FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS (1) 12"-166 Sq. F= as required by the provisions of the ASME Code rules, Section VIII, Division 1 FTSSX Heat Exchanger

1. Manufa	actured and	d certified by	, Perry	Product	s Corpo	ration,	25 Mt. La	urel Road	, Haines	port, NJ 080
						(name a	ind address of mai	nulacturer) enter, Cha		
z. mandi	actu: Cu : O:					(name and add	fress of purchaser	)	<u>`</u>	
3. Locatio	on of instal	lation _So	fix Cor	oratio	n, 2800		rt Road,	Chattanoo	ga, TN	37406
4. Type:_	Horizo	ntal (ank)	B-4617 (mtr's, serial r	10.)	(CRN)		91130-1 (drawing no.)	4248 (Nat'l. E	3d. no.)	1991 (year built)
								fications of the	1	ER AND PRESSURE 989
7000	1989	-			ansinp con	IOIIII (U AGIV	C 00de, 3ectio		1	(year)
	(addenda (Da		(Code	Case no.)			(spe	cial service per UG-	·120(d))	
tems 6-11	inclusive to	be comple	ted for sतास	<del>ए लगा ए</del> ड	<del>उटा इ.नडरह</del> ा	<del>3 UT TAURETE</del>	ā∀ēssēR∃ <del>ā</del> r:	shells of heat e	exchangers.	
6. Shell:_	SA312-	T304 S/S		6"	<u> </u>	(COST Allow tip	<u>" 0'-</u>	12-3/4" 0	.D. 5'-	11-3/4 <sup>11</sup> Lg. oth (overall) (ft. & in.))
7. Seams:	Weld	ed		85				-		1
		sngl.))	(AT (spot or full)	) (eff. (%	(HT temp	. (*F)) (time)	(girth (dbl	sngl.)) (RT(spot	, partial, or full))	(no. of courses)
8. Heads:	(a)		(mat'l. (spec.	no., grade))		(b	)	(mat'l. (sp	ec. no., grade))	
	ation (top, tom, ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (convex or concave)
(a)		<b> </b>				13: <u>1</u> -1-17: 4				
(b)						11/2/2017				
. MAWP:	85 (psi)	at max. temp	5. <u>300</u> . (*F)	Min desig	n metal tem	p.: 20 (*F)	_at85 (psi)	Hydro., p <del>neu.</del> e	<del>म एक्नाठ</del> . test	pressure 145 (psi)
ems 12 an	d 13 to be	completed	for tube sec	tions.						TELAL DESERT
2. Tubesh	eets: SA	A240-T30	4 . no gr.)) (dia.	12-3/4	O.D.	3/4	Thk.	(corr. allow. (ii	- N	Welded
										ained by lir
<u> </u>	(floati	ng mat'l. (spec.	no., gr.))	(dia. (ir	1.))	(nom. thick	O# Std.	(corr. allow. (ir		(attachment)
. Tubes:	SA249-	-T304		5/8"		18 G	a.	169		straight lype (straight or U))
_	(mat'l. (s)	sec. no., gr.))	,	(OD (in.))	(nom	. thickness (in.	or gauge))	(no.)	{'	lype (straight or U))
				224-346						
		,						heat exchange		l @ 4" Lg.
		,								
. Shell: _	SA312-3	2304 S/S c. no., gr.))	(nom. ti	156**		(corr allow. (in	0,	-12-3/411 C		1 @ 4" Lg. @ 8" Lg. gth (overall) (ft. & in.))
. Shell: _	SA312-3 (mat'l. (spe Wed	2304 S/S c. no., gr.))	(nom. ti	156**		(corr allow (ir	0 *)  - DB1	-12-3/411 C		@ 8 <sup>th</sup> Lg. gth (overall) (ft. & in.))
. Shell: _	SA312-3 (mat'l. (spe Wed	1304 S/S ic. no., gr.)) .ded	(nom. ti	156 <sup>††</sup> nickness (in.))  (eff (		(corr allow. (in	0 *)  - DB1	-12-3/4 <sup>11</sup> C (dia. 10 (ft. & in.))	).D. 1 (len	@ 8 <sup>th</sup> Lg. gth (overall) (ft. & in.))
. Shell: Seams: . Flat: . Feads:	SA312-3 (mat'l. (spe Wed	1304 S/S ic. no., gr.)) .ded	(nom. ti —— (AT (spot or fu S	156 <sup>††</sup> nickness (in.))  (eff (		(corr allow (ir	0 *)  - DB1	-12-3/4 <sup>11</sup> C (dia. 10 (ft. & in.))	(len	@ 8 <sup>th</sup> Lg. gth (overall) (ft. & in.))
Seams: Flat: Loca botto  (a) R.	SA312-3 (mat'l. (spe Well (long (dt (a) S com, ends) End	2304 S/S ic. no gr.)) .ded ol sngl.)) SA105 C/	(RT (spot or fu S (mat'l. (spec. r	156 <sup>11</sup> nickness (in.))  { (eff (	35 - %)) (HT tem	(corr allow (in p. (*F)) (time (b)	O DB1  (girth (dbi	-12-3/4 <sup>11</sup> C (dia. IO (ft. & in.)) (7 sngl.)) (RT (spo (mat'l. (spo	(len t, partial, or full)	gth (overall) (ft. & in.))  1  (no. of courses)  Side to Pressure
Seams: Flat: Local botto  (a) R. (b) L.	SA312-3 (mat'l. (spe Well (long (dt (a) S (a) S (mat'l. (spe (a) S (a) S (a) S (b) S (b) S (c) S	2304 S/S ic. no., gr.)) ided il., sngl.)) SA105 C/ Minimum Thickness 1-3/16	(RT (spot or fu S (mat'l. (spec. r Corrosion Allowance	156 <sup>††</sup> nickness (in.)  { iii) (eff (  no. grade))  Crown Radius	35 %)) (HT tem.  Knuckle Radius	(corr allow. (in p. (*F)) (time (b) Ratio	O DB  (girth (dbi  Conical Apex Angle	-12-3/4 <sup>11</sup> C (dia. IO (ft. & in.)) [7] sngl.)) (RT (spo (mat'l. (spi Hemispherical Radius	t. partial, or full)  BC. no grade)  Flat Diameter  10-3/411	gth (overall) (ft. & in.))  1 (no. of courses)  Side to Pressure (convex or concave)  Concave
Shell: Seams: Flat: Loca botto (a) R. (b) L.	SA312-3 (mat'l. (spe Well (long (dt (a) S (a) S (mat'l. (spe (a) S (a) S (a) S (b) S (b) S (c) S	2304 S/S ic. no., gr.)) ided il., sngl.)) SA105 C/ Minimum Thickness 1-3/16	(RT (spot or fu S (mat'l. (spec. r Corrosion Allowance	156 <sup>††</sup> nickness (in.)  { iii) (eff (  no. grade))  Crown Radius	35 %)) (HT tem.  Knuckle Radius	(corr allow. (in p. (*F)) (time (b) Ratio	Conical Apex Angle  K 611 Lg.,	-12-3/4 <sup>11</sup> C (dia. IO (ft. & in.)) [7] sngl.)) (RT (spo (mat'l. (spi Hemispherical Radius	t, partial, or full)  ec. no grade)  Flat Diameter  10-3/4**  Dia.x5*	gth (overall) (ft. & in.))  1 (no. of courses)  Side to Pressure (convex or concave)  Concave   Lg. C/S stud

18. Nozzles, inspection and safety valve openings:

Purpose (inlet, outlet, drain, etc.)	Number	Dia or Size	Туре	Mat'l	Nom. Thickness	Reinforcement Material	How Attached	Location
Inlet	1	.611	CL-150	SA312	Sch #10	Inherent	Welded	Bonnet
				T304				
Outlet	1	2"	CL-150	SA312	Sch #10	Inherent	Welded	Bonnet
				T304				-
Inlet and	2	2"	CL-150	SA312	Sch #10	Inherent	Welded	Shell
Outlet				T304				
						<u> </u>		

	——
19. Supports: Skirt — Lugs 2 Legs — Other — Attached Welded to main shell (yes or no) (no.) (no.) (describe) (where and how)	
20. Remarks: Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for	or the
following items of the report:	
(name of part, item number, mfr's, name and identifying stamp)	
Unit not designed for lethal service. Unit designed for non-corrosive serv	ice.
Unit hydro-tested in horizontal position. Exempt from impact testing per Code	
paragraphs UG-20 (b), UCS-66 and UHA-51. Safety valve connection located elsewhe	re i
system. One bonnet consisting of 12"x 6" Sch #10 concentric reducer T304L, SA403.	
CERTIFICATE OF SHOP COMPLIANCE	
We certify that the statements made in this report are correct and that all details of design, material, construction and workmanship of	fthic
vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.	1 (1113
"U" Certificate of Authorization no. 4328 expires Dec. 31 19 91	i
"U" Certificate of Authorization no. 4328 expires Dec. 31 19 91  Date 9-12-91 Name Perry Products Corporation Signed J.M. J.C.L.  (manufacturer) (representative)	
(manufacturer) (representative)	
CERTIFICATE OF SHOP INSPECTION	
Vessel constructed by Perry Products Corporation at Hainesport, NJ	
I. the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the state or	·
ince of New Jersey and employed by Lumbermens Mutual Casualty Co. of Long Grove, IL	prov-
Report on SFP 1 2 1991, 19, and state that, to the best of my knowledge and belief, the manufacturer has constructed	Data
pressure vessel in accordance with ASME Code, Section VIII, Division 1.	this
By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vi	
described in the Manufacturers' Data Report. Furthermore, polithor the ingressing as his amplications at the first pressure vi	ssel
described in the Manufacturers' Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any	per-
sonal injury or property damage of a loss of any kind arising from or connected with this inspection.  Oate Commissions NB 7050 NJ 476  (Nat'l. 8d. (incl. endorsements) state, prov. and no.	
(Nat'l, 8d, (incl. endorsements) state, prov. and no	<del>,                                    </del>
CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE	
We certify that the field assembly construction of all assets of this way to	
We certify that the field assembly construction of all parts of this vessel conforms with the requirements of Section VIII, Division 1 o ASME BOILER AND PRESSURE VESSEL CODE.	fthe
"U" Certificate of Authorization noexpires, 19  DateNameSigned	
Date	
CERTIFICATE OF FIELD ASSEMBLY INSPECTION	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or	-vorc
ince ofand employed by	
01 have compared the statements in this Manufacturers'	Data
Report with the described pressure vessel and state that parts referred to as data items, not included in	ı the
certificate of shop inspection, have been inspected by me and that to the best of my knowledge and belief, the manufacturer has	con-
structed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel was inspe	cted
and subjected to a hydrostatic test ofpsi.	- 1
Ou standard with the same	ssel
By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the pressure ve	
described in the Manufacturers' Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any	per-
described in the Manufacturers' Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any sonal injury or property damage or a loss of any kind arising from or connected with this inspection.	per-
described in the Manufacturers' Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any	per-

C-4/3/
Job No: 13963
FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS(1) 12"-166 Sq. Ft as required by the provisions of the ASME Code rules, Section VIII, Division 1 FTSSX Heat Exchanger

2 Man	factured for	Sofix C	Corporati	on. 101	Northo		and address of mar nercial Ce	enter, Cha	ttanoora	., TN 37415
Z. Wallu	nactured ioi		- г		*	(name and ad	dress of purchaser	)	ccanooga	., IN 3/413
3. Locai	tion of insta	llation So	fix Cor	poratio	n, 2800	Riverpo	ort Road,	Chattanoo	ga, TN	37406
					1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	(na	me and address)			· The P
4. Type:	Horizo	ntal -	B-4617 (mtr's, serial			<u>D</u> -	-91130-1	4248 (Nat 1. E		1991
			١.							(year built)
										ER AND PRESSUR 989
7230	CE CODE. I	ne design, c	onstruction a	and workin	ansnip com	iorm to ASN	ie Code, Sectio	on VIII, Division	11:	(year)
	1989	· · · · · · · · · · · · · · · · · · ·	•			-				
	(addenda (D		•	e Case no.)				cial service per UG	• ••	
ems 6-11	inclusive t	o be compl	eted for s <del>ilig</del>	te watt ves	उस्र इत्यक्त	उ <i>ै। नुबरस्रहर</i> ह	व पराउराउ, जा	shells of heat e	exchangers.	
i. Shell:	SA312-	T304 S/	s .15	5611		II A II	0,4	12-3/4" 0	D 51_	11_3// Ta
	(mat'l. (spec	. no., grade))	(nom. t	hickness (in.))		(corr. allow. (in	.))	(dia. ID (ft. & in.))	(len	11-3/4" Lg. gth (overall) (ft. & in.))
. Seam:	<sub>s:</sub> Weld	ed		85						1
	(long. (dbl	. sngl.))	(RT (spot or full)	)) (eff. (%	6)) (HT temp.	(*F)) (time)	(girth (dbl	sngl.)) (RT(spot	, partial, or full))	(no. of courses)
. Heads	s: (a)		(mat'l. (spec.	no ocadell		(b	)	-	-	Control of the Contro
Γ.,	ocation (top,	Minimum	Corrosion	1	V	Curaniani		· · · · · · · · · · · · · · · · · · ·	ec. no., grade))	T
	ottom, ends)	Thickness	Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (convex or concave)
(a)	Astronomic State	15		1124-11		**************************************				
Туре	of jacket: closure:		ribe other fas	Proof	test: par, give dim	nensions:	(mat'ls <sub>i</sub>	oec. no., gr., size, n		
If remo	of jacket: closure:	describe as og	- lee & weld, bar. e	Proof	Jai, give uiii		(mat'l., s <sub>i</sub>	oec. no., gr., size, no	If boiled,	describe or sketch
If remo	of jacket: closure: p. 85 (psi)	describe as og at max. tem	- - jee & weld, bar, e p. 300 (*F)	Proof If to	Jai, give uiii		(mat'l., s <sub>i</sub>	oec. no., gr., size, no	If boiled,	42 (4.42) A. A. A
If remo	of jacket: closure: p. 85 (psi)	describe as og at max. tem	- lee & weld, bar. e	Proof If to	Jai, give uiii		(mat'l., s <sub>i</sub>	oec. no., gr., size, no	If boiled,	describe or sketch
If remo	of jacket:	describe as og at max. tem	p. 300 (*F)	Proof If to Min design	n metal tem	p.: 20 (*f)	(mat'l., s)	oec. no., gr., size, no	If boiled,	describe or sketch
If remo	of jacket: t closure: o: 85 (psi) and 13 to be heets: Sa	describe as og at max, tem completed	p. 300 (*F) for tube sec.	Proof  itc.)  Min design  tions.  12-3/4 <sup>1</sup> (in.) (subject	n metal tem	p.: 20 (*F)	(mat'l., s;	ec. no., gr., size, no.	If boiled, n=comb. test	describe or sketch pressure 145 (psi) Welded
If remo	of jacket: t closure: o: 85 (psi) and 13 to be heets: Sa	describe as og at max, tem completed	p. 300 (*F) for tube sec.	Proof  itc.)  Min design  tions.  12-3/4 <sup>1</sup> (in.) (subject	n metal tem	p.: 20 (*F)	(mat'l., s;	Hydro., p <del>neu. o</del> 11011 (corr. allow. (ir	If bolted,	describe or sketch pressure 145 (psi)  Welded chment (welded, bolted)
Type of Jacket MAWF	of jacket:	at max. tem  completed A240-T30 hary mat'l. (specification)	p. 300  (*F)  for tube second  (dia.	Proof  Itc.)  Min design  tions.  12-3/4  (in.) (subject  12-3/4 (dia. (in.)	n metal temp	p.: 20 (°F) 3/4' (nom. thick	(mat'l., s; at 85 (psi)  "Thk. (ness (in.))  "Std. (ness (in.))	Hydro., p <del>neu. o</del> (corr. allow. (ir	If bolted,	describe or sketch pressure 145 (psi)  Welded chment (welded, bolted) (atined by line (attachment)
Type of Jacket MAWF	of jacket:	at max. tem  completed A240-T30 hary mat'l. (specification)	p. 300  (*F)  for tube second  (c. no gr.))  (dia.	Proof  Itc.)  Min design  tions.  12-3/4  (in.) (subject  12-3/4 (dia. (in.)	n metal temp	p.: 20 (°F) 3/4' (nom. thick	(mat'l., s; at 85 (psi)  "Thk. (ness (in.))  "Std. (ness (in.))	Hydro., p <del>neu. o</del> 11011 (corr. allow. (ir	If bolted,	describe or sketch pressure 145 (psi)  Welded chment (welded, boiled) (atined by lin
Type of Jacket MAWF Tubes:	of jacket:	describe as og at max, tem completed A240-T30 ary mat 1. (specially mat 1. (speciall	p. 300 (*F)  for tube sectors )4 c. no gr.)) (dia.	Proof  itc.)  Min desig  tions.  12-3/4  (in.) (subject  12-3/6  (dia. (in.)  5/8**	n metal temp	20 (°F)  3/4  (nom. thick 15/ (nom. thick	(mat'i., s;   at 85 (psi)  Thk.  cness (in.i)  7 # Std.  cness (in.i)  a.	Hydro., preumo  ''O'  (corr. allow. (in  169 (no.)	If bolted,	describe or sketch pressure 145 (psi)  Welded chment (welded, bolted)
If remo	of jacket: closure: c. 85  (psi)  Ind 13 to be  Theets: SA (station (station (station (mat'l. (station)))  (mat'l. (station))  (inclusive the	describe as og at max, tem completed A240-T30 ary mat'l. (specially mat'l. (speciall	p. 300 (*F)  for tube sec. ()4 c. no gr.))  deted for instal	Proof  itc.)  Min design  tions.  12-3/4  (in.) (subject  12-3/4 (dia. (in.)  5/8!! (OD (in.))	n metal temp	3/4/ (nom. thick 15/ (nom. thick 18 Ga thickness (in.	(mat'l., s;  at 85 (psi)  "Thk. kness (in.))  # Std. kness (in.))  a. or gauge)	Hydro., preumo  ''O'  (corr. allow. (ir  ''O'  (corr. allow. (ir  169  (no.)	If bolted, recents. test  (atta	describe or sketch pressure 145 (psi)  Welded chment (welded, boiled) cained by lin (attachment) straight type (straight or U))
If remo	of jacket: closure: c. 85  (psi)  Ind 13 to be  Theets: SA (station (station (station (mat'l. (station)))  (mat'l. (station))  (inclusive the	describe as og at max, tem completed A240-T30 ary mat'l. (specially mat'l. (speciall	p. 300 (*F)  for tube sec. ()4 c. no gr.))  deted for instal	Proof  itc.)  Min design  tions.  12-3/4  (in.) (subject  12-3/4 (dia. (in.)  5/8!! (OD (in.))	n metal temp	3/4/ (nom. thick 15/ (nom. thick 18 Ga thickness (in.	(mat'l., s;  at 85 (psi)  "Thk. kness (in.))  # Std. kness (in.))  a. or gauge)	Hydro., preumo  ''O'  (corr. allow. (ir  ''O'  (corr. allow. (ir  169  (no.)	If bolted, recents. test  (atta	describe or sketch pressure 145 (psi)  Welded chment (welded, boiled) cained by lin (attachment) straight type (straight or U))
If removed. Type of Jacket. MAWF  ms 12 a  Tubesi  Tubes: ms 14-1  Shell:	of jacket:	at max. tem  completed  A240-T30  ary mat'l. (specT304  bec. no gr.))  o be completed  C304 S/S	p. 300 (*F)  for tube second (c. no., gr.))  detect for insecond (nom. ti	Proof  Itc.)  Min design  tions.  12–3/4  (in.) (subject  12–3/4  (dia. (in.)  5/8"  (OD (in.))	n metal temp	20 (°F)  3/4' (nom. thick 15/ (nom. thick 18 G/ thickness (in. cod vessels colling) (corr allow. (in	at85	Hydro., preuse  (corr. allow. (ir  1001  (corr. allow. (ir  169  (no.)  heat exchange  -12-3/41 O  (dia. 10 (ft. & in.))	If bolted, recents. test  (atta	describe or sketch pressure 145 (psi)  Welded chment (welded, bolted) cained by lin (attachment) straight type (straight or U))
If removed. Type of Jacker MAWF ms 12 a Tubesi y Flat Tubes: ms 14-1.	of jacket:	at max. tem  completed  A240-T30  ary mat'l. (specT304  bec. no gr.))  o be completed  C304 S/S	p. 300 (*F)  for tube second (c. no., gr.))  detect for insecond (nom. ti	Proof  Itc.)  Min design  tions.  12–3/4  (in.) (subject  12–3/4  (dia. (in.)  5/8"  (OD (in.))	n metal temp	20 (°F)  3/4' (nom. thick 15/ (nom. thick 18 G/ thickness (in. cod vessels colling) (corr allow. (in	(mat'l., s; at 85 (psi)  "Thk. (ness (in.))  # Std. (ness (in.))  a. or gauge))  # channels of  0' DBI	Hydro., preumo  (corr. allow. (ir  11011 (corr. allow. (ir  169 (no.) heat exchange  -12-3/411 0 (dia. 10 (ft. & in.))	If bolted,  necental test  (atta Ret	describe or sketch pressure 145 (psi)  Welded chment (welded, boiled) cained by lin (attachment) straight (spe (straight or U))  1 @ 4" Lg. @ 8" Lg. gth (overail) (ft. & in.))
If removed. Type of Jacket.  MAWF ms 12 a  Tubes: y Fla  Tubes: ms 14-1. Shell:	of jacket:	at max. tem  completed  A240-T30  ary mat'l. (specT304  bec. no gr.))  o be completed  C304 S/S	p. 300 (*F)  for tube sec. (AT (spot or tu	Proof  Itc.)  Min design  tions.  12–3/4  (in.) (subject  12–3/4  (dia. (in.)  5/8"  (OD (in.))	n metal temp	p.: 20 (°F)  3/4 (nom. thick 15/ (nom. thick 18 Ga thickness (in. (°C) (corr allow. (in. (°C))) (corr allow. (in. (°C)))	(mat'l., s;	Hydro., preumo  (corr. allow. (ir  11011 (corr. allow. (ir  169 (no.) heat exchange  -12-3/411 0 (dia. 10 (ft. & in.))	If bolted, recents. test  (atta	describe or sketch pressure 145 (psi)  Welded chment (welded, boiled) cained by lin (attachment) straight (spe (straight or U))  1 @ 4" Lg. @ 8" Lg. gth (overail) (ft. & in.))
If removed. Type of Jacker.  MAWF ms 12 a Tubes: y Fla Tubes: ms 14-1 Shell:	of jacket:	at max. tem  completed  A240-T30  ary mat'l. (specT304  bec. no gr.))  co be completed  C304 S/S  co. no gr.))  ded  ol., sngl.))	p. 300 (*F)  for tube sec. (AT (spot or tu	Proof tc.)  Min desig  tions.  12-3/4 (in.) (subject  12-3/4 (dia. (in.) 5/8!! (OD (in.))  156!!  nickness (in.))  (eff. (	n metal temp	20 (°F)  3/4' (nom. thick 15/ (nom. thick 18 G/ thickness (in. cod vessels colling) (corr allow. (in	(mat'l., s;	Hydro., preumo  (corr. allow. (ir  169 (no.)  heat exchange  -12-3/4** (dia. IO (ft. & in.))  sngl.))  (RT (spot	If bolted,  necental test  (atta Ret	describe or sketch pressure 145 (psi)  Welded chment (welded, boiled) cained by lin (attachment) straight (spe (straight or U))  1 @ 4" Lg. @ 8" Lg. gth (overail) (ft. & in.))
Tubes: Tubes: Shell: Seams	of jacket:	at max. tem  completed  A240-T30  ary mat'l. (specT304  bec. no gr.))  co be completed  C304 S/S  co. no gr.))  ded  ol., sngl.))	pee & weld, bar, e p. 300 (*F)  for tube sec; (4 c. no., gr.))  deted for inne (nom, t)  (AT (spot or ty	Proof tc.)  Min desig  tions.  12-3/4 (in.) (subject  12-3/4 (dia. (in.) 5/8!! (OD (in.))  156!!  nickness (in.))  (eff. (	n metal temp	p.: 20 (°F)  3/4 (nom. thick 15/ (nom. thick 18 Ga thickness (in. (°C) (corr allow. (in. (°C))) (corr allow. (in. (°C)))	(mat'l., s;	Hydro., preumo  (corr. allow. (ir  169 (no.)  heat exchange  -12-3/4** (dia. IO (ft. & in.))  sngl.))  (RT (spot	If bolted, recomb. test  (atta Ret  (b) (c) (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	describe or sketch pressure 145 (psi)  Welded chment (welded, boiled) cained by lin (attachment) straight (spe (straight or U))  1 @ 4" Lg. @ 8" Lg. gth (overail) (ft. & in.))
Type of Jacker MAWF ms 12 a Tubes: Tubes: Tubes: Shell: Seams Flat Feads:	of jacket:	describe as og at max. tem completed A240-T30 ary mat'l. (specially specially speciall	pee & weld. bar. e p. 300 (*F) for tube sec. ()4 c. no gr.)) deted for instal (AT (spot or lu S (mat'l. (spec. r	Proof  itc.)  Min design  tions.  12-3/4  (in.) (subject  12-3/6  (dia. (in.)  5/81  (OD (in.))  156  (eff (	n metal temp  1 0.D. 10 pressure))  41 I.D. (nom.	20 (°F)  3/4 (nom. thick 15/ (nom. thick 18 G/ thickness (in. (°C) (corr allow. (in. (°C)) (corr allow	(mat'l., s;  at 85 (psi)  "Thk. kness (in.))  \$\frac{1}{2} \text{ Std.} kness (in.))  a. or gauge)  achannels of  0'	Hydro., preuse  (corr. allow. (ir  101  (corr. allow. (ir  169  (no.)  heat exchange  -12-3/41 O  (dia. 10 (ft. & in.))  sngl.))  (mat'l. (spet  Hemispherical Radius	If bolted, n-comb. test  (atta Ret  (b.))  (c. no. grade))  Flat Diameter	describe or sketch pressure 145 (psi)  Welded chment (welded, bolted) cained by lin (attachment) straight (spe (straight or U))  1 @ 4" Lg. @ 8" Lg. gth (overall) (ft. & in.))  1 (no. of courses)  Side to Pressure (convex or concave)
Type of Jacker MAWF ms 12 a Tubes: y Fla Tubes: ns 14-1 Shell: Seams Flats: (a) R (b) L	of jacket:	at max. tem  completed  A240-T30 hary mat'l. (specT304 hec. no gr.)) ded http://doi.org/10/10/10/10/10/10/10/10/10/10/10/10/10/	p. 3()0 (*F)  for tube sec. (AC, no., gr.))  deted for instal (nom. If  (RT (spot or tu  ) (mat'l. (spec. r  Corrosion Allowance	Proof  Itc.)  Min desig  tions.  12-3/4  (in.) (subject  12-3/4  (dia. (in.)  5/8!  (OD (in.))  156!  nickness (in.))  (eff. (	n metal temp  to O.D. to pressure)  the I.D. (nom. to of jackets  Knuckle Radius	p.: 20 (°F)  3/4 (nom. thick 15/ (nom. thick 18 Gz thickness (in. o	(mat'l., s;  at 85 (psi)  "Thk. kness (in.))  # Std. tness (in.))  a. or gauge)  # channels of  0'))  DBi- (girth (dbl)  Conical Apex Angle	Hydro., preuse  (corr. allow. (ir  101  (corr. allow. (ir  169  (no.)  heat exchange  -12-3/41 O  (dia. 10 (ft. & in.))  sngl.))  (mat'l. (spet  Hemispherical Radius	If bolted, n-comb. test  n.)) (atta Ret  n.))  (n.)  (prs. (len  n., partial, or full))  ic. no., grade))	describe or sketch pressure 145 (psi)  Welded chment (welded, boited) cained by lin (attachment) straight type (straight or U))  1 @ 41 Lg. gth (overall) (ft. & in.)) 1 (no. of courses)

Purpose (inlet, outlet, drain, etc.)	Number	Dia or Size	Туре	Mat'l.	Nom. Thickness	Reinforcement Material	How Attached	Location
Inlet	1	6"	CL-150	SA312	Sch #10	Inherent	Welded	Bonnet
				T304				
Outlet	1	2"	CL-150		Sch #10	Inherent	Welded	Bonnet
				T304				
Inlet and	2	2"	CL-150	SA312	Sch #10	Inherent	Welded	Shell
Outlet				T304				
Supports: Skirt	Lugs	2Legs_	(	Other		Attached Weld	led to main	n shell

Uttet	<del> </del>			7.3114				
19. Supports: Skirt	Lugs	2Legs	(no.)	Other	describe)	Attached Weld	ed to main	shell
20. Remarks: Manufacturer	s' Partial Data	Reports prope	rly identifie	ed and signe	d by Commis	sioned Inspectors	have been furni	shed for the
following items of the r	eport:							
			(name	of part, item nu	mber, mfr's, name	and identifying stamp)		
Unit n	ot designe	d for let	hal ser	vice. U	Init desig	gned for non	-corrosive	service
Unit hydro-te	sted in ho	rizontal	positio	n. Exer	npt from	impact testi	ng per Cod	е
_ paragraphs UG	-20 (b), t	ICS-66 and	UHA-51	. Safet	y valve o	connection 1	ocated els	ewhere
svstem. One	bonnet cor	sisting o	f 12"x	6" Sch 4	10 concer	itric reduce	r T304L, S	A403.
We certify that the stateme vessel conform to the ASM		s report are co	rrect and t		s of design, m	naterial, constructi	ion and workma	nship of this
	, , , ,		-					
"U" Certificate of Authoriza  Date 9-12-91 Na	Perry	Products	res	ation	),	<b>0</b> 1	1.11 110	. 1
Date 7-12 1 Na	ime rerry	FIORUCES	manufacti	acion		Signed	رب الحد ، ۱۲۷ الحد representativ	(8)
							(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	Dommer Brand			SHOP INS		77 -	<i></i>	.T T
Vessel constructed by								
I, the undersigned, holding ince of <u>New Jersev</u>	_and employed	by Lumbe	rmens M	utual Ca	sualty Co	o. of Long G	rove, IL	
055 1 0 10	<u>01</u>	_of	ha	ave inspecte	d the pressure	e vessel described	in this Manufac	turers' Data
Report on SEP 1 2 19	<del>91</del> . 19	and state tha	it, to the be	est of my kn	owledge and	belief, the manufa	acturer has cons	structed this
pressure vessel in accordar	ice with ASME	Code, Section	1 VIII, Divis	ion 1.				
By signing this certificate n								
described in the Manufactu	rers' Data Repo	rt. Furthermor	e, neither t	he inspecto	r nor his empl	oyer shall be liabl	e in any manner	for any per-
sonal injury or property dar Date SEP 2 Signe	nage of a loss	of anypkind ari	ising from	or connecte	d with this in	spection or o		
Date SEP 1 5 19 Signe	d THINGTO	geage		C	ommissions_	<u>NR 1020</u>	.NJ 476	) 
		(Authorized Insp	ecteri			(Nat'l. 8d. (incl. endo	orsements) state, pro	v. and no.)
		CERTIFICATE	OF FIELD	ASSEMBL'	COMPLIANC	E		
We certify that the field ass	embly constru	ction of all par	ts of this v	essel confo	rms with the i	requirements of Se	ection VIII, Divis	sion 1 of the
ASME BOILER AND PRESS	URE VESSEL C	ODE.						
"U" Certificate of Authoriza	ition no	expir	es	, 19				
DateNam	e					Signed		
	{-	assembler that cert	ulied and cons	structed field as	sembly)		(representativ	e)
		CERTIFICATE	E OF FIELD	ASSEMBL	Y INSPECTIO	N		
l, the undersigned, holding a	a valid commiss					· -	actors and the s	tate or prov-
nce of	and employed	l by		a. 50a. 60, 1	soner and ric	oddie vedder mape	sciois and the s	tate of prov-
		. 07	£		have compare	ed the statements	in this Manufac	turara' Data
Report with the described pr	ressure vessel :	and state that o	arte referr	nd to se data	itomo	ed the statements	in this Manufac	turers Data
certificate of shop inspections are structed and assembled this								
structed and assembled this and subjected to a hydrosta				INIE COGE, S	ection VIII, Di	VISION I. INC DESC	rided vessel wa	is inspected
				<b>.</b>				
By signing this certificate ne								
described in the Manufactur							e in any manner	for any per-
sonal injury or property dam								
DateSign	ea	(Authorized Insi	nector)	C	ommissions_	(Nat'l. 8d. (incl. endo	reamante) state	u and ac.
						treat i. au. (inci. 8ndd	n semental state, pro	v. and no.)