PO# 1C8-4944-C-M003 Job No. 15430

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

26"x36"-1448 SqFt UTSSMX

Course (s)   Matrial   Cexternal   Cexte																				
2. Manufactured for McNeil Specialty Products Company, Highway 43 & Industrial Highway McIntoch, AL 36553  3. Location of installation  Same  4. Type: Horizontal Reboiler / Heat Exchanger B-8933 (Name and addresse of Purchased)  5. ASME Code, Section VIII, Db. 1  1995-97A  Code Class Mc. Special Speci	1.	Manufactured ar	d certified by	y Per	ry Product	s Corpor	ration 25	Mt. L	aurel Re											
3. Location of installation  4. Type: Horizontal (rank, insparation, pit. version, head each, etc.)  4. Type: Horizontal (rank, insparation, pit. version, head each, etc.)  5. ASME Code, Section VIII, Dw. 1  1995-97A  Code Case No.  Code Case No.  Code Case No.  Code Case No.  Special Service per UC-120(d)  Items 6 - 11 incl. to be completed for singlet will version, headered (allow)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  Special Service per UC-120(d)  No. Diameter. in Length (rit. 8 in.)  No. Diameter. in Length (rit. 8 in.)	2.	Manufactured fo	McN	eil Sp	ecialty Pro	ducts Co	ompany,	Highwa	ay 43 &	Indus	trial F	lighwa	ay, Mc	Intosh		36553		-55.00000000000000000000000000000000000		
Name and address    Cleark, separately,   Cleark, separately,   Cleark, separately,   Cleark, separately,   Cleark, separately,   Cleark, separately,   Cleark,   Cl	3. i	Location of insta	lation S	Same						(1444)	ne and i	audi ess	or r uron	a561)						
S. ASME Code, Section VIII, Div. 1			- T			1000			77		(1)	Name an	d addres	s)						1000
Elemen 6 - 11 incl. to be completed for single wall vessels, jackets of jacketed vessels, sheld of heat exchanger, or chamber of multi-chamber vessels.	4.	, ypo		e) (T							.)	(CRN)					(N			
Elemen 6 - 11 incl. to be completed for single wall vessels, jackets of jacketed vessels, sheld of heat exchanger, or chamber of multi-chamber vessels.	_	ASME Codo So	ation VIII Da		ř	100	5-97A													and the street of
Bittern 6 - 11 Inc. 10 to comprehend for single wall vessels, jackets of jackets of packets with seasons, shall of heat exchangers, or chamber of multi-chamber vessels.	J. 1	ASIVIE Code, Se	CHOIL AIR, DI	v. 1 _	. Editle			i		-	Coc	de Case	No.			Specia	Sen	/ice pe	r UG-120(c	)
Course(e)   Matiental   Thickness   Long Joint (Cat. A)   Circum, Joint (Cat. A)   B CO   Hoat Treatment				100	gle wall vesse	els, jackets	of jacketed	vessels,							nber ve	ssels.				Ć.
No.   Diameter, in.   Length (fit, 8 in.)   Spec,Grate or Type   Nom.   Corr.   Type   Full, Spot, None   Eff.   Type   Full, Spot, None   Eff.   Type   Time   Time   Time   Time   Time   Sec.   S	6. 3	Shell (a) No. of	course(s):	_4_					(b) Ove	erali leng	tn (It & I	in.): _	18 - 0							
2   36"   8"-0"   SA-240 Tp304L		Course(s)			Material			-										& C)	Heat Tre	
1	-		-	-						. Type			-	-	pe Ful				Temp.	Time
1								- 10		+										
The control of the	-	500 1121											-		-					
Location (Top,   Thickness   Radius   Eligiblical   Conical   Hemispherical   Fibal   Side of Pressure   Catagory X	1					4L	1/4"	0	1		None		%		None 70		70%			
Location (Top.   Stotem Ends)   Min.   Corr.   Crown   Knuckle   Radius   Apex Angle   Hemispherical   Flat   Side to Pressure   Correw   Type   Full, Spot, None   Eff.	7. 1																			
								7	-11	Homis	nhorios							16 Ot 16	<del></del>	^
(b)   L. End   .245"   0   .36"   .2-1/4"						· · · · · · · · · · · · · · · · · · ·	-				S	DI					Type Full			
It removable, bolts used (describe other fastening)	(a)	I. Fnd										.0		JOHNEX					and the second	
If removable, bolts used (describe other fastening)	-	D. Dile				2 1/4		1							_			<del>                                     </del>		0570
Internal   (external   (exte	9. 1				ps	i at max. ter	mp. 3	150			°F.		Vlin. desi				, It	bolted,	describe o	
Course(s)   Material   Thickness   Length (ft. & in.)   Spec./Grade or Type   Norm.   Corr. Type   Full, Spot, None   Eff.   Temp.   Time   Location (Top.   Edition (Top.	٥	-		(exte		r ar rradi. tor			(exte	rnal)			viiii. Goog	,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		20				
11. Hydro., pneu., or comb. test press.	10.	Impact test	No per C	ode pa	aragraphs	UG-20 (1	f), UCS-6	66(a) au	nd UHA	1-51(d)	(e).	) impact	tested)			-	_			
12 Tubesheet:   SA-240 Tp304L   26"   1-3/4"   0   Bolted	11.	Hydro., pneu., o	r comb. test	press.	167	7		m - 1		17 57		, <b>,</b> .	,							
Stationary (Mat'l Spec. No)   Dia, in. (subject to press.)   Nom. thk., in.   Corr. Allow., in.   Attachment (welded or botted)				ā	e sections.											13				
Body Fig. SA-516 Gr70   26-1/8"ID x 30-5/8" OD   1-3/4"   0   Retained by liner	12. Tubesheet: SA-240 Tp304L 26" 1-3/4" 0 Bolted																			
Body Fig.: SA-516 Gr70		14: 10									om. thk	., in.		Corr.	Allow., i					or bolted)
13.Tubes:   SA-249 TP304L   3/4"   18 GA.   222   U	Body Fig. SA-516 Gr70 26-1/8"ID x 30-5/8" OD 1-3/4" 0 Retained by liner																			
Mat'l Spec. No., Grade or Type   O.D., in.   Nom. thk., in. or gauge   Number   Type (Straight or U)																				
terms 14 - 18 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.  14. Shell (a) No. of course(s): 1	13.											12.75					_	_		
14. Shell (a) No. of course(s): 1								001-10 <b>4</b> 00 0000 0000				gauge		Nt	mber			Туре	(Straight o	r U)
No.   Diameter, in.   Length (ft. & in.)   Spec./Grade or Type   Nom.   Corr.   Type   Full, Spot, None   Eff.   Type   Full, Spot, None   Eff.   Temp.   Time				_	nner chambei	rs of jackete	ed vessels o	or channe				in.): 2	2'- 3"							
No.   Diameter, in.   Length (ft. & in.)   Spec./Grade or Type   Nom.   Corr.   Type   Full, Spot, None   Eff.   Type   Full, Spot, None   Eff.   Temp.   Time	_	Co	urea(e)	-		Material			Thicks	2000	т	Long I	oint (Cat	۸١	Cir	cum loint	(Cat	A B 8	C) Heat	Freatment
1   26"   2'-3"   SA-240 Tp304L   3/16"   0   1   None   70%   1   None   70%       15.   Heads: (a)   SA-240 Tp304L   (b)     (Mat'l Spec. No., Grade or Type) H.TTime & Temp   (Mat'l Spec. No., Grade or Type) H.TTime & Temp   (Mat'l Spec. No., Grade or Type) H.TTime & Temp																				
15. Heads: (a) SA-240 Tp304L (b)  (Mat'l Spec. No., Grade or Type) H.TTime & Temp    Location (Top, Bottom, Ends)   Min.   Corr.   Crown   Knuckle   Ratio   Apex Angle   Radius   Diameter   Convex   Concave   Type   Full, Spot, None   Eff.	-														-		1			
Contact   Cont	1 20 2-3		-	5A-240 1p304L				3/10		1 None		one	70%		140	Ivone		0% -		
Contact   Cont	$\vdash$										1			_	+					
Contact   Cont	15	Heads: (a)	\$4-240	Tp304	T					(b)										
Location (Top, Bottom, Ends)    Diameter   Convex   Concave   Type   Full, Spot, None   Eff.	13.	. ισαασ. (α)				or Type) H.	TTime & T	Гетр		- (5)		(M	fat'l Spec	. No., C	rade or	Type) H.7	rTin	ne & Te	emp	
Bottom, Ends   Min.   Corr.   Crown   Knuckle   Ratio   Apex Angle   Radius   Diameter   Convex   Concave   Type   Full, Spot, None   Eff.		Location (Top.				Radius Ellipt			Conica	al H	Hemispherical			t Sk		le to Pressure				
	D-H E1-3				. Crov	vn Kn	nuckle	Ratio	Apex Ar	ngle	Radius		Diamete	er Co	Convex Conce		Ту	pe Ful	l, Spot, Nor	ne Eff.
(b)			.1619"	0	26"	2-1	1/4"	-	_									S	None	85%
	(b)										-	.	_							

							~	24				
16. MAWP 100 psi at max. temp. 350							oF !	Min. desigi	metal temp. 20	0 °F a	t10	0 psi.
	nterna		(external)		(internal)	,						
17. Impact test N	lo p	er Code	paragraphs UG-2			nd UHA-51(d)(d) or no and the comp		nnoet toete	d\			
18. Hydro., pneu.,	or cor	nb. test pr	ess. 167	976	Proof tes		onen(s) ii	iipaci iesie	u)			
19. Nozzles, inspec	ction,	and safety	valve openings:									
Purpose (inlet,	11 13	Diameter	Flange		Mate	rial	Nozzle	Thickness	Reinforcement	How At	tached	Location
Outlet, Drain, etc.)	No.	or Size	Туре	Nozzle		Flange	Nom.	Corr.	Material	Nozzle	Flange	(Insp.Open)
Various	2	4"	CL150 LJ	SA-312 TP3	04L	SA-105	.237"	0	SA-240 Tp304L	q	la	
Various	6	2"	CL150 LJ	SA-312 TP3		SA-105	.154"	0	SA-240 Tp304L	9	la	
Various	3	2"	CL150 LJ	SA-312 TP3	-	SA-105	.154"	0		d	1a	
Outlet	3	6"	Weld End	SA-312 TP3			.280"	0	SA-240 Tp304L	_ q		
Inlet	1	10"	CL150 LJ	SA-312 TP3		SA-105	.365"	0	SA-240 Tp304L	q	1a	
Manway	1	24"	100# Plate SO	SA-240 30	4L	SA-516 Gr70	3/8"	0		<u>d</u>	3	Shell
							L	(2) (2	L			
20. Supports: Skirt	-	(Yes or N	Lugs	Le (No.)	gs _	Other	rs	(2) Sa	ddles Atta	iched W	elded to n	nain shell.
-			nber, mfg's. name and									
22. Remarks: * ]	his	shell co	urse is an eccent	ric reducer wi	th 36"	major diamete	r and 26	" minor	diameter.			
Timit mot d		nad for 1	athal assiss II	C 46(a) East					3-100		-	
			ethal service. U			The state of the s		.1				
Unit nyare	-les	tea in no	orizontal position	. Full capac	ity said	ety rener valve	instaneo	eisewn	ere in system.			
						FICATE OF SH		교사기가 등위하기 (8기급)				20020
					that al	I details of design,	material,	construc	tion, and workmans	hip of this ve	essel confo	rm to
			Vessels, Section V	III, Division 1,	28		Expires		12/31		2000	
U Certificate of	Autr	iorization	No		20		Expires		12/31	;	2000	7 772
Date MAY	1	2 199	Jame		ON THE RESERVE	Corporation			Signed 3	(Represe	suis ntative)	
						ICATE OF SHO	OP INSE	PECTIO	N	(Heprese	illativo)	
I, the undersigned and employed by		dingavali	d commission issued	by The National		of Boiler and Press			orsand the State or P	rovince of	have in	NJ spected
		escribed	in this Manufacturer		-	MAY 1219	000	and state	e that, to the best of	Chelliphone State Chemical Control of the Control o		
The state of the s				and the second of the second o		ME Code, Section	VIII, Divisi		signing this certificat			1111-1111
employer makes	any	warranty,	expressed or implie	d, concerning th	ne press	sure vessel describ	oed in this	Manufacti	urer's Data Report. F	urthermore	, neither the	Inspector
nor his employer	shal	l be liable	in any manner for a	any personal inju	ury or p	roperty damage or	a loss of	any kind	arising from or conf	nected with t	this inspecti	on.
Date MAY 1	2	<b>1000</b> Sig	ned Mills	aglay.			Commissio	ons	NB 7050	AR N.	1478	
			// 6	uthorized Inspe	ector)			(N	at'l Board incl. endo	rsement, St	ate, Provinc	e and No.)
	NAS V					FIELD ASSEM				6.		
			n this reportare corr	ectand that the	field as	sembly constructi	onofall pa	artsof this	vessel conforms wit	th the require	ements of A	SME
Code, Section VI U Certificate of A			lo.			Expires					€1	
Date		Nam					Sign	nad				
Date		_ Ivaiii	-	(Assem	nbler)		_ Sigr		(Represer	ntative)		
			С	ERTIFICATE	OF F	IELD ASSEMB	LY INSF	PECTIO	N		942911	0
I, the undersigne and employed by		olding a va	alid commission issu	ued by The Natio	onal Bo	ard of Boiler and F	Pressure \	Vessel Ins	spectors and the Sta	ate or Provir	nce of	
		tatements				아들아이는 하는 그리고 하게 된 전하는 데 없어야 하는데 없는데 없었다.			e that parts referred			
and halled the M									cted by me and to the			
									ode, Section VIII, D			
expressed or imp	olied,	concerni		sel described in	this M	anufacturer's Data	Report.	Furthermo	Inspector nor his er ore, neither the Inspected with this inspec	ector nor his		
Date	ici II I	Signed		Toponty damage	, o, a 10	Commis		J. COMINEC	TOG WILL THIS HISPEC	uon.		
		_ Signed		uthorized Inspec	ctor)		The state of the s	(Nat'l Boa	ard incl. endorsemen	nt, State, Pro	ovince and	No.)