PO# 1C8-4944-C-M003 FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS 14"- 424 SqFt Job No. 15431 FTSX As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 Manufactured and certified by Perry Products Corporation 25 Mt. Laurel Road, Hainesport, NJ 08036 McNeil Specialty Products Company, Highway 43 & Industrial Highway, McIntosh, AL 36553 (Name and address of Purchaser) Same Location of justallation. (Name and address) Horizontal Heat Exchanger B-5804 D-98458 Rev. 2 (Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exh., etc.) (CRN) (Mig's serial No.) (Drawing No.) (Nat'l, Bd, No.) (Year buili) 1995-97A 5. ASME Code, Section VIII. Div. 1 Edition and Addenda (date) Code Case No. Special Service per UG-120(d) Items 6 - 11 incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multi-chamber vessels. 6 Shell (a) No of course(s): (b) Overall length (ft & in.): 15'- 11 3/4" Course(s) Material Thickness Long Joint (Cat. A) Circum, Joint (Cat. A, B & C) Heat Treatment Diameter, in. Length (ft. & in.) Spec./Grade or Type Nom. Corr. Type Full, Spot, None Type Full, Spot, None Temp. Time Eff. 10'- 3 3/4" 14" SA-53 GrB 312" 1/8" Ε 85% None 70% None (See below) 3 1.2" Expansion Joint (See Below) 5`-1" 312" 14" SA-53 GrB 1/8" E 85% None None 70% Expansion Joint SA-516 Gr70 7. Heads: (a) (Mat'l Spec. No., Grade or Type) H.T.-Time & Temp (Mat'l Spec. No., Grade or Type) H.T.-Time & Temp Radius Thickness Flat Location (Top. Elliptical Conical Hemispherical Side to Pressure Bottom, Ends) Diameter Type Full, Spot, None Min. Corr. Crown Knuckle Ratio Apex Angle Radius Convex Concave Eff. Center .11153/4" Flanged and flued heads S None 65% (b) 14" OD x 24" OD If removable, botts used (describe other fastening) (Mat'l Spec. No., Grade, size, No.) 8 Type of jacket Jacket closure (Describe as ogee #13 1, bar, etc.) If bar, give dimensions if bolted, describe or sketch 9 MAWP psi at max, temp. Min. design metal temp. 100 350 (Internal) 20 100 (Agrarya) (external) No per Code paragraphs UG-20 (f), UCS-66(a) and UHA-51(d)(e).

(Indicate year or no and the component(s) impact tested) 10 Impact test Proof test \_\_\_\_ 11 Hydro , pneu., or comb. test press. items 12 and 13 to be completed for tube sections 14" SA-240 Tp304L 1-1/8" 0 Welded Stationary (Mat1 Spec. No) Dia., in. (subject to press.) Nom. thk.. in Corr. Allow... in. Attachment (welded or bolted) Body Flg. SA-516 Gr70 14-1/8" ID x 18-1/8" OD 1-1/4" 0 Retail by tubesheet Corr Allow in Nom thk in Floating (Mat1 Spec. No. ) Dia., In. Attachment SA-249 TP304L 3/4" 18 GA. 136 Straight 13 Tubes Mai'l Spec No. Grade or Type O.D., in. Nom. thk., in. or gauge Number Type (Straight or U) Items 14 - 18 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers 14 Shell (a) No. of course(s). 1/1 (b) Overall length (ft & in.): 1 @ 6" Lg. & 1 @ 10" Lg. Circum, Joint (Cat. A, B & C) Heat Treatment Long Joint (Cat. A) Course(s) Material Thickness Type Full, Spot, None Type Full, Spot, None No Diameter in Length (ff. & in.) Spec./Grade or Type Corr. Eff. Eff. Temp. Tlme Nom. 14" 11. 3/16" SA-240 Tp304L 70% 1 None None 70% 14" 10" SA-240 Tp304L 70% 3-16" None None 70%

1-,	Heads (a)	SA-240 T	p304L				(b	SA-240	Tp304L					
(Mat'l Spec. No., Grade or Type) H.TTime & Temp							(Mai'l Spec. No., Grade or Type) H.TTime & Temp							
	Location (Top Bottom Ends)	Thickness			Radius		Conical	Conical Hemispherical		Side to Pressure		Category A		
		Min	Con	Crown	Knuckle	Ralio	Apax Angle	Radius	Diameter	Convex	Concave	Type F	ull, Spot. None	Eff.
d1	1 End	095211	0	14"	7 8"			gong	****		Yes	S	None	85%
ţ.,	k End	0952	()	14"	7.8"					***	Yes	S	None	185001

If removable, boils used (describe other fastening)

SA-193 GrB7, 5/8" Dia. x 6" Lg., (24)

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

16 MAWP	[UC]		nax. temp. 350		-	Min. desig	n metal temp2	50 ok	at10	O psi
•		(external) paragraphs UG-2	(Internal 0 (f), UCS-66(a) au							
	7 47 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Principles O.O. 2		or no and the cor		r.pact teste	ed)			
18 Hydro , pneu., i 19 Nozzles, inspec			Proof tes							
Purpose (inlet,	Diameter	Flange	Mate	rial	Nozzla	Thickness	Reinforcement	How A	Mached	Location
Outlet Drain, etc.)	No or Size	Туре	Nozzle	Flange	Nom.	Corr.	Material	Nozzle	Flange	(Insp.Open
Inlet Outl <u>et</u>	. 22"	CL150 LJ	SA-312 TP304L	SA-105	.154"	0	SA-240 Tp304L	g	la	
iniet Outlet		CL150 SO	SA-53 GrB	SA-105	.218"	1/8"	SA-516 Gr70	<u> </u>	3	
Vent Drain	_23.4"+	Half Coupling	SA-182 F304L	****	3000#	0	**************************************	d		M-to-sa
Vent <u>Drain</u>	5 - 14,	Half Coupling	SA-105	Name of the last o	3000#	1/8"		d	<u> </u>	
-										
20 Supports: Skirt		Lugs	Legs	Oth	ers	(2) Sac	idles	<u> </u>	/elded to m	nain chall
	(Yes or No		lo.)	(No.)		(Descri		ached W	(Where an	
(List the name of	of part, item num	ber. mfg's, name and k	and signed by Commissi dentifying number) Cc. UG-46(a). For							
			Safety valve insta			m.				
					· · · · · · · · · · · · · · · · · · ·					- 17-02
			CERTII	FICATE OF S	HOP CO	MPLIAN	CE			
We certify that the	he statements	made in this report a	are correct and that all	details of design	n, material,	construct	ion, and workmans	hip of this v	essel confor	m to
		Vessels, Section VIII	, Division 1, 4328		<b>-</b>		10/21		3000	
U Certificate of A	Authorization N	vo	7528		Expires		12/31		2000	
Date JUN	0.4	lame	Perry Products (Menufa				Signed /	Represe	wike	
* ** ***********				CATE OF SH	OP INSP	ECTION	J	(Liebiese	ilalive)	
the undersigned,	holding a valid	commission issued b	y The National Board of	Boiler and Pres	sure Vesse	Inspecto	• rs and the Stateor F	rovince of		NJ
and employed by			HSB I&I Ç	9.0	NAA		of <u>Hartfo</u>	rd, CT	have ins	`
		this Manufacturer's		1AK 3 3 1		and state	that, to the best of	my knowle	dge and beli	ef, the
manutacturer nas i	constructed the	is pressure vessel in	accordance with ASM	E Code, Section	VIII, Divisio	xn 1. By si	gning this certificat	e neither the	Inspector no	or his
employer makes a nor his employer s	ny warranty, e hall be liable ir	expressed or implied,	concerning the pressu personal injury or pro	ure vessel descri	bed in this N	/lanufactu	rer's Data Report. F	urthermore,	, neither the Ir	rspector
nor ma employer a	man oc nabic ii	ASI.	/ personal injury or pro	perty damage o	I a loss or a		5 A			<b>л</b> .
Date IIIN A	Signe		All 19		Commission		NB 7050/			
		<del></del>	horized Inspector)				17 Board incl. endo	rsement, Sta	ate, Province	and No.)
We certify that the	statementson	this report are correc	ERTIFICATE OF F tand that the field ass	-IELD ASSEN	BLY CO	MPLIAN	ICE	h tha an an isa		A 45"
Code, Section VIII		ans reportate correc	tand that the new ass	embly construct	юпоган раг	tsor this v	essei conforms wit	n tne require	ements of AS	ME
J Certificate of Au				Expires						
Date	Name	100.2	ARC 1 MM NO NA ARCHITECT IN IN IN IN IN INC.		Signe	ord.				
			(Assembler)		Sign	<b>5</b> 0	(Represen	tative)		
		CEF	RTIFICATE OF FIE	LD ASSEMB	LY INSPI	ECTION				
the undersigned. and employed by	holding a valid		by The National Boar					te or Provin	ce of	
• •	e statements in	this Manufacturer's	Data Report with the	described press	ure vessel	-	that parts referred	to as data it	tems	
			ded in the certificate o							
and belief the Man	nulacturer has		embled this pressure							vessel :
vas inspected and	subjected to a	hydrostatic test of	psi. B	y signing this ce	rtificate nei	ther the Ir	spector nor his em	nployer make	es any warra	inty
			described in this Mar						employer sh	all
ie liable in Lity ma	nner for any pe	ersonal injury or prop	perty damage or a loss	of any kind aris	ing from or	connecte	d with this inspecti	on.		;
Date	Signed	** ##=*	بعد الدامية السدول العدر	Commis			province of the second second second second	and the second of the second o		
		(Auth	orized Inspector)		۷)	lat'i Board	l incl. endorsemen	t, State, Pro	vince and No	o.)