.T. – time & temp)																				
Location (Top, Thickness Radius Elliptical Conical Hemispherical Flat Side to Pressure Category A																				
Bottom, Ends) Min. Corr. Crown Knuckle Ratio Apex Angle Radius Diameter Convex Concave Type Full, Spot, None												Eff								
(a)																				
	If removable, bolts used (describe other fastenings) N/A (Material spec. number, grade, size, number)																			
8.	8. MAWP at max temp Min. design metal temp at																			
9.	(Internal) (External) (Internal) (External) 9. Impact Test NO. EXEMPT UG-20(f), UCS-66. at test temperature of Indicate yes or no and the component(s) impact tested																			
10	Hydro., pne	ı or	comb.	Indicat test no	e yes or no	and the c	component(:	s) Impact i	tested Proof	Test	•									
11.	Nozzles, ins	ectio	n, and	safety	valve ope	nings:					***	. 22.1-1		Dalafa		Laur	Attach	ad I	lec	ation 1
	Purpo (Inlet, Outlet,		etc)	No		ieter Size	Flange Type	Nozzie Nozzie	terial Fl	ange	Nom.	e Thici	orr.		rcement terial	Nozzie				Open.)
	N/A	1		-	_ _	-			+		 	+		-						
12.	Identificatio		arts	Ounch		e No.	Mfr's Iden	tiflestion 1	io I		Mfr's Drawli	20.00		CR	ns Li	National 1	Roand	No. I	Year	Built
	Name of I N/A	art		Quant	LY LII	c 110.	Pill 3 loca	UNDECONT.	<u>,,,,</u>		- III 3 DIGINI									
13	Supports: Si	cirt		NO	Lug	15		1	egs			Oth	ers	·		Attach	ed			1
	• •		(Ye	s or No)		,	(Number	<u> </u>	_		imber) k M Weld	ina i	ווכ	(Desc	ribe)			(When	e and	how)
14.	Remarks					WPS (QUALIFIE							s.						
					C	שודיםי	ICATE	OF SI	JOP.	ÆT E	ገ.D.CC	MP	TJAN	ICE						
													•		••	t F.	· •			,
	We certify the vessel part c	est the	statements	ents ma	ide in this: BOILER A	report a ND PRE	re correct : SSURE VE	and that SSELC(all det DDE, S	iails c Sectio	n VIII, D	I, con ivisio	structe n 1.	on and v	vorkmansi	nip ot tr	ııs pre	ssure		
	U Certificate					41,929		xpires				8/20			#		//			_
	Date 10/2	4/ <u>12</u>		Name		Jē	k M Weld	ing, LL(acturer)	<u> </u>		Sig	ned				(Keprese	ntative			
					C	ERTI	FICAT	E OF S	HOI	?/FI	ELD IN	SPI	CTI	ON						
ļ	I, the unders	igned, LAH(d commiss d employe		ed by the One	National Beacon A	Board	d of E a Insu	Boiler and rance Com	Press pany	sure Vi	ssel Ins	pectors ar	nd/or the Lyn	e Stati m, Ma	e or Pro	vince	:
	have inspect	ed the	pressu	re vess	el part des	cribed in	this Mar	ufacture	r's Da	ta Re	port on	·	10/2	4/12						
	and state tha	RAN	DPRES	SURE	PESSEL CO	DE. Sec	ction VIII.	Division	n 1. B	y sie	ning this	certifi	icate n	ither th	e Inspecto	r nor hi	s/her	employ	сг	
	makes any v	/arran	lv ernn	essed a	r implied.	concern	ing the or	essure vo	essel p	art de	scribed in	n this	Manu	facturer'	s Data Re	port. F	urthei	more, r	eithe	ır
	connected w						,	\mathcal{O}	-J p-11		·9. ·9		• -			•		-		
	Date /	ويراد	Iliz	Sign	ed ///	Wh	ally	P-601)	0		Cor	nmiss	ions	_ALE	39265	4		_		
	ظبلبيم					(Auth	orized Insp	ector) /				[Nat	ional Bo	and (incl.	endorseme	nts) State	e, Prov	ince and	numb	er]

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FORM U-2 MANUFACTURER'S PARTIAL DATA REPORT

A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

_														,		****	D1110101	<u> </u>
1.	Manufactu	red and	d certifie	d by	-		J&I	M Weldi	ng, LL(C 7862 Sou	th Rec	gency	Drive,	Tulsa, O	K 741	31		
2.	Manufactu	red for						Fabsco	LLCP	Name and add	8, Sap	oulpa,	OK 74					
3.	Location of	install	ation			· · · · · · · · · · · · · · · · · · ·	"			"unk	nown		f Purcha	ser)			_	
4.	Туре: _					CHAN	NEL		(1	Name and add	ress)	9	3273.2	2			<u> </u>	
	(National Boa				10631-2-1	L REV 2		d, tube bu		FABSCO, 1		(Mfg's	serial N		_	2012		
	SME Code			iv 1	2	ng numb 2010/2	011A			Drawing prepa						ear bu		
Iter	ns 6-11 incl	to be c	completed	i for s	-		nda (date) Is, jackets	_	ted ves	(Code Case r sels, shell of		•	ngers, o			•	er UG-120(chamber	
6. 5	iheli (a) Ni	umber	of cours	e (s):				(b) Ove	erall Length	: .							
No.		rse(s)	ength	Soe	Material c./Grade o		Thic Nom.	kness Corr.	Long. Joint (Joint (Cat. Full, Spot			Heat Tre	Time
	<u>.</u>	-	*	+					+				<u> </u>			 		<u> </u>
		1		<u> </u>											*			
7. I	leads: (a)								(b)	_								
	Location		1				(H.T. – tin					spec. no		rade or typ	e) (H.T.			
	Bottom		Thickn			dius Knucki	Ellipti Ratio		nica! : Angie	Hemispherical Radius	Diameter -		Side to Pressure Convex Concave		Category A			-
(ē	1)		Min.	Corr.	Crown	Knucki	e	<u> </u>		-	 	 -	Convex	Concave	Туре	Full, Spot, None		ie Eff
(t							<u> </u>											
If r	emovable,	bolts u	sed (des	cribe	other fa	stening	gs)		·····					· · · · · · · · · · · · · · · · · · ·				
8.T	ype of jack	et							_Jacke	Matena) et closure	ı spec.	numbe		, size, numi				
	If bar, give	dimen	sions										(Desc	ribe as oge If			etc.) scribe or	sketch
		(Internal		ternal		ax tem	•	Internal)	(E	xtemal)				I temp.		•		
10.	Impact Te	ST		[Indica	ite yes or r	no and th	е сотроле	nt(s) Impa	ct teste	d]	: test	temp	eratur	e of				•
11.	Hydro., pr	eu., or							roof Te									
	ns 12 and 1.	-		-	-									*				
12.	Tubesheet		ationary (ma	terlal sp	ec. no.)]	[Dla:	neter, (subj	ect to press	rre)]	(Nominal thick	ness)		(Corr. A	low,)	(Alt	achme	nt (welded o	r bolted)]
13.	Tubes	Float	ting (materia –	l spec. 1	10.)]		(Diamet	er)		(Nominal thickne	ss)	(Corr. Allow	Y.)		·(A	ttachment)	
	***	•	al spec. no.,				(O.D.)		•	lominal thickness	•		(Numb	er)		[Туре	(straight or	U)]
					r inner ci		s of jacke			hannels of h	eat ex	chang	ers.			•		
14.	Shell (a)	No. of	course(s)፡ <u></u>	Material	1	Thiel	ness (l) Ove	rall length: Long. Joint (C	'at Al		F1p	Joint (Cat	17-3		Uast T-	atmost.
No.	Diameter	l	ength		c./Grade o	г Туре	Nom.	Corr.	Туре	Full, Spot, 1	None	Eff.	Type	Joint (Cat. Full, Spot		Eff	Heat Tre Temp.	Time
1	16"	8	5/16"	5	A516GR	70	3/8"	N/A	SMSL	NONE		N/A	1	SPC	T			-
		<u> </u>													·			-
		\neg		$\overline{}$					1	<u> </u>			i	T			$\overline{}$	

Form U-2 (Back)

15. H	eads: (a) <u>s</u>						(b))								
		(Material s	pec. numb	per, grade	or type)	(H.T. – time	& temp)	·	(Mat	terial spec	. number,	grade or ty	pe) (H.T.	– time & te	mp)	
	Location (Top	, Thic	kness	Ra	dius	Elliptical	Conical	Hemisphe	erical	Flat	Side to	Pressure		Category	/ A	
	Bottom, Ends) Min.	Corr.	Crown	Knuckle	Ratio	Apex Angle	≥ Radiu	s	Diameter	Convex	Concave	Туре	Full, Spot,	None	Eff
(a)	END	5/16"	N/A			2:1					X	1	1	SPO	T	\top
(b)			\top													\top
If rem	ovable, bolt	s used (describe	other fa	 ≥stenin¢	 js)										******
	41470	*				_		(1				size, numbe				
16. M	AWP	mal) psi	(Evtorna	atm	ax tem		ternal)	(External)	tal	un, desi	gn meta	I temp		.ac		_ psi
17. In	anact test	illar)	(Execute	",		/211	cerisa)	(LACCINELY		at tes	t temper	ature of				
	npact test _		[Indic:	ate yes or i	no and th	e component	t(s) impact tes	sted]								
10. III	Anion buca.	, 01 001111	u. awat p	"cos			Proof	Test								
<u>19. N</u>	ozzles, inspe		ıd safety			s:		r			· 1					
(1)	Purpose niet, Outlet, Dra	ain etc\	No.		eter or	Flange Type	Mater Nozzle	flange	No: No:	zzie Thick	Corr Re	einforceme Materia!	Nozzk	Attached e Flangi	Loc	cation . Open
(1		MI, EUJ			i i								1	1 7215		<u></u>
	INLET		2	4"-	150#	RFWN	SA-106B	SA105	SCH	ХН	N/A	N/A	UW16.1	l(a) 1(a)		
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			╬	-						_					┿	
70 TJ		of Borbon	<u> </u>										<u> </u>			
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21. St	.pports: Skir	t	NO	Lug	js	YES	Legs			Others			Attach		LD/SI	
		_				(No.)	CT TECTIA	(No		D HC-2		albe)		(Whi	ere and	( how)
ZZ. K	emarks					IMPA	CT TESTIN	IG EXEMP	1 PL	K UG-21	<i>J</i> (F)					
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