103226 E114

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

			1 11	=====						
Manufactured and certified by	HEA	AT TRANSFE	R SYST	EMS, IN	C., 8100	POLK	, MO. 63	111		
2. Manufactured for	PROTHERM COL	RPORATION.,	11108 SO		VNE SQU	ARE, ST	r. Louis, i	MO. 631	123	
		(Na			aser)					
3. Location of installation				KNOWN ne and address	s)					oser, en (d. 11)
HODIZ	HEAT EXC	HANGER	12915-		N/A	B-2	2915-6-01	180)4	2007
4. Type: HORIZ. (Horiz., vert., or sphere)	(Tank, separator, jkt. ves				(CRN)		rawing No.)	(Nat'l B		(Year Built)
5. ASME Code, Section VIII, Div. 1	2004 Ad				/ A			N	//A	
o. Home obel community	(Edition and Add	denda (dale))	s	(Code C	ase No.)		(Spec	al Service	per UG-120	(d))
Items 6 - 11 Incl. to be completed for s	ingle wall vessels, jacket	s of jacketed vessels	, shell of hea	t exchangers	, or chamber	of multi ch	amber vessels			
	4) Overall leng	gth (ft & In.):			26' - 3			
	Material			Long Joint (Joint (Cat A B	& C) T	Heat To	ealment
No. Diameter, in. Length (ft & in.)	Spec./Grade or Type	Nom. Corr.	Туре	Full, Spot, N	lone Eff.	Type F	ull, Spot, None	Eff.	Temp.	Time
3 38" 8'-0"		0.500" 0.125	0" 1	NONE			NONE			0.60 Hr.
1 38" 2'-3 3/16"	SA-516, Gr. 70	0.500" 0.125	0" 1	NONE	70%	1 1	NONE	70%	1100 F.	0.60 Hr.
		1 -01 14 11 1								
		50.000000000000000000000000000000000000		L				.]]		l
7. Heads: (a) SA-	516, Gr. 70	1100 F. 0.0	60 Hr.	(b)						
	c. No., Grade or Type) H.T	r Time & Temp			(Mari S	pec. No., G	rade or Type)	H.T Time	& Temp	
Location (Top. Thickne	ss Radius	Elliptical		emispherical	Flat	Side to	Pressure		Category A	
Bottom, Ends) Min.	Corr. Crown Kn	uckle Relio Ar	ex Angle	Radius	Diameter 38"	Convex	Concave X	Type Fu	NONE	85%
					36				HOND	- 05.70
(b)	Programme and the second secon		L.				I =	·		e cede or eo
ir felliovable, bolls used (describe of	not testerning)			(Mat'l Spe	c. No., Grade					
Indiana Agrangata					ıre					
8. Type of Jacket				Jacket Cioac	, io	(Das	cribe as ogee 8	weld bar	etc.)	
was a beautiful										e or sketch
9. MAWP 80 1		. 330		_ •F	Min. design	metal temp.	-20	· •F (at 8	O psi
(internal) (exte	rnal)	(internal)	(external)	121 1212						
10. Impact test	NONE	PER UG-20 (f),	AND UC	S-66			at lest t	emperatur	e of	
	(maleate yes	of the dild the compe	monito) impa	31 (33133)						
11. Hydro., pneu., or comb. test pres	s. HYDRO - 104	4 PSI Proof les	t							
Items 12 and 13 to be completed for to	ibe sections.	•								
12. Tubesheel: SA-516, C	ir. 70	42 7/8"		2 1/2"		0.250			BOLTE	
	Spec. No.) Dia., in	42 7/8" n. (subject to press.)	1	Nom. lhk., in.		Corr. All	ow., in.	Altachm	ent (welde	d or bolled)
				S. H. BLALTEL						A DE VERTS
Floating (Mat'l Spec. No.)	Dia., In.		Nom. thk.,	ln.	Con	. Allow., in.			Attachmen	1
13. Tubes: SA-214 ER	w	3/4"		0.083"	Min.		466		U - TUB	
Mat'l Spec. No., Grad		O.D., In.		Nom. Ihk., In.	or gauge		Number	Ϋ́γ	pe (Straigh	(or U)
Items 14 - 18 incl. to be completed fo		ted vessels or chann	els of heat ex	changers.						
14. Shell (a) No. of course(s):	i) Overall leng				1' - 11	15/16"		
	.,		7		Cal Al	Cleaner	Joint (Cat A I		I Wast T	realment
Course(s)	Material Space (Grade or Type	Nom. Cor	г. Тура	Full, Spot, I			Full, Spot, Non		Temp.	Time
No. Diameter, In. Length (ft & in.) 1 38" 1'-11 15/16"	Spec./Grade or Type SA-516, Gr. 70	0.500" 0.125		NON		1 1	NONE	70%	1.000	
1-111510										
	1	t L	-9.7]					L	
15. Heads: (a) SA	-516, Gr. 70			(b)						1.50
	ec. No., Grade or Type) H	I.T Time & Temp		nat re	(Mat'l	Spec. No., C	Grade or Type	H.T Tin	ne & Temp	
		Elliptical	Conical H	lemispherical	Flat	Side to	Pressure		Category	
Bottom Ends) Min.	Corr. Crown Ki	nuckle Ratio A	pex Angle	Radius	Diameter	Convex	Concave	Type F	ull, Spot, N	lone Eff.
(a) L - END 0.4375" 0	.1250"	2:1			38"		X	2	NONE	85%
(b)			بالمحمد	00 00 00	1100 131	201411	C DOG OF	CA 104	OLI NICE	Te
If removable, bolts used (describe of	ner fastening)	3/4" - 28 PCS	OF SA-1					SA-194	-Zri NU	10
				(Mat'l S	Spec. No., Gr	ade, Size, I	(.0 <i>Y</i>			

MAWP	100		p:	si at max. temp.	0 10-00	150		• F	Min.	design metal temp.	-20	• F at	100 F
	(internal)	(ex	ternal)			interna		ernal)					
mpact test				NONE P	ER U	G-20	(f), AND no end the cor	UCS-66	nant tastari)		at test te	mperature of	
							no ena the col						
Hydro., pnu	e., or con	nb. test pre	85	HYDRO	- 130	PSI		Proof test					
lozzles, inspi			openings:					I Manda T	Thistianan T	Deleterement .	T Daw A	llached	Location
irpose (inle let, Drain, el	I,	Diameter or Size	Flange	Nozzie		erial	Flange	Nom.	hickness Corr.	Reinforcement Material	Nozzle	Flange	(Insp. Open.
NLET.	1	1811	RFSO	SA-106-B	SML	SA-1	05	0.750"	0.1250"		С	0	
UTLET		60	RFSO	SA-106-B	SML	SA-1	05	0.432"	0.1250"	3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	С	0	
NLET	1	14"	RFSO	SA-106-B	SML	SA-I	05	0.375"	0.1250"		C	0	
DUTLET	1	14"	RFSO	SA-106-B	SML	SA-1	05	0.375"	0.1250"		C	0	
				L		<u></u>			L			L	
Supports: S	klrt	NO	Lugs	NO	L	egs	NO	Others	SADDI	E SUPPORTS	Attached		TO SHEL
	- (Yes or No)		(No.)	A seed		(No.)			(Describe) nished for the following		200	and How)
Remarks:													
							CATE OF S			struction, and workm	anship of this	vessel confor	n to the
U Ce Date	rilificate o	Authoriza	lon No	HEAT TR	on 1, 2064 ANSI (M	FER S anufact	SYSTEMS Urer) ICATE OF	Expires S, INC.	Signed	flang BOSTON	04/2009 Representative MASS.		
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