1. Manufactured and certified byThe	DUPPS Compo	ny, 54	8 N.	Cherry S	St., Germanto			27					
2. Schured for Arus-Andritz	, 1010 Comme	ercial Bl	lvd. S	S., Arling	•	17						-	
3. Location of installation Stone-Cor	isolidated Corp	., Div. I	Laure	entide <u>.</u> Gr	rand Mere, Q		Canad	<u>a_G91</u>	5L2				
4. Type: Horizontal (Hariz., vert., or sphere)	Rotating (Tank, seperato	Screw F	Press el, heat	Shaft exh., etc.)			9063.6 (CRN)	SEE	ITEM Orawing No.	22.3	2184 (Not'l. Bd. No.	1995 (Year bui	
5. ASME Code, Section VIII. Div.1	Edition and Addenda	(date)			Code Cas	e No.		_	Special	Service p	er UG-120(d)		
items 6-11 incl. to be completed for sin	gle wall vessels, jeek	de el jech	oled	****	- Look anahangara			u eksa					
6. Shell (a) No. of course(s);	5			(b) (Overall length (ft å	(in.):			25 ft.	6-1/2	2 in		
Course(s)	Material	_	kness	L	ong Joint (Cat. A)		Circu	m, Joint	(Cat. A, B	& C)	Heat Tr	ealment	
No. Diameter, in. Length (It & in.)			Corr.	Туре	Full, Spot, None	Elf.	Туре		Spot, None	Elt.	Temp.	Time	
1 25-5/16 l.D. 3 ft 8-1/2 i 5 19-1/4 l.D. 4 ft 0-3/4 ir			_	1	None	70% 70%	2	-	one one	65%	SEE ITE		
(Continued, See Remarks,					NONE	70%		_			SEE ITE	_M _I	
7. Heods: (a) SA-105 (Drive E					(b) SA-		eed En						
(Mat'l. Spec. No., Grad	e or Type) H.T Tin	ne & Temp							H.T Tin	ne & Ter	пр		
(Mat'l. Spec. No., Grade or Type) H.T Time & Temp (Mat'l. Spec. No., Grade or Type) H.T Time & Temp Location (Tap. Thickness Radius Elliptical Conical Herrispherical Rat Side to Pressure Category A Rottom Ends No. Consultation of the Control of the Con													
Location (Tap. Thickness Radius Elliptical Conical Hemispherical Flat Side to Pressure Category A Bottom, Ends) Min. Corr. Crawn Knuckle Ratio Apex Angle Radius Diameter Canvex Concave Type Full, Spot, None Elf.													
(a) End 2.99 ——						25-5					<u>miess</u>	85%	
(b) End 3.44						19-	1/4"			Sec	<u>miess</u>	85%	
If removable, boils used (describe other f	astening)				(Mat'l. S	pec. No.,	Grade, size	. No.)					
8 The of jacket					Jacket Closure	·		1		_			
Miles after afternation								(descri	be as ogee				
9. MAWP 100 N/A (internal) (external)	psi at max. tem	p. (îr	340 nternal)		N/A °F.	Min. de	sign meto	temp.	35	"F.	ot 100	psi.	
10. Impact test	Nor				opt per UCS-			JHA-5	51(A)				
At theter was a such feet and	17	0			ne componeni(s) in		⊵d)						
11. Hydro, pneu., or camb. test press items 12 and 13 to be completed for tub				Proof (es	t								
12. Tubesheet:												<u> </u>	
Stationary (Mot'l Sp	ec. No.) Di	z., in. (sub	ject to	oress.)	Nom, the, in		Corr. All	ow., in.		Attach	ment (welded o	r bolled)	
Flooling (Moll, Spec. No.)	Oia., in.				., in.			in,			Attachment		
13. Tubes: Mat'l Spec. No., Grade or Ty		in			, in, or gauge					Type (S	itraight or U)		
Items 14-18 incl. to be completed for inc					• •			-		.,,,,,,			
14. Shell (a) No. of course(s):	,				-	k in.):							
Course(s)	Victorial	Thick	ness		ing Joint (CaL A)		Ciecus	n loigt	(Cot. A. B	& C)	Heat Tre		
No. Diameter, in. Length (ft & in.)		_			Full, Spot, None	Ell.	Туре	_	pat, None	EII.	Temp.	Time	
		_											
15. Heads: (a) (Mat'L Spec. No., Grade	or Type) H.T. – Tim	e & Temp			(b)(Mat')	. Spec. No	Grade	or Type)	H.T. – Tim	e & Tem			
Location (Top. Thickness	Radius	Dliptic	cai	Conical	Hemispherical	Flo	t S	ide to P	ressure	_	Cotego	ory A	
Bollom, Ends) Min. Corr.				Apex Angle		Diame	` 	nvex	Concave	Type	Full, Spot, No	ne E11.	
(a)								-]			
(b)							- [-						
If removable, boils used (describe other to	istening)							 	<u>.</u>				

(Mat'l. Spec. No., Grade, size, No.)

16. MAWP(internal)	(external)	psi at max. ter	mp. ——— (inter	rnal)	(external)	°F. N	Min. design metal temp	<u></u>	- 'F. ot	ps
17. Impact test									_	
			(Indicate yes	•	d the compone	nt(s) impact	t lested)			
18. Hydro., pneu., or co				Proof	test		-	 -		
19. Nozzles, inspection,		*	,							- T
Purpose (Inlet, Outlet, Drain, etc.)	No. Diameter	Flange	Materii Nazzie		Nozzle Th		Reinforcement Material	How Att	Т	Location
Steam Inlet	1 3-1/2" NPTR	Туре —	SA-106-B	Flange	5/8" -	Corr.	Inherent	Nozzie - Wid	· Flange	(Insp. Open.) Head 7(b)
Steam Outlet	1 1-1/2" NPTE	•	SA-105	· <u>-</u> _	3MCPLG			Thrd		Thru Head 7(
Safety Valve	1 1-1/4"									Outside Pipir
20. Supports: Skirt —	No Lugs	Legs		Others	Rol	ler Beari	ings Attached	End Jou	rnals, Ite	ms $7(a)/7(8)$
· -··- (Yes	•	•	(No.)	-		(Describe)			(Where and	Haw)
21. Manufacturer's Partic	al Dota Reports properly part, item number, migʻ:	identified and	signed by Commentifying number				hed for the following item			والمريحة
	. •			· .	3974-3 (o. 3: S/N 6397A-			S/N 63074-
	e No. 5: S/N 5								- 110.	3/11 033/A
22. Remarks: 22,1)		700171 107	q. 0) ,		506.	4 6/19/1/0	ioting outriperry:			
22.1.1) No.2, 2 ft	1.55 in to 1 ft 11	1.50 in 1.0.,	5 ft 4.75 in	ı lg, SA-	240-316L,	7/8" Norr	n, ** in. CA, 1, Non	e, 70%, 2,	None, 65%	K. See Item 2
							. CA, 1, None, 70%, 2			
						1/2" Nom	ı, ** in. CA, 1, None	<u>2, 70%, 2, </u>	None, 65%	4, See Item 2
	all Thk375 in.			ns Item	b.		•			
	<u>per Drawing No</u> y Weldment per			18_1						
	nining per Drawir			О т.						
				others:	.27 Sq. I	n. Min.	Orifice Area (@ 1	500 lbs/	hr Max S	Steam)
22.6) DUPPS 36	24B Press Shaft		,		,		1	,		
			CERTIFIC	ATE OF	SHOP	COMPLL	ANCE			
We certify that the	statements made in	this report of					ial, construction, and w	orkmanship (of Unis Vess	el conform to
the ASME Code for	Pressure Vessels, Se	ection VIII, Divi	sion 1.				,		6	
U Certificate of Aut	thorization No. 2,73	33			Expires _	Decembe	er 28 /		_X 19 <u>9</u>	5
7/7/0		0.1000					4 ($\mathcal{M} \mathcal{V}$	/	
Date	Nome The	DUPPS Co			<u> </u>	9	Signed	John f	. Simmo	100
			•	nutacturer	•		(Representative	9) 00/181 1	. 31111110	1115
	E. (18				F SHOP			L - 61-1-	0	OHIO
and employed by	The Hartford Ste	nission issued eam Boiler	by the Notion	and In	ot Boiler and Isurance C	O.	Vessel Inspectors and t of _Hartford	ne State or I, Connect	Province or Licut	have inspected
the pressure vessel	described in this Mo	nufacturer's (Data Report on	، <u>۵</u> -	28 , 19 C	35	and state that, to the	best of my	knowledge	and belief, the
Manufacturer has a	constructed this press	ure vessel in	accordance wit	th ASME (Code, Section	VIII, Divisio	n 1. By signing this Manufacturer's Data R	certificate ne	ither the Ins	spector nor his
nor his employer s	hall be liable in any	manner for a	ny personal in	jury or pr	operty damag	e or a los:	s of any kind arising f	orm or conn	ected with	inspection.
	_	100.	0				1172 mm (A	n.,1 ⁻		
Date	Signed	XION	Authorized Inspe			Commissio	ons NBKACHA:			
) (A	wthorized Inspe	ector)			(Nat'l. Board incl.	endorsement	t, State, Pro	ovince and No.)
		CERT	IFICATE C	F FIEL	D ASSEM	IBLY CO	OMPLIANCE			
We certify that the Code, Section VIII,		this report a	re correct and	that the	field assemb	y construc	tion of this vessel con	orms with th	ne requireme	ents of ASME
U Certificate of Aut	thorization No			<u>.</u>	Expires _				_ , 19	
0.4	N						د ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ			
Ugte	Nome		(Ass	sembler)		:	Signed (Representative	<u> </u>		
			· · · · · · · · · · · · · · · · · · ·				_			
I, the undersigned,	holding a valid comm	nission issued	by the Nation	al Board	of Boiler and	Pressure \	NSPECTION Vessel Inspectors and t of	he State or	Province of	
have compared the	statements in this M	lonulacturer's	Data Report v	vith the d	escribed press	sure vessel	and state that parts	referred to a	s data item	ıs
and belief, the Mor	nufacturer has constru	, not included	uded in the ce sembled this pr	ertificate o ressure ve	of shop inspec	tion, have dance with	been inspected by me ASME Code, Section VI her the Inspector nor I	and to the II, Division 1.	best of my	knowledge ribed vessel
expressed or implie	ed, concerning the pre	essure vessel	described in the	his Manufi	acturer's Data	Report. 1	Furthermore, neither the rom or connected with	e inspector r	nor his emp	loyer shic
Date	Signed					Commissio			Chili D	visas and Na \
		(A	uthorized Inspe	ctor)			(Nat'l. Board incl.	endorsement	, State, Pro	אושכב מעם אם.)

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 Code Rules, Section VIII, Division 1

	nufactured	and certifled by	<u>Halvors</u>	en Boiler	& Engin	eering C	o. <u>750</u> 0				Avenue, of Manufac		land	, Ohio	44125		_	
2.	Manufactured t	for The D	upps Co.	. 548 N.C	Cherry Str	reet, Ger	mantow	n. Ohio	453	27-01								
3.	Location of inst	tallation II	n-known					,				,						
-			11 10101111						ame a	ınd addı	ress)					_	_	
4,	Туре:				cylinder				639	2A-2	& 3							
		(Description of	vessel part	(shell, two-	piece head,	tube bundle	9))		(M	fg's ser	ial No.)				(C	RN)		
						4-94		Ha			iler & E		Co.				1995	
	(Nat'l	Bd. No.)			(Drawin	•		-	(Drawing	g prepared	by)				(Ye	ar built)	
5.	ASME Code, S	ection VIII, DIV.	1	1992 Edition a	2 <u>1993 A</u> Ind Addenda	Addenda (dale)				Code Ca	aco No		_	Spe		/ice per	UG-120	<u></u>
Ite	ms 6 - 11 Incl. to	o be completed:	for single wa				eis, shell o	f heat exc				nuiti-ch	amber					-,
6.	Shell (a) No. (of course(s):		1			(b)	Overall ler	gth ft 8	& in.:		3'	<u>8.5"</u>					
	Course((s)		Ma	terial		Th	ickness		Long Jo	oint (Cal. A)		Circu	ım, Joint (C	Cat. A, B	& C)	Heat T	eatment
No	Diameter, in.	Length ft. & in.	İ	Spec./Gra	ide or Type		Nom	Corr.	Туре	Full, Sp	oot, None	EĦ.	Type	Full, Spot.	None	Eff.	Temp.	Time
1	28.31"OD	3'8.5''	<u> </u>	SA-24	0Tp.316L		1 1/2	<u>" </u>	1	1_1	Vone				-			
	<u> </u>		_	_	-			<u> </u>	_	!			_		.			
_												_	_					
7.	Heads: (a)	- (Mai	I Spec No	Grade or T	ype) H.TTir	ma & Tamo		(b)	_		(Mat'l Spe	o No	Grade	or Type)	HT.Tim	10 & To		
) applies (Tan	Think			adius	Elliptical	Conical	Herr	spher	ical	Flat			essure	14.7.5-7711	10 0. 10	Categor	
	Location (Top Bottom, Ends)	·	Corr.	Crown	Knuckle	Ratio	Apex Ang		Radius		Diameter	Conv		Concave	Type	Full. S	pot, Non	_
(a)						_							_		-		_	-
(P)			_			_							-		_	i -		_
								· ·			·	_						
ll're	emovable, boits	used (describe	other faster	ning) -														
Δ									(Mat'l Sp	ec. No., G	rade, S	ize. No	o.)				
٥.	Type of jacket							Jack	() et clos	,	ec. No., G				2 mold	25. 010		
٥.								Jack		,	ec. No., G			e as ogee 8			,	
	Il bar, give dim	nensions							et clos	ure _		(De	escribe			oñed,) lescribe d	r sketch
	If bar, give dim		(external)		nax. temp				et clos	ure _	n. design m	(De	escribe				,	r sketch
9.	If bar, give dim	nensions	(external)			(Internal)			et clos	ure _		(De	escribe			oñed,	,	r sketch
9.	If bar, give dim		(external)		nax. temp) (6	external)	et clos	of Mir	n. design m	(De	escribe			oñed,	,	r sketch
9.	If bar, give dim MAWP	(internal)			nax. temp	(Internal)) (6	external)	et clos	of Mir	n. design m	(De	np.	as ogee 8	If 6	orted, o	,	r sketch
9. 10.	If bar, give dim MAWP Impact test Hydro., pneu.,		ess	psi at n	nax. temp	(internal)) (6	external)	et clos	of Mir	n. design m	(De	np.	as ogee 8	If 6	orted, o	,	r sketch
9. 10. 11. iter	If bar, give dim MAWP Impact test Hydro., pneu.,	(internal) or comb. test pr	ess	psi at n	nax. temp,	(Internal) (Indicate y	es or no ar	external)	et clos	of Mir	n. design m	etal ten	np.	e as ogee 8	If E	oofted, o	describe o	F
9. 10. 11. iter	If bar, give dim MAWP Impact test Hydro., pneu., ms 12 and 13 to	(internal)	ess	psi at n	nax. temp	(Internal) (Indicate y	es or no ar	external)	oonent	of Mir	n. design m	etal ten	np.	e as ogee 8	If E	oofted, o	,	F
9. 10. 11. iter	If bar, give dim MAWP Impact test Hydro., pneu., ms 12 and 13 to Tubesheet:	or comb. test probe completed f	ess	psi at n	nax. temp,	(Indicate your Proof to	es or no ar	external)	oonent	of Mir	act tested)	(De etal ten	np.	e as ogee 8	Attac	oolted, of at	describe o	F
9. 10. 11. iter	If bar, give dim MAWP Impact test Hydro., pneu., ms 12 and 13 to Tubesheet:	(internal) or comb. test pr	ess	psi at n	nax. temp,	(Indicate your Proof to	es or no ar	external)	oonent	of Mir	n. design m	(De etal ten	np.	e as ogee 8	Attac	oofted, o	describe o	F
9. 10. 11. iter 12.	If bar, give dim MAWP Impact test Hydro., pneu., rns 12 and 13 to Tubesheet: Floating (Ma	or comb. test probe completed (Stationary (Ma	ess or lube secti	psi at n	Dia., in. (sui	(Internal) (Indicate year) (Proof te	es or no ar	external)	ponential	of Mir	act tested)	Corr.	np.	e as ogee 8	Attac	of at	describe of	or boite.
9. 10. 11. item 12.	If bar, give dim MAWP Impact test Hydro., pneu., rns 12 and 13 to Tubesheet: Floating (Ma Tubes: Mat1	or comb. test probe completed (Stationary (Matt) Spec. No.)	ess	psi at n	Dla., in. (sui	(Internal) (Indicate your Proof to pre	es or no ar	od the com	Donenia de la componenta del componenta della componenta	of Mir	act tested)	Corr.	np.	e as ogee 8	Attac	of at	describe o	or boite.
9. 10. 11. item	If bar, give dim MAWP Impact test Hydro., pneu., ms 12 and 13 to Tubesheet: Floating (Ma Tubes: Mat1 ms 14 - 18 Incl.	or comb. test probe completed (Stationary (Ma 11 Spec. No.) Spec. No., Gracto be completed	ess	psi at n	Dla., in. (sui	(Internal) (Indicate your Proof to pre	es or no arestss.)	Nom. thkal exchange	ponent	of Mir	act tested)	Corr.	np.	e as ogee 8	Attac	of at	describe of	or boite.
9. 10. 11. item	If bar, give dim MAWP Impact test Hydro., pneu., rns 12 and 13 to Tubesheet: Floating (Ma Tubes: Mat1	or comb. test probe completed (Stationary (Ma 11 Spec. No.) Spec. No., Gracto be completed	ess	psi at n	Dla., in. (sui	(Internal) (Indicate your Proof to pre	es or no arestss.)	od the com	ponent	of Mir	act tested)	Corr.	np.	e as ogee 8	Attac	of at	describe of	or boite.
9. 10. 11. item	If bar, give dim MAWP Impact test Hydro., pneu., ms 12 and 13 to Tubesheet: Floating (Ma Tubes: Mat1 ms 14 - 18 incl. 1 Shell (a) No. o	or comb. test probe completed (Stationary (Ma 11 Spec. No.) Spec. No., Gracto be completed	ess	psi at n	Dla., in. (sui	(Internal) (Indicate your Proof to pre	es or no arestss.) m. thk., in.	Nom. thkal exchange	ponent	of Mir	act tested)	Corr.	np. Allow.	e as ogee 8	Attac	chment	(weided	or boite.
9. 10. 11. item	If bar, give dim MAWP Impact test Hydro., pneu., rns 12 and 13 to Tubesheet: Floating (Ma Tubes: Mat1 rns 14 - 18 Incl. 1 Shell (a) No. o	or comb. test probe completed (Stationary (Ma	ess	psi at n	Dia., in. (sui	(Internal) (Indicate your Proof to pre	es or no arestss.) m. thk., in.	Nom. this at exchange	Jom. th	of Mir	act tested)	Corr.	Allow.	e as ogee 8	Attac	chment Type	(weided of	r U)
9. 10. 11. iter 12.	If bar, give dim MAWP Impact test Hydro., pneu., rns 12 and 13 to Tubesheet: Floating (Ma Tubes: Mat1 rns 14 - 18 Incl. 1 Shell (a) No. o	or comb. test probe completed (Stationary (Ma Lif Spec. No.) Spec. No., Grad to be completed of course(s):	ess	psi at n	Dia., in. (sui	(Internal) (Indicate your Proof to pre	es or no arest ss.) m. thk., in. (b) (Nom. this at exchange of the community o	Jom. th	of Mir	act tested)	Corr.	Allow.	in.	Attac	chment Type	(welded of	r U)
9. 10. 11. iter 12.	If bar, give dim MAWP Impact test Hydro., pneu., rns 12 and 13 to Tubesheet: Floating (Ma Tubes: Mat1 rns 14 - 18 Incl. 1 Shell (a) No. o	or comb. test probe completed (Stationary (Ma Lif Spec. No.) Spec. No., Grad to be completed of course(s):	ess	psi at n	Dia., in. (sui	(Internal) (Indicate your Proof to pre	es or no arest ss.) m. thk., in. (b) (Nom. this at exchange of the community o	Jom. th	of Mir	act tested)	Corr. N	Allow.	in.	Attac	chment Type	(welded of	or boiled

15.	Heads: (a)		- (N4at')	Saga Na C	rada as Tu	pe) H.TTime	8 Tama	(t)	() 4=4	VI C N	la Orada	or Timel U.T. 3		
	· · · · · · · · · · · · · · · · · · ·		Thick			ladius	Elliptical	Caningl	Hamianhaa				or Type) H.T1		The second second
	Location (Top, Bottom, Ends)						Ratio	Conical	Hemispher	- 1	Flat		Pressure Concave	Cate Type Full, Sp	gory A
(2)		+	Min.	Corr.	Crown	Knuckle	Папо	Apex Angle	Radius	, D	iameter	Convex	Concave	ype ruii, Sp	O(, I\
(a)		_					 -			-	$\overline{}$				
(b)		Н.													
	movable, boits MAWP	used	<u> </u>	other fastenin	-	ax. temp.	(Internal)	(extern	°F	•	lo., Grade	e, Size, No.)	°F at	
17.	Impact test -			·				,	,						
	_					(Ir	ndicate yes	or no and the c	omponent(s)	impact te	sted)				
18.	Hydro., pneu.,	or cor	nb. test pr	ess		_	Proof test	<u></u>							
19.	Nozzies, Insper	ction,	and safety	valve openin	ıgs:										
1	urpose (Inlet,	1	Diameter	Flange			Materia	al	Nozzie 1	Thickness	s Rei	nforcement	How A	ttached	Locatic
Ou	tlet, Drain, etc.)	No.	or Size	Туре		Nozzle	•	Flange	Nom.	Corr.		Material	Nozzle	Flange	(Jusp. Ot
		_								_					
		_	_												
		_								-	T -				
		_	_												
		_	_			_				_	Ì				
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		~							T		1				
	_	_	_]												
		_							<u> </u>						15
		_			1									_	
21.	Remarks:l	2.)	All design	40 T 316L r	naterial ons and l					(De:	scribe)			(Where	and How)
							_						_		
															_
1	e certify that th					e correct an	d that all d	OF SHOP/I letails of mate				nanship o	f this pressur	e vessel pa	rt conform
	the ASME Co. Certificate of A				Section V 3415	III, Division 1	١.		Expires	1/31			, 19	97	1
	Date /-12	-93	2	Name Ha	alvorsen	Boiler & I	Engineer	ing Co.		_	Signed	m	x/1		
							(Manufa				-(-		(Repre	esentátive)	
1	he undersigne		olding a v	alid commiss	sion issue Roiler In		ational Boa	E OF SHOP and of Boiler and ace			Inspecto	ors and the lartford.			Ohio nspected we
nr	d employed by essure vessel	r deco							19 95	. and				owledge an	d be
Ma	inufacturer ha iployer makes	scon	structed	this pressur	e vessel i	n accordance	ewith ASN	ИЕ Code,Sect	ion VIII, Divi	sion 1.B	y signing	g this certi	ficate neither	the inspecto	or nor his
	pector nor his														
0	Date 1/12/	199		Signed /	az 1	ithorized Insp	r. Aca	mb	Commiss	ions S	0 41 (Nat'l Bo	ard incl. e	endorsement,	State, Prov	ince and No.

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 Code Rules, Section VIII, Division 1

anula	ctured	and certified by	Halvors	en Boile	r & Engin	eering C	Co. 7500	Grand	Divis	sion Avenue.	Clev	el <u>and.</u>	Ohio 4-	125_		
2. Manufa	ctured (for The Di	pps Co	548 N.	Cherry Sti	reet. Ger	mantovy	OH	45327		,					
3. Locatio	n of insi	tallation Ut	-known					(Name a	nu acur	ess of Fulcilase	')					
							_	()		nd address)				_		
4. Type:		(Description of		& weld		luba hundle	-11	_		'A-3 & ↓ g's serial No.)	_			/CON		
		(Description of	vesser part	(sneil, two			∍ <i>))</i>							(CRN)	,	
	(Mail	8d. No.)			181 (Drawir	5-94		<u>Ha</u>		n Boiler & E		Co.			1994	
	•	,		100	•	Addenda			(1)	rawing prepared	oy)			,	(Year buil	ц
S. ASME (Jode, S	ectioл VIII, Div. 1		Edition a	ind Addenda			_	Co	ode Case No.		_	Specia	Service	per UG-1	50(q)
Items 6 - 1	1 incl. to	be completed to	r single wa	ıll vessəls,	jackets of jac	keled vess	els. shell of	heat excl			multi-ch	amber v	essels.			
6. Shell (a) No. c	ol course(s):		<u>_</u>	1 -		(b) C	verall len	gth ft &	in.:		5'	4.75"			
	Course(s)		Ma	aterial	_	Thic	kness) L	ong Joint (Cat. A)	Circum	n. Joint (Cat	. A, B & C) Hea	at Treatmen
No. Diamet	er, in.	Length II. & in.		Spec./Gra	ade or Type		Nom.	Corr.	Type	ull. Spot. None	Elf.	Type:F	ull. Spot. No	one Elf.	Temp	. Tim
1 27.30	COO	5'4.75"		SA-2-	0Tp.316L		.875	-	i 1 :	None	100	- m		-		-
2 25.25	SOD [1	1 1		200	1-1				
							·		1 - 1			1-1	****	_		
7. Heads:	(a)							(p)								
- 1					ype) H.T. Tir	4							or Type) H.1	:-Time &		
	on (Top. n. Ends)				adius	Elliptical	Conical	!	ispheric			e to Pres	_			gory A
! 	1, [1103]	Mir.	Corr.	Crown	Knuckle	Ratio	Apex Angl	9 '	Radius	Diameter	Conv	ex C	oncave	Type Fu	II. Spot, N	lone Elf
[{all						-		- !								
, -																
4																
ii temovabi	e, boits	used (describe o	iner lasten	ing) _					/1/	fat'l Spec. No., G	rada 9	Siza No.				
8. Type of	iacket							lack	et closu	•	raue. C	126. 140.	'			
o,po o.	jaanat							_ 5201	CT 0.030		(D	escribe a	as ogee & w	eld, bar.	e(c.)	
If bar, g	jive dim	ensions												If botte	d, describ	e or sketch
9. MAWP				_ psiatr	nax. lemp				0	F Min. design n	netal te	mp		٥F	at -	F
	((internal)	(external)			(internal)) (e)	dernai)								
10. Impact	test															
						(Indicate y	es or no and	the com	onent(:	s) impact tested?						
		or comb. test pre				Proof 16	esi									
items 12 ar	nd 13 to	be completed to	r tube secti	on.												
12. Tubesh	eel;	Stationary (Mat	Snac Na		Dia., in. (su	hiect to ore	ce l		lom. this	· in	Corr	Allow.	<u>.</u>	Altachm	ent /welde	ed or boitec
		Stationary (Mar	торес. (чо)		Dia., III. (Su	bject to pre	33.)	,	10111. 1117	V., III.	0011	. Anow.,	,,,		•	a or boilec
Float	ing (Mai	(TSpec. No.)		Dia in.		No	m. thk., in.			Corr. Allow	n.			Atlachme		
	3 (_										
13.Tubes:	Mal'I	Spec. No Grade	or Type		O.D., i	in.	_ ~	Nom. thk	. in. or	gauge	7	lumber		Typ	pe (Straigl	ht or U)
Items 14 - 1	8 incl. t	o be completed f	or inner cha	ambers of ja	ackeled vess	els or chan	nels of heat	exchang	ers.							
14. Shell (a	a) No. of	course(s):					_ (b) O	/erail leng	th (ft &	in.):	<u></u>					
			_		_								17.			
Na Dlaws		urse(s)	-		terial			ness	I Trans	Long Joint (Ca		_ :	um, Joint (C			at Treatme
No. Diame	ter, In.	Length ft. & in.	 	Spec./Gr	ade or Type		Nom.	Corr.	iype	Full. Spot. Non	- 511	i	Full, Spot.	140116	Eff. Te	mp. Time
-			-			10			-	<u></u>	 -	<u> </u>				
	-		-	=		- 1			!-		1	1				_
- ;			L						1-		1	-				

Location (Top	- 1		Spec. No., Grade			00.1.1	Lu 1	`			Time & Temp	
Bottom, Ends)		Thick		Radlus	Elliptical	Conical	Hemispherica		_	Pressure	Catego	
		Min.	-	own Knuckle	_	Apex Angle	Radius	Diameter	1	Concave	Type Fulf, Spo	i, None
a) o)	_				+							
removable, bolts	used	(describe	other (astening)									
		(······				(Mat'l S	pec. No., Gra	de, Size, No	.)		
6. MAWP			ps	i at max. temp,			_ ºF M	in. design met	al temp.		°Fat -	
(intern	al)	(external)		(Internal)	(externa	al)				-	
7. Impact test											_	
						or no and the co						
, .			ess y valve openings:		Proof test		*****					
Purpose (inlet,	Т		Flange		Maleria		Nozzle Thi	ckness B	eintorcement	How	 Attached	Loca
Outlet, Drain, etc.)	A 1 -	Diameter or Size	Type	Noz		Flange		Corr.	Material	Nozzie		(insp. 0
	1_1		.,,,,		_			_				
	1-1			-	_		i	}				
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	!	i										┿.
	1			<u>:</u>	- :	4		i	*****	:		1 \ :
0. Supports: Ski	rt_				Legs	0	thers			Altached		
		(Yes or N	Vo)	(No.)		(No.)		(Describe)			(Where a	and How)
	1 \ /		40T316L mate									
21. Remarks:			an coloulations	and hydrostatic		_						
21. Remarks:												
1. Remarks:	2.) 3.)	Part has	s one (1) 1/2" tl	ık. SA240T316	L stitliser r	ıng.						
21. Remarks:	2.) 3.) 4.)	Part has Butt join	s one (1) 1/2" that 100% P.T. in	nk. SA240T316 spected.	6L stitliser r	ing.						_
21. Remarks:	2.) 3.) 4.)	Part has Butt join	s one (1) 1/2" tl	nk. SA240T316 spected.	oL stitliner r	ing.						
21. Remarks:	2.) 3.) 4.)	Part has Butt join	s one (1) 1/2" that 100% P.T. in	nk. SA240T316 spected.	SL stitliser r	ing.						
21. Remarks:	2.) 3.) 4.)	Part has Butt join	s one (1) 1/2" that 100% P.T. in	nk. SA240T316 spected.	SL stitliner r	ing.						
21. Remarks:	2.) 3.) 4.)	Part has Butt join	s one (1) 1/2" that 100% P.T. in	nk. SA240T316 spected.	SL stitliner r	ing.						
21. Remarks:	2.) 3.) 4.)	Part has Butt join	s one (1) 1/2" that 100% P.T. in	nk. SA240T316 spected.	SL stitliser r	ing.	_					
21. Remarks:	2.) 3.) 4.)	Part has Butt join	s one (1) 1/2" that 100% P.T. in	nk. SA240T316 spected.	SL stitliner r	ing.						
21. Remarks:	2.) 3.) 4.)	Part has Butt join	s one (1) 1/2" that 100% P.T. in	nk. SA240T316 spected.	SL stitliner r	ing.						
	2.) 3.) 4.) 5.)	Part has Butt join Dupps F	s one (1) 1/2" that 100% P.T. in P/N 130692 (P.C	uk. SA240T316 spected. D.#25568).	TIFICATE	OF SHOP/						
	2.) 3.) 4.) 5.)	Part has Butt join Dupps F	s one (1) 1/2" that 100% P.T. in	uk. SA240T316 spected. D.#25568).	TIFICATE	OF SHOP/				of this pressu	ire vessel part	conform
We certify that to the ASME Co	2.) 3.) 4.) 5.)	Part has Butt join Dupps F	made in this representations of the vessels, Section 1971 and 1971	cent are correct a on VIII, Division	TIFICATE and that all d	OF SHOP/	rial, construct	ion, and wor		of this pressu	ire vessel part	conform
We certify that t	2.) 3.) 4.) 5.)	Part has Butt join Dupps F	made in this representations of the vessels, Section 1971 and 1971	cent are correct a on VIII, Division	TIFICATE and that all d	OF SHOP/	rial, construct			of this pressu	are vessel part	conform
We certify that to the ASME Co	2.) 3.) 4.) 5.)	Part has Butt join Dupps F	made in this representations. The versels of the series o	CERT ort are correct a on VIII, Division	TIFICATE and that all d	OF SHOP/fetails of mate	rial, construct	ion, and wor	kmanship o	of this pressu	ire vessel part	conform
We certify that to the ASME Co	2.) 3.) 4.) 5.)	Part has Butt join Dupps F	made in this representations on the versels, Section 341.	cent are correct a on VIII, Division	TIFICATE and that all d	OF SHOP/fetails of mate	rial, construct	ion, and wor	kmanship o	, 1 mg//	ere vessel part	conform
We certify that to the ASME Co	2.) 3.) 4.) 5.)	Part has Butt join Dupps F	made in this representations on the Marie	CERT ort are correct at con VIII, Division of the Boiler &	TIFICATE and that all d	OF SHOP/fetails of matering Co.	rial, construct Expires /FIELD INS	ion, and wor 1/30 Sign	kmanship o	, 1	9 97 esentative)	<u>-</u>
We certify that to the ASME Coduction of Date 12	2.) 3.) 4.) 5.) he stande for Author	Part has Butt join Dupps F atements or Pressur prization f	made in this representation of the Marie M	CERT ort are correct a on VIII, Division orsen Boiler & CEF issued by The I	TIFICATE and that all d and that all	OF SHOP/fetails of matering Co.	rial, construct Expires /FIELD INS	1/30 Sign	ed States	, 1 Repr	9 97 esantative)	Ohio
We certify that to the ASME Condition of Date 2	2.) 3.) 4.) 5.) he stande for Authory	Part has Butt join Dupps F atements or Pressur prization f bolding a v Hartfo	made in this representation of the Maria M	CERT ort are correct a fon VIII, Division orsen Boiler & CEF issued by The I er Inspection	TIFICATE and that all d in 1. Engineer (Manufa RTIFICATE National Boa & Insuran	OF SHOP/fetails of mate	Expires //FIELD INS	SPECTION essel Inspec	ed stors and th	, 1 Repr e State or Pr Ct.	9 97 esantative) rovince of have in	Ohio _
We certify that to the ASME Could be a second by the Landersign and employed by the pressure vessel	2.) 3.) 4.) 5.) 5.) continuous de formation	Part has Butt join Dupps Function Pressur Pres	made in this representation of the management of the made in this representation of the management of	CERT ort are correct a fon VIII, Division orsen Boiler & CEF issued by The fer Inspection or's Data Report	CIFICATE and that all don 1. Engineer (Manufa RTIFICATE National Boa & Insuran on	OF SHOP/fetails of matering Co. acturer) OF SHOP and of Boiler arce	Expires VFIELD INS and Pressure V	SPECTION essel Inspect of , and state to	ed stores and th Hartford.	Repr e State or Pr Ct.	g 97 esentative) ovince of have innowledge and	Ohio spec
Ne certify that to the ASME Co. J Certificate of Date 2. , the undersigned the pressure vessel Manufacturer had	2.) 3.) 4.) 5.) he stronger for Authority I descreas control of the Authority I descreas control of th	Part had Butt join Dupps Function It Pressur Pressur Pressur Prization It Pressur	made in this representation of this Manufacture this pressure versure	CERT ort are correct a on VIII, Division orsen Boiler & CEF issued by The ler Inspection r's Data Report ssel in accordar	IFICATE and that all d and that all	OF SHOP/fetails of matering Co. acturer) OF SHOP and of Boiler arce 12/1/ //E Code, Sect	Expires VFIELD INS ad Pressure V 19 94 ion VIII, Division	SIGN. Sign. SPECTION essel Inspection of and state to the sign.	ed tors and the Hartford. hat, to the teng this certification in the series of the se	Representation of the	g 97 resentative) rovince of have in- nowledge and rithe Inspector	Ohio _spec belied on his
We certify that to the ASME Condition of the	2.) 3.) 4.) 5.) he staded for Authority I describe as correspondences any	Part had Butt join Dupps Function & Pressur Pr	made in this representation of the management of the made in this representation of the management of	CERT ort are correct a on VIII, Division orsen Boiler & CEF issued by The lear Inspection r's Data Report ssel in accordar applied, concerning	TIFICATE and that all d 11. Engineer (Manufa RTIFICATE National Boa & Insuran on nce with ASM	OF SHOP/fetails of materials of materials of materials of materials of materials of short and of Boiler arce	Expires VFIELD INS and Pressure V 19 94 ion VIII, Division to described in	Sign SPECTION essel Inspection of and state to the this Manufation.	ed ditters and the Hartford. hat, to the it of this certicuturer's Da	Repries State or Prince Ct. Dest of my kinding the Report. For	g 97 resentative) rovince of have innowledge and ruthe Inspector	Ohio spec belief nor his either the

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 Code Rules, Section VIII, Division 1

.3	anulactured	and certified by	Halvors	en Boiler	& Engin	eering C	o. 7500) <u>Gra</u> (Na	nd I	Divis	ion Avenue.	Cleve	land.	Oliio 4	14125	_		
2.	Manufactured	for The D	upps Co	. 548 <u>N</u> .C	Cherry Str	reet, Gen	mantow				ess of Purchaser	-						
3.	Location of ins	tallation <u>U</u>	n-known															
			D 11 1	0 11							d address)							
4.	Type:	(Description o		& welde		luhe bundle	- 11	-			A-5 & 6 s serial No.)	_	******		(CRN			
		(Description o	veoser pari	(311611, (440	,		,,						_		(CHN)			
	/Alat'i	Da Ma M			_	5-94			Halv		n Boiler & E		Co.				94	
	,	Bd. No.)		1003	(Drawin	•				(L	rawing prepared	оу)			1	(Year	(חוטם	
		ection VIII, Div.			nd Addenda	, ,	els, shell o	– I heat i	excha		ode Case No.	nulti-ch:	amber v		ial Service	per U	G-120(3)
6.	Shell (a) No.	of course(s):			1		(b)	Overall	l leng	th ft &	in.;		5'	11.63"				
	Course			Ma	terial		Th	icknes	s	L	ong Joint (Cat. A)		Circum	n, Joint (C	at. A, B & C	((Heat Tr	eatmen
No	. Diameter, in.	Length ft. & in.		Spec./Gra	de or Type		Nom.	C	orr.	Type [f	ull, Spot, None	EII.	Type F	ull, Spal. l	Vone Ell.	Te	emp.	Tirr
1	24.970D	5'11.63"		SA-24	0Tp.316L		.625	`` -	- į	1 1	None :						-1	
2	22.69OD						·	_	<u> i</u>							.		
_							<u> </u>	_		~-								
7.	Heads: (a)							(b)									
_				Grade or T	ype) H.TTir	ne & Temp					(Mai I Spe	c. No	Grade (or Type) H	I.T,-Time &	Temp		
	Location (Top		ness		adius	Ellíptical	Conical	F	łemis	pheric	-	Side	lo Pres		L , .		ategory	
1	Bottom, Ends	Min.	Corr.	Crown	Knuckle	Ratio	Apex Ang	le ¦	- R	adius	Diameter	Conv	ex , C	oncave	Type Fu	II. Spo	I. None	E:
(a)					••••	1 = 1		<u>'</u> -				_=	-		-	~-		<u> -</u> -
		used (describe	other lasten	ing)						•	fat'l Spec. No Gr	ade, S	lze. No.)					
8.	Type of jacket							— J	acke	ciosu	re	(⊅∈	escribe a	as ogee &	weld, bar,	e(c.)		
	If bar, give dire	ensions												-	if boite	d. des	cribe or	skelc
q	MAWP			Dei at II	nax lemp.				_	- 0	F Min. design mi	nat ler			- of			
	-	(internal)	(external)		iak temp.	(Internal)	(e	xterna	I)	,	Willia design mi	siai (ei)	η.		_ `	a		-
10.	impact test					(Indicate ye	s or no an	d the c	ompo	onent(s) impact tested)							
	,	or comb, test pr		on.	<u> </u>	Proof te	st				<u></u>							
12	Tubesheet:	was the same						_										
		Stationary (Ma	17 Spec. No)		Ola in. (sul	bject to pres	ss.)		No	m, thi	c., in.	Corr.	Allow i	n.	Attachm	ent (w	elded o	r botte
	Floating (Ma	l'I Spec. No.)		Dia., in.		Nor	ຕ. thk iດ.				Corr. Allow in				Allachme	ent		
13.	Tubes:		<u> </u>											· <u>·</u> -				
		Spec, No., Grad	, ,		O.D., i					in, or g	gauge	N	umber		Тур	e (Str	aight o	rU)
	ns 14 - 18 incl. Shell (a) No. o	to be completed I course(s):	for inner cha	ambers of ja	ckeled vess	els or chan		it exchi			in.);							
_				1/	nozini		This	kness			Long Joint (Ca)	A)	i Ciro	um foigi	(Cat. A, B &	2 ()	Heat T	realmo
Nο	Diameter, In.	urse(s) Length It, & in,			erial ade or Type	- i -	Norn.	ckness	orr.	i Typo	Long Joint (Cat.		-	Full. Spo		EII.	Temp.	Tim
,	Ciamoter, III,	congra it, a iii,		Opec./Gra			,40111.	-	,	' ' '	, t dii, Opol, 1400e		, , , , ,	1. 5 090	.,		. отпр.	
_						-					1	1	1	-				_
)						l.		-	_	1		+-	1 -			_	_	
. 5						1		1		-		,	_					

15. Heads: (a)						(b)							
		t'l Spec. No., G	rade or Typ	e) H.TTime	_			(Mat'l	Spec. I	No Grade d	or Type) H.T.	·Time &	Temp	
Location (Top	·	kness	- Ra	adius	Elliptical	Conical	Hemispheric	cal f	Flat	Side to I	Pressure		Catego	_
Bottom, Ends)	Min.	Corr.	Crown	Knuckle	Ratio	Apex Angle	Radius	Dia	rmeter	Convex	Concave	Type F	ull Spot.	N
(a)		_						_ (.						_
(b)													_	
		-	_											
W		41 4 4 1-	_1										٠٠.	
If removable, boits	usea (describe	e otner lastenin	g)											
							(Mat I	Spec. No	o., Grad	e, Size, No.))			
16. MAWP		*****	psi at ma	x, temp.			^F	Min. desi	gn meta	l temp.	**	°F a	at 🚣	
(Internal)	(external)			(internal)	(externa	tľ)							
17. Impact test .														
_				(11	ndicate yes	or no and the co	mponent(s) ir	npact tes	ted)					
18. Hydro., pneu.,	or comb. test p	ress			Proof test									
19. Nozzles, inspe														
Purpose (Inlet,		Flange			Materia	I	Nozzle Ti	hickness	Rei	nforcement	How	Attache	d	Loc
Outlet, Drain, etc.)	Diameter No or Size			Nozzle			'	Corr.	/ //	Material				
Outlet, Drain, etc.)	01 3126	Туре		NUZZIE	<u>' </u>	Flange	Nom.	Corr.	1	Material -	Nozzle	2	Flange	(Insp.
							!		<u> </u>					
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		1	- i-		<u> </u>		1 1		!		1			_
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	1-1 -	-	<u> </u>				****		!					
21. Remarks:	3.) Part ha4.) Butt jo	ign calculations one (1) 1/2 int 100% P.T P/N 130693	2" thk. SA [, inspecte	.240T316L ed.										
	_					_					_			
				CERTI	FICATE	OF SHOP/F	IELD COI	MPLIAI	NCE					
We certify that t	he statements	made in this	report are							πanship of	this pressu	re ves	sel part o	conform
to the ASME Co			-										•	,
U Certificate of		2	3415	, 5.7.0.011	•		Expires	1/30			1	97	7	
	,	140.					Expires				<i></i> .'	1	1.1	
Date 12-	1.94	Name Ha	lvorsen l	Boiler & F	Engineeri	ing Co.				-//	1-11	¶][].		
Date /	-//	Name			(Manufa			-	Signe	1 //40	Ren	esenta	M(a)	
				000		OF SHOP	/CICL O INI	COECT	100		(ПСВ	2	<u> </u>	
I, the undersigned b	YT	valid commiss ord Steam E	sion issued Boiler Ins	by The Na	itional Boa	rd of Boiler an		Vessel la	nspecto	ors and the Iartford.	State or Pr Ct.		of (Ohio
pressure vessel	,			•			, 19 <u>9</u> 9		Ÿ. —					
						•								
Manufacturer ha								-						
employer makes	s any warrant	y, expressed	or implied,	concerning	the pressi	ure vessel par	t described i	n this Ma	anufact	turer's Data	a Report. Fi	ırtherm	ore, neit	her the
inspector nor his														
)											
Date _ / 2	1/94	Signed	ym	Now	HOOM	nc_	Commissio	ons _	<u>0 H7</u>	0 60	ndorsement			
	,	- 3	// (Auti	horized Inst	pectori			(1	Vat'l Bo	oard incl. e	ndorsement	. State.	Provinc	e and

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 Code Rules, Section VIII, Division 1

p	The state of the s																		
	· January and	and certified by	Halvorsen	Pailer	& Engin	eering (٠.	7500	Grand	Divic	ion Are	20010	Clava	lond	Ohia	(1125			
	anulactured	and cermied by	<u>IIm vorsen</u>	DOLLET	& Liight	cernig c	<i>.</i> 0.	7300	(Name a	and add	tress of M	lanulaci	ntet)	iand.	Ollio	4+125			
2.	Manufactured	for The Du	pps Co., 5	48 N.C	Cherry Str	eet. Ger	ma	ntown,	OH 4	15327	,		,						
											ess of Pur	chaser)							
3.	Location of ins	taliation IIn	-known																
									{Na	me an	d address								
4.	Туре:		Rolled &	welde	d cone					6397.	A-7 & 8	8							
	,	(Description of v	vessel part (sh	rell, (wo-	piece head, 1	lube bundle	e))			(Míg	s serial N	10.)				(CR	N)		
					181	5-94			Hab	vorsei	n Boiler	r & Eı	igrg.	Co.				1994	
	(Nat1.	Bd. No.)			(Drawin	g No.)					rawing pre							ar built)	
5.	ASME Code, S	Section VIII, Div. 1		1992	1993 A	Addenda	l												
					nd Addenda						de Case					cial Service	e per	UG-120	(d)
		o be completed to	ir single wall v	essels, ja	ackets of jac	keled vess	se is .	shell of h	eat exch	angers.	. or chaml	ber of m	uithcha	imber v	esseis.				
6.	Shell (a) No.	of course(s):			<u> </u>		_	(b) Ov	erall leng	th ft &	in.: _			6,	<u>3.44" </u> _				
_	Course	(s)		Mai	terial			Thick	nece	1.0	ong Joint ((Cat A)		Clean	loint (C	at. A. B 8	C)	Haar	reatmen
No	Diameter, in.	Length R. & In.	Sı		de or Type		+	Nom.			uil. Spot.	_	EII.	-	ull. Spot.			Temp.	Tim
1	22.670D	6'3.44"			OTp.316L		1	1/2"		1		-		1		1		Temp.	
1	20.26OD	0 3.44		3A-24	01p.310L		1	1/2		1 -	Non	1	E	- 1		- }	-		1
	20.20 <u>OD</u>		_				1			-				- !		-			
<u> </u>										;				:					
7.	Heads: (a)	(Matil	Spec. No., Gra	ade or Ty	/pe) H.TTin	ne & Temp	_		_ (b)		(M.	at I Spec	c. No.	Grade o	or Type) F	I.T. Time	& Ter	no	
	Location (Top	Thisten	 -		ıdius	'Elliptical		onical	Hemis	spheric		lat i		to Pres		1		Catego	ν Δ
	Bottom, Ends		Corr.	Crown	Knuckle	Ratio	1	ex Angle		adius		neter	Conve		oncave	Type	Fuil Si		
(a)		1	-					******	 . _			1		-					
(-,		<u> </u>		1		!		******	,			ž.				1 1			
	·	,																	
11 40	emovable, boils	used (describe o	Ther fastening	١															
		4004 (400000 0								(M	at'l Spec.	No Gr	ade, Si	ze. No.)					
8.	Type of jacket								Jacke	t closur		-							
	,, ,												(De	scribe a	is ogee &	weld, ba	r. etc.)		
	If bar, give din	ensions														It bol	ited, de	escribe	or sketc
9.	MAWP			psi at m	ax. temp					oF.	Min, de	ടian നല	tal tem	p.		_ - 0	F at		
		(internal)	(external)			(internal))	(exi	ernai)										_
10.	Impact test																		
					((Indicate y	es o	no and I	he comp	onent(s	s) impact t	ested)							
۱1.	Hydro., рпеи.,	or comb, test pres	ss			Proof te	est												
ite	ms 12 and 13 to	be completed for	tube section.																
12,	Tubesheet:											_							
		Stationary (Mat'l	Spec. No)		Dia., in. (sub	ect to pre	ss.)		No	m. Ihk	in.		Corr.	Allow i	n.	Attach	ment (welded	or bolte
							_					·							
	Floating (Ma	(TSpec. No.)	٥	lia in.		Noi	m. (h	ık., in,			Corr. A	llow in				Attach	menl		
13.	Tubes:					· · ·											- 10		
		Spec. No., Grade			O.D ii				om. thk	•	gauge		Νι	ımber		Г	ype (S	itraight	or U)
iter	TIS 14 - 18 INCE	to be completed to	or inner chamb	ers of ja	cketed vessi	els or chan	ineis	of heat e	exchange	rs.									
14.	Shell (a) No. o	(course(s):					_	(b) Ove	rail lengti	n (11 & i	n.):								<u> </u>
								Thirt			1.000 107	-1 /5	۸)	7 0/	- 1-1-1	/Cnl A 5		User	Trooters
λιc		ourse(s)	1	Mati				Thicks		T	Long Join			-		(Cal. A. E	_		Treatme
IVO.	Diameter, in.	Length It, & in.		<u></u>	de or Type			Nom.	Corr.	-	Full, Spot				Full. Spo	JI. NORE	EH.	Temp). Tim
-	Ţ		-				_			<u> - </u>			 	1			_=	+-	
1						- !	-	- +		: - !			!	! -			_	+	 -
di.				=		i	-	<u> </u>		حم ا		-	{	<u> </u>			_	<u> </u>	<u> </u>

i	(IVIAI	1 Spec. No., G	rade or Typ	e) H.TTime	& Temp	(b		(Mat'l Sp	ec. No., Grade o	or Type) H.T	Time & Temp	
Location (Top,	Thic	kness	Ra	dlus	Elliptical	Conical	Hemispheri	cal Flat	Side to I	Pressure	Catego	<u>ry</u>
Boltom, Ends)	Min.	Corr.	Crown	Knuckle	Ratio	Apex Angle	Radius	Diame	ter Convex	Concave	Type Full, Spot.	Non
l												-
emovable, bolts	used (describe	other fastenin	ng)									
								-	irade. Size. No.))		
MAWP			psi at ma	x, temp.			°F	Min. design r	netal temp.		. °F at 🛌	
(i	nternal)	(external)			(internal)	(externa	ıi)					
. Impact test												
				(Ir	dicate yes o	or no and the co						
. Hydro., pneu., o . Nozzies, inspec					Proof test				**			
	 				Material		North T	hickness	Dointornament	Have	Altachad	1 100
Purpose (inlet.	Diameter	Flange		Mozzlo	Material	_			Reinforcement		Attached	Loca
tlet, Drain, etc.)	No. or Size	Туре		Nozzle		Flange	Nom.	Corr.	Material	Nozzle	Flange	(Insp.
						*****		!		<u> </u>		 -
	-		i				<u> </u>	1				
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	1-1-	1	•			*****					1	Ť
		ign calculati s one (1) 1/		240T316L								
	4) Buttion									_		
		$\overline{}$	(P()#/\)	, 0., j.								
	4.) Butt joi 5.) Dupps	$\overline{}$	(P.O.#25)									
		$\overline{}$	(P.O.#25)									
		$\overline{}$	(P.O.#25)									
		$\overline{}$	(P.O.#25)									
		$\overline{}$	(P.O.#25)									
		$\overline{}$	(P.O.#25)									
		$\overline{}$	(P.O.#25:									
		$\overline{}$	(P.O.#25)	CERTIF		OE SUODIE		AADI IANG				
	5.) Dupps	P/N 130694				OF SHOP/F				f this pressu	ire vessel part	confort
/e certify that th	5.) Dupps	P/N 130694	s report are	correct an	d that all de					this pressu	re vessel part	conform
/e certify that the	5.) Dupps	r made in this	s report are	correct an	d that all de		riał, constru	ction, and w		f this pressu	re vessel part	conform
/e certify that the the ASME Concertificate of A	5.) Dupps	r made in this	s report are	correct an	d that all de			ction, and w		f this pressu	ire vessel part	conform
/e certify that the ASME Concertificate of A	5.) Dupps	made in this re Vessels.	s report are Section VII 3415	correct and , Division 1	d that all de	etails of mate	riał, constru	ction, and w	orkmanship of	f this pressu	ere vessel part	conform
le certify that the the ASME Co	5.) Dupps	made in this re Vessels, S	s report are Section VII 3415	correct an	that all de	ng Co.	riał, constru	ction, and w		, 1	ore vessel part	conform
/e certify that the ASME Concertificate of A	5.) Dupps	made in this re Vessels.	s report are Section VII 3415	correct and Correc	e that all de constitution de	ng Co.	rial, constru Expires	1/30 Si	orkmanship of	, 1	9 97 , esentative)	<u></u>
e certify that the the ASME Concertificate of A	ne statements de for Pressur Authorization	made in this re Vessels, No. Name Hard	s report are Section VII 3415 alvorsen	CERT	Engineeri (Manufa IFICATE	ng Co. cturer) OF SHOP rd of Boiler an	Expires	1/30 Signature S	and the ectors and the	Repr	9 97 , resentative)	Ohio
/e certify that the the ASME Concertificate of Asternational Content of the Undersigned the undersigned employed by	ne statements de for Pressu Authorization	r made in this re Vessels, So. Name H. Valid commissord Steam I	s report are Section VII 3415 alvorsen sion issued Boiler Ins	correct and Division 1 Boiler & I CERT by The Napection &	Engineeri (Manufa IFICATE tional Boa Insurance	ng Co. cturer) OF SHOP rd of Boiler and	Expires /FIELD IN Id Pressure	1/30 Signature	ned inectors and the Hartford.	Repr State or Pr Ct.	9 97 , resentative)	Ohio
le certify that the the ASME Concertificate of Asmediate and employed by the sure vessel	ne statements de for Pressu Authorization de de Martfo described in	P/N 130694 made in this re Vessels, No. Name H valid commis ord Steam I this Manufac	s report are Section VII 3415 alvorsen sion issued Boiler Ins	CERT Botler & I CERT by The Na pection & a Report or	Engineeri (Manufa: (FICATE Itional Boa Insurance	ng Co. cturer) OF SHOP rd of Boiler and	Expires /FIELD IN d Pressure	1/30 Sipperficient of the properties of the pro	ned Note that the best of the	Repr State or Pr Ct.	g 97 resentative) rovince of have ins	Ohio per belia
The certify that the ASME Concertificate of Asmediate the undersigned and employed by the sure vessel anufacturer has	ne statements de for Pressur Authorization Hartford described in sconstructed	r made in this re Vessels, Sono. Name Howalid commisord Steam I this Manufactinis pressur	s report are Section VII 3415 alvorsen sion issued Boiler Ins sturer's Dat	CERT by The Na pection & a Report or accordance	Engineeri (Manufaci EFICATE Itional Boa Insurance ewith ASM	ng Co. cturer) OF SHOP rd of Boiler and	Expires /FIELD IN ad Pressure , 19 / / on VIII, Divis	1/30 Signal Section Signal Section Se	aned and the Hartford. e that, to the bigning this certification.	Repr State or Pr Ct. est of my k	g 97 resentative) revince of have inspector	Ohio per belia nor his
The certify that the ASME Concertificate of Asmediate the undersigned and employed by the sure vessel anufacturer has	ne statements de for Pressur Authorization Hartford described in sconstructed	r made in this re Vessels, Sono. Name Howalid commisord Steam I this Manufactinis pressur	s report are Section VII 3415 alvorsen sion issued Boiler Ins sturer's Dat	CERT by The Na pection & a Report or accordance	Engineeri (Manufaci EFICATE Itional Boa Insurance ewith ASM	ng Co. cturer) OF SHOP rd of Boiler and	Expires /FIELD IN ad Pressure , 19 / / on VIII, Divis	1/30 Signal Section Signal Section Se	aned and the Hartford. e that, to the bigning this certification.	Repr State or Pr Ct. est of my k	g 97 resentative) revince of have inspector	Ohio per belia nor his
The certify that the the ASME Concentificate of Astronomy the undersigned demployed by the ssure vessel anufacturer hamployer makes	ne statements de for Pressuranthorization Authorization Hartford described in sconstructed any warranty	r made in this re Vessels. No. Name Wallid commissord Steam I this Manufaction in this pressur, expressed	s report are Section VII 3415 alvorsen sion issued Boiler Ins sturer's Dat re vessel in or implied,	CERT Boiler & I CERT by The Na pection & a Report or accordance concerning	Engineeri (Manufactional Boal Insurance e with ASM the pressur	ng Co. cturer) OF SHOP rd of Boiler and	Expires /FIELD IN d Pressure , 19 977 on VIII, Divis	1/30 Signal Spection ISPECTION Vessel Inspection of and state in this Manual	ned inectors and the Hartford. e that, to the b gning this certif	Repr State or Pr Ct. est of my k licate neither	g 97 , resentative) rovince of have inspector urthermore, ne	Ohio per belia nor his ither the
/e certify that the the ASME Concertificate of Asternational Content of Asternation Content of the Undersigned End employed by	ne statements de for Pressuranthorization Authorization Hartford described in sconstructed any warranty	P/N 130694 made in this re Vessels. No. Name Malid commise ord Steam I this Manufacthis pressur, expressed II be liable in a	s report are Section VII 3415 alvorsen sion issued Boiler Ins sturer's Dat re vessel in or implied, any mannel	CERT Boiler & I CERT by The Na pection & a Report or accordance concerning for any pe	Engineeri (Manufa: FICATE Itional Boa Insurance ewith ASM the pressursonal injur	ng Co. cturer) OF SHOP rd of Boiler and ce 2/// E Code, Section are vessel party or property of	Expires /FIELD IN IN Pressure , 19 // on VIII, Divisit described damage or a	LISPECTIC Vessel Inspection 1. By sign this Manuloss of any kill	gned JiN Jinectors and the Hartford. The that, to the bigning this certifulacturer's Date and arising from the properties of the proper	State or Pr Ct. est of my k licate neither a Report. Fin	g 97 , resentative) rovince of have inspector urthermore, ne	Ohio pec belia nor his ither the pection.

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 Code Rules, Section VIII, Division 1

factured	and centilled by	<u>Halvorse</u>	n Boiler & Engine	eering Co	o. 7500 (Grand (Name :	Division	Avenue.	Cleve	land. Ohio 44	125		
2. Manufactured	for The Di	ipps Co	548 N. Cherry Sti	reet. Ger	mantown.	Oliio	45327	of Purchaser)			_		
3. Location of ins	tallation TI	ı-known			,		-						
3. Location of its	TaliationOt	1-KHOWH				(Na	ame and a	ddress)					
4. Type:		Rolled &	welded cylinder					18,-20			-		
4. Type			(shell, two-piece head, t	ube bundle))			serial No.)			(CRN)		
			179	1-94		Hal	vorsen F	Boiler & Er	ιστσ	Co		1994	
(Nati).	Bd. No.)		(Drawin					ving prepared l			(Y	ear built)	
5. ASME Code, S	Section VIII Div. 1		1992 1993 A	Addenda								·	
J. ASIME 0006, E	1601(01) ¥111, D14.		Edition and Addenda			, —	Code	Case No.	_	Specia	Service pe	r UG-120(3)
Items 6 - 11 Incl. I	to be completed for	or single wai	l vessels. Jackels of Jac	keled vesse	els, shell of h	eat exch	angers, or	chamber of m	utti-ch	amher vessels.	•		
6. Shell (a) No.	of course(s):		1		(b) Ov	erall leng	gth It & in.;			4'0.75"			
Course	(s)		Malerial		Thick	ness	Long	Joint (Cal. A)		Circum, Joint (Cat	A. B & C)	Heat Tr	ealment
No.Diameter, in.	Length ft. & In.		Spec./Grade or Type		Nom.	Corr.	Type Full.	Spot, None	EII.	Type Full. Spot. No.	ne Elt.	Temp.	Time
1 20.25"	4'0.75"		SA-240Tp.316L		.5(1/1)	-	. 1	None			<u> </u>	i —]	
2 OD			*****		<u>!</u>		'			<u> </u>			
_		1			<u> </u>					<u> </u>	<u> </u>	<u> </u>	
7. Heads: (a)						(b)							
			Grade or Type) H.TTir	ne & Temp				(Mat'l Spe	c, No	Grade or Type) H.1	Time & T		
Location (Top		ness	Radius	Elliptical	Conical	Hemi	spherical	Flat	Sid	e lo Pressure		Category	
Bottom, Ends) Min.	Corr.	Crown Knuckle	Ratio	Apex Angle	· F	Radius	Diameter	Conv	ex Concave	Type Full	Spot. None	E#.
(a)		<u> </u>		<u>: - </u>									
(5)									_=		!		
8. Type of lacket		other lasteni	ng)			Jack	(Marī) et closure	Spec. No., Gr		escribe as ogee & w		•	
lí bar. give din	nensions											describe o	r skelch.
9. MAWP	//accord	(_ psi al max, lemp	(internal)			٩F	Min. design m	etal ter	np	°F al		p:
	(internal)	(external)		(internal)	(exi	ernal)							
10. Impact test	-			Marain ala									
				,		ine com	oneni(s) i	mpact tested)					
11. Hydro., pneu.,				Proof te	st								
items 12 and 131	o de completed it	or tube secil	Jn.										
2 Tubesheet:	Stationary (Ma	I Spec No.	Dia., in. (su	hiect to nee	96 /		lom. thk,. i		Corr	Allow in.	Altachmen	1 (welded o	r bolled
	Otalional y (ival	110000.110)	<i>5</i> -41, 11. (55.	Djour to pro-					0.01,			_	
Floating (M	at'l Spec. No.)		Dia., in.	Nor	n, thk., in.			Corr. Allow ir			Attachmen	t	
3 (ur opes,		5144, 111										
13.Tubes:	Spec. No., Grad	le or Type	O.D	in.		lom, thk.	, in, or gat	ine -		umber	Туре	(Straight o	(U)
	·		ambers of jackeled vess				-						
	,						th (ft & in.)):					
	ourse(s)		Material		Thick	1855	1	ong Joint (Cal.	A)	: Circum. Joint (0	Cat. A. B &	C) [Hear]	realme
No.I Diameter. in.		+	Spec./Grade or Type		Nom.	Corr.				Type : Full Spot			1
i canotes. III.	Conguin. a III.	-		- :						1		_ +	
	-	-i -					· - !		·				
	1	+		i					; -	1=+==	_ †]		
				· ·					,				<u>'</u>

15. Heads: (a	a)	(Mat	Spec. No., C	erade or Tyn	a) H T .Time	. V Tamp	(b		(Mat) Suc	ec. No., Grade o	· Tuncl H T	Time & Town	<u>:</u>
I I annier (~ l		ness	, 	adius	Elliptical	Conical	Hemispheric			ressure		
Location (Min.	Corr.	Crown	Knuckle	Ratio	Apex Angle	Radius	Diamet			Catego Type Full. Spo	
(a)				1		1	Apox Anglo	7140103	Diamo	i i		!	
(p)						+ =		<u> </u>					
(-);							<u>, — </u>			:		: - : -	
Il removable, b	oolts us	ed (describe	other fastenin	ng)		<u>-</u>					. "	· ; · .	
			• *							rade. Size. No.)			
16. MAWP			/	psi at ma	x. lemp. –	(I=1B			Min, design m	netal temp.		· °Fat _	
17. Impact test	•	ernai) 	(external)			(internal)	(externa	ai) .			_		-
				•	(Ir		or no and the co	omponent(s) in	npact tested)				
18. Hydro., pnd 19. Nozzles, in						Proof test							
Purpose (inte	<u> </u>		,			Materia		i Nozzle Tř	hlakanan !	Pointonnant	: U	Attack and	Lazakia
Outlet, Drain.	- 1	Diameter o. or Size	Flange		Nozzle		Flange .	Nom.	Corr.	Reinforcement Material	:	Altached	Locatio
Odiet, Orain, t	1	0, 0,20	Туре		1102210	•	range .	; Nom. i	Corr.	Material	! Nozz!	Flange	(Insp. Op
						· ·		•	•		<u> </u>	1	
		-						•				1 .	 -
	- 		1	- f		- !		 :			•	<u>'</u>	!
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i	<u></u>			;		:						; .	
	i			:		:							1
	1												
21. Remarks:		2.) All des	40T316L i	tions and h	upplied by	testing by			(Describe	e) 		(Where a	and how)
			am butt joi		<u> </u>								
						, internal s	stiffener ring.						
		5.) Dupps	P/N 13069	L (P.O.#23	865).								
											~ ~		
		_											
					CERTI	FICATE	OF SHOP/F	FIELD COL	MPLIANC	Ε			
We certify th	at the	statements	made in thi	s report are						orkmanship of	this pressi	re vessel part	conform
to the ASME					I. Division 1				. /2.1				,
U Certificate	of Au	thorization	No	3415				Expires	17.53		1	9 9/	
Date /D	.20	94	ŭ	alvorcen	Boiler & I	Fogiveer	ina Co				1	[[],]	
Date/	27		Name	MITOISCII	Boiler & I	(Manuta			_ Sig	not fur	Ben	esentative)	
					CERT		OF SHOP	VEIELD IN	SPECTIO		(нер	esemanve)	
I, the unders			ralid commis		by The Na	ational Boa	rd of Boiler ar			ectors and the Hartford.	State or Pi Ct.		Ohio spected the
pressure ve	ssel de							19 94	. and state	that, to the b		nowledge and	belie(-
Manufacture	or has	Constructed	this preserve	re vecesi in	accordana	a with ASA	AE Code Soci	ion VIII Divis	ion 1 Ru sin	ning this certifi	icate neithe	the inspector	nr C
										facturer's Data			
,			l beliablein	any manner	for any per	rsonal injur	ry or property			nd arising from			
Date 4	24/9	7	Signed 2	(Aut	horized ins	Acor pector)	rb_	Commissio	ons CA	1 Board incl. e	MM- /4	, State, Provin	ice and No