FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS (Alternative Form for Single Chamber, Completely Shop -Fabricated Vessels Only) As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

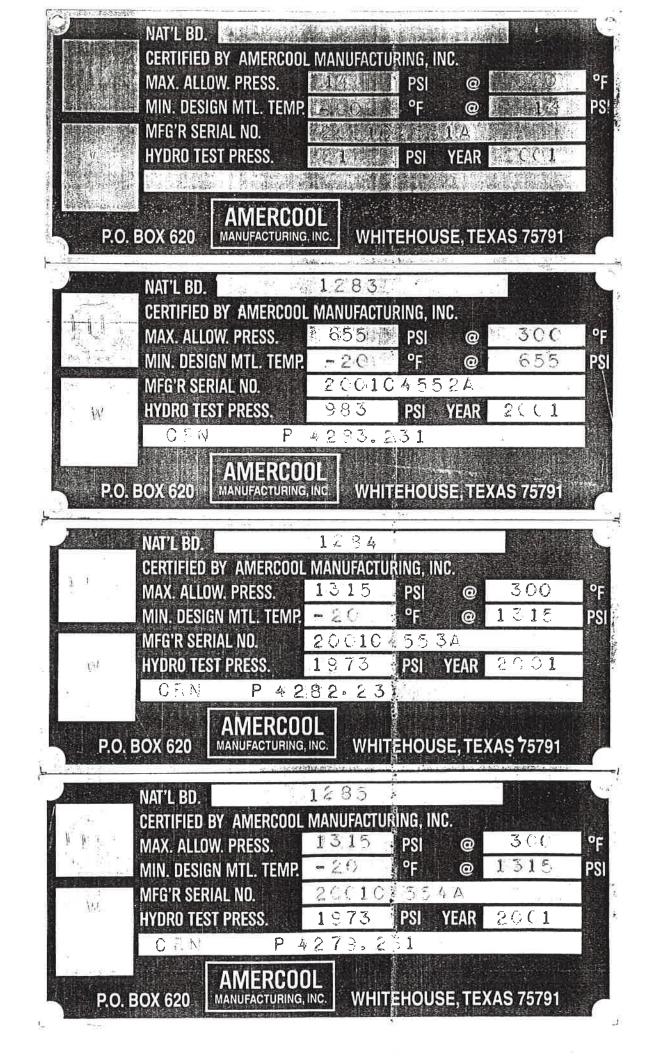
1. 1	Manufactured	and cert	ified by	AMÊR	.C00	L Manu	facturing	Inc., 1	2783 FM	346 I	East: WI	hitehouse, Tex	cas 75791		
2. N	/lanufactured	for					ry, Albert				d address of mar				
	ocation of ins	tallation		UNIVI	ERSA	L COM	PRESSIC)N unkr	nown	(Name ar	nd address of pur	rchaser)			
4. 1	уре Ногі:			2		-4552-A	P	4283.23	1		arne and address	•	1283		2001
5. T		(Honz of Verl. and phys	,	erties of		erial No.) Is meet l	he require	(CRN) ments of		pecific	(Drawin	the ASME BOI	(Nat1 Bo	PRESSURE VES	(Vans bud))
														PIEGOGIE VEG	SEL CODE.
to		A0	0						57				17,70	Year	
6. S	hell:Tube & F	lug Shee	ts: SA-5	16 GR-7	0	Fr 1.1	25/ Bk 1.		Code Case Nos		F	r 0' 4.2500"/I	3k 0' 4.25	Special Service per UG-12	1' 0.1250"
7. S	eams: Corr	er Joint	ec. No., Grade)	FIT (Spot			Nom. Thik. (in. 00			Wow. (in.)		Diam, I	D. (ft. & in.)	****	Length (overall) (ft . & in.)
8. H	eads: (a) Mai	g (Welded D Sngl., Lap. But	(a) C	overs: S			En(%)		T. Temp. (*F)	b) Mat	Tane (F		n (Welded, Dbl xot, Lap, Butt) 516 GR-70	R.T. (Spot , Partia or Full)	No. of Courses
	Lassies (Tee	T		C		ec. No., Grade)	T							(Spec No., Grade)	
	Location (Top Bottom, Ends		nimum ickness	Corros Allowa		Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemisphe Radius			Flat Diameter	6	Side to Pressure (Convex or Concave)
(a)	Fr/Bk		0/0.500	0.1250		144	22			1575	2.500	00/2.5000 x 1:	2.1250		Flat
(b)	Fr/Bk	0.500	0/0.500	0.1250	-		**		***	-22	2.500	00/2.5000 x 3	.7500/3.75	500	Flat
lf ı	emovable, bo	lls used	(describe	other fa	stenin	gs)		1	N/A						
											(Matt_Sp	ec No Gr Size No)			
9. M	AWP			6	55					psi a	at max. te	emp		300	0
M	in. design me	tal temp.		-20			°F at	655	ps	i. Hyd	dro., pneu	., or comb. test	pressure	983	ps
10. N	ozzles, inspe	ction and	d safety v	alve ope	nings:	Safety v	alves by o	thers per	UG-125 I	Vote (a).				
(Inle	Purpose I, Outlet, Drain)	No	Diame or Siz	6.9	T	уре		Material			Nominal Thickness	Reinforcen Materia		How	Location
	/Outlet	1/1	3"300/1	60	RFW	N ,	SA-105/SA-106B				0.438	Integral		UW-16.1(a)	Front Head
															Trom Troud
-					_										
11 S	upports: Skirt:		L No						4						
		ufacture	es or No)	— Lu	ys	(No.) identified (Legs —	(No.)		Other	(Describe)	—— Att	dojica	ed to covers Where and how)
		oraciore	- J ulual	Data He	:ports	лорепу	identilled a	and signe	ed by Con	ımıssıo	inea inspi	ectors have bee	en turnishe	d for the following	items of the report:
									number, Migr's		d identifying st	amp)			
Impa	es: SA-214 \	Rempt p	er: UG-2	(1)09 1" × 060	tem: I	C-1 S	ervice: N	ATURA	LGAS	CLR-I					
	structed in c						straignt		-						
-													- 6.		
Were	artify that the	statomo	ata mada	in this so		С	ERTIFIC	CATE C	F SHO	COI	MPLIAN	ICE			
Code	for Pressure	vessels.	Section 1	ın ınıs re VIII. Divis	port ar sion 1.	e correc "U" Cer	t and that tificate of <i>i</i>	all details Authoriza	s of design stion No	n, mate 2	erial, cons 3 329	struction, and w	orkmanship		nform to the ASME
Date_	05-14						ERCOOL	Manufa				Signed	Viane 1	17.0	2004
1/0000	1		ALAEDO	001.14			CERT	IFICATE	OF SHOP	INSPE	CTION	7	(Re	presentative)	
	I constructed andersigned	,	AMERC					Poord of	Doiler one	I Danas	at _	Whit	ehouse, T	exas	
	lexas					a	nd employ	ed by		H.S	.B.I. & I	Co. of Harife	ord CT	tate of Province o	
have i	nspected the	compon	ent descr	ibed in th	nis Mar	nufacture	er's Data R	Report on		9.	20	01.	and state t	hat, to the best of	my knowledge
) D	ellet, the Mar	lutacture	r has con	structed	this pr	essure v	essel in a	ccordanc	e with AS	ME Co	de, Secti	on VIII, Division	1. By siar	ning this certificat	e neither the
neithe	r the Inspecto	ir nor his	nakes an emplove	y warran r shall be	ıy, exp e liable	ressed o	or implied, nanner for	concerni	ng the pre	essure	vessel de	escribed in this	Manufactur	rer's Data Report.	Futhermore.
inspec	tion.							any pers		yupn	орену иа				
Date =		15-6	(Sign	ed	1	7 (Authori	ge Inspector	1			Commission	ns	3/04913	7 × 15 × 6

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS (Alternative Form for Single Chamber, Completely Shop -Fabricated Vessels Only) As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

									T					
1. N	Manufactured	and certifi							2783 FM		ast, Wh	nitehouse, Texas 75791		
2. N	fanufactured	or				V.	y, Albert				d address of pur			
)	cation of ins	tallation		UNIVE	RSAL	COM	PRESSIC)N unkr	iown		me and address			
4. T		(Non-Ci		20	001C-4	553-A	P	4282.23	11		01C-455	53 1284		2001
5. T			,				ne requirer		material s	pecifica		9 NO) (NAT B The ASME BOILER AND F		(Year buili) SEL CODE.
TI	ne design, cor	struction	, and wo	rkmanshi	p confo	rm to A	ASME Rule	es, Sectio	on VIII, Di	ision 1		1998		
ło		A00)						57				Year	
6. S	hell:Tube & P	lug Sheets	denda (Date) S: SA-51	6 GR-7	0	Fr 1.2	50/ Bk 1.	250	Code Case Nos.	50	F	г 0' 4.2500"/Bk 0' 4.25	Special Service per UG-120	1' 5.1875"
7. S	eams: Com	er Joint	. No., Grade)				Norn, Thk. (in)()			Vlow (in.)	nar.	Diam. I.D. (ft, & in.)		Length (overall) (ft . & in.)
8. H	امر leads: (a) Mat	(Welded Dbl. ngl., Lap. Butt)		RT (Spot of			En(%)		Temp (°F)	b) Matt	.Time (h	Spot, Lap, Butt)	R.T. (Spot , Partial or Full)	No. of Courses
	And the sale					No , Grade)	1			U) Wall			(Spec. No., Grade)	
	Location (Top Bottom, Ends	1	mum kness	Сопоsія Allowan		crown adius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemisphe Radius		Flat Diameter		Side to Pressure (Convex or Concave)
(a)	Fr/Bk	0.625/	0.625	0.1250		241				1.937	75/1.9375 x 17.1875		Flat	
(b)	Fr/Bk	0.500/	0.500	0.1250	- 6		••	-		-	1.93	75/1.9375 x 3.7500/3.7	500	Flat
lf ı	removable, bo	lts used (describe	other far	steninas	(;		1	V/A					
	,	(2.01gc	/					(MatL, Sp	ec No Gr Size. No)		
9. M	AWP			13	15					:-			300	al
										,		mp, or comb. test pressure		,
												i., or comb . test pressure	1973	<u>s</u> ps
10. 1	lozzles, inspe						aives by o			vote (a	Nominal	Reinforcement	11	T
	t, Outlet, Drain)	No. Diameter Type Material or Size						Thickness	Material	How Attached	Location			
1.	/Outlet	1/1	2"600/1	60	RFWN		SA-105/S	SA-106B			0.344	Integral	UW-16.1(a)	Front Head
									=:7:===					
11. S	upports: Skirt	s N	10	Luc	ıs			l eas	4		Other	(Describe)	tached Welde	ed to covers
12. R	emarks: Man	_(Yes) 'ufacturer	or No) 's Partial	Data Re	ports or	₀N) operly) identified a	and signe	(No.) ed by Con	nmissio	ned Inspi	(Describe) ectors have been furnishe	od for the following	Where and how)
													or the following	nems of the report.
									number, Migr's			amp)		
	act testing ex Bar: Front(4											616 CD 70 0 3750	0.1050 1.005	
	es: SA-214 \							2.7300	ne E	ar: Ba	CK(4)SA	x-516 GR-70 0.3750 x	0.1250 x 1.937	5 x
	structed in c												F.	
	5° 4					C	ERTIFIC	CATE C	F SHO	P COI	MPLIAN	ICE		
Oode	erlify that the	statemen Voscolo	ts made	in this rep	port are	correc	t and that	all details	s of desig	n, mate	rial, cons	struction, and workmanshi		
Date	for Pressure 05-14		Section				ERCOOL					Signed March	1 20th	2004
							(A	danufacturer)	OF SHOP			4	lepresentative)	
	el constructed			OOL Ma			Inc.				at	Whitehouse, 7		
I, the	undersigned, Texas	holding a	valid co	mmission	n issued							el Inspectors and/or the S	State of Province of	of
have	inspected the	compone	ent descr	rihed in th	is Manı		and employ er's Data F	—			20	Co. of Hartford CT. and state	that to the heat o	f mu ka swis dae
												on VIII, Division 1. By sig		
пъре	ctor nor his er	nployer m	nakes an	y warran	ty, expr	essed	or implied,	concern	ing the pr	essure	vessel de	escribed in this Manufactu	rer's Data Report	. Futhermore,
neithe	er the Inspecto	r nor his	employe	r shall be	e liable i	n any i	manner for	any per	sonal inju	y or pr	operty da	mage or loss of any kind	arising from or cor	nnected with this
insped Date		15-0) (Sign	ed ·		KIL	1-	نے	,		Commissions	BINISIA	TX/346
				Olgrii			(Author	zed Inspecto	ir)			Commissions	Board Incl. endorsement	state Prov and No.)

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS (Alternative Form for Single Chamber, Completely Shop -Fabricated Vessels Only) As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. M	lanufactured	and cert	ified by	AMER	COOL Ma	nufacturi	ng, Inc., 1	2783 FM	1 346 1	East, Wi	nitehouse, Texas 7579	1				
2. M	lanufactured	for		UCI C	algary Cal	gary, Alb	erta T2		Menre	d address of mar						
	ocation of ins	stallation		UNIV	ERSAL CO	MPRESS	ION unki	nown		nd address of pur						
4. T		z(Non-C		2	001C-4554	I-A	P4279.23			ame and address 001C-45.	54 1285		2001			
5. TI		(Honz or vert t and phys	,	erties of	(Migr's serial No.) all parts met	et the requ	(CRN) rements of		specific	(Drawin ations of	g No.) the ASME BOILER AND	PRESSURE VESS	(Year built) SEL CODE.			
											1998					
to		A0						157				Year				
6. SI	nell:Tube & I	lug Shee	ts: SA-5	16 GR-	70 Fr			Code Case No	50	F	r 0' 4.2500"/Bk 0' 4.:	Special Service per UG-120 2500"	1' 1.8125"			
7. Se	eams: Con	ner Joint	ec. No., Grade)	A T (Spot	or Eudit	Nom. Th		Corr.	Allow: (in.)		Diam. I, D. (ft, & in.)	****	Length (overall) (ft . & ic.)			
8. He	eads: (a) Ma	ng (Welded , D Sngl., Lap, Bull)	(a) C		SA-516 GR	-70			b) Mai	Time (f	Grift (Welded, Dbl., Spot., Lap, Bult) (b) Ends: SA-516 GR-7	70 or Full)	No ol Courses			
	Location (Top	M	nimum	Сопо	(Spec No. G		e Elliptical	Conical	1			(Spec No , Grade)				
	Bottom, Ends		ickness	Allowa	0.0	II		Apex Angle	Hemisph Radiu		Flat Diame	er er	Side to Pressure (Convex or Concave)			
(a)	Fr/Bk		5/0.625	0.1250		44 14	E 1/2			1.93	75/1.9375 x 13.8125		or Fult) Side to Pressure (Convex or Concave) Flat DO Flat Side to Pressure (Convex or Concave) Flat Flat Flat Flat Flat Flat How Altached Localion Localion			
(b)	Fr/Bk	[0.500)/0.500	0.1250		'	FF.	5.4		1.93	75/1.9375 x 3.7500/3.	7500	Flat			
lf r	emovable, b	olts used	(describe	e other fa	stenings)]	N/A								
										(Matl_Sp	ec. No . Gr., Size, No)					
9. M	AWP			1	315				psi	at max. te	emp	300	°F			
Mi	n. design me	tal temp.		-20		°F	at 1315	p:	si. Hy	dro., pne t	J., or comb . test pressure	e1973	pś			
10. N	ozzles, inspe	ection and	d safety v	alve ope	nings: Safet	y valves by	others per	UG-125	Note (a	ı).						
1	Purpose . Outlet_Drain)	No	Diame or Si		Туре					Nominal Thickness	Reinforcement Material		Location			
) T	Outlet	1/]	2"600/	160	RFWN	SA-105	5/SA-106E	3		0.344	Integral	UW-16.1(a)	Front Head			
Vent		2	1.0		6000CPLC	SA-105	5				Integral UW-16.1(a)					
-																
11 Sı	innorte: Skirt		No.	1.		<u> </u>						W-14				
12 Re	upports: Skirt	(Ye	es or No)	— Lu I Data R	porte propo	(No)	Legs :-	(No.		- Other	(Describe)	-ttacrica	ed to covers Where and how)			
12. 110	Jindino. IIIdi	idiacidic	131 0100	i Dala III	sports prope	путоенине	u and sign	ed by Cor	nmissie	onea insp	ectors have been furnish	nea for the following	items of the report:			
						(N	ame ol part, item	number, Mlgr	s name an	d identifying st	amp)					
	et testing e									1						
Tube	es: SA-214	WLD- 2	23 x 0.63	3" x .06	0" x 8.000	x 1.9375 0'-Straigh	x 2.7500 t	Tie Ł	Bar: Ba	ack(4)SA	A-516 GR-70 0.3750	x 0.1250 x 1.937	5 x			
	structed in c												¥1			
Mo co	artify that the	olotomo	ata ada	in Main a		CERTII	ICATE C	OF SHO	P CO	MPLIAN	NCE					
Code	for Pressure	Vessels.	nts made . Section	ın tnıs ri VIII. Divi	eport are cor sion 1 "U"	rect and tr Certificate	iat all detail of Authoriz:	s of desig ation No.	n, mate 2	erial, cons	struction, and workmans expires Marc	hip of this vessel co th 20th	nform to the ASME 2004			
Date_		-2001			o. nameA		OL Manuf	acturing,			Signed	V. X	2004			
.,						CE	(Manufacturer) RTIFICATE		INSPE	CTION		(Representative)				
U.	l constructed				anufacturii		al Daged of	Dallas	10	at _	Whitehouse,					
i, trio t	Texas	nording	a vallu cu	инноск	ii issueu by						el Inspectors and/or the	State of Province o	1			
have in	nspected the	compon	ent desci	ribed in t	his Manufac	turer's Dat	a Report or	5	-9.	20	0, and stat	e that, to the best of	my knowledge			
) b	elief, the Ma	nufacture	er has cor	nstructed	this pressu	re vessel ir	n accordanc	ce with AS	SME C	ode, Secti	ion VIII, Division 1. By s	igning this certificat	e neither the			
neithe	ior nor his e. r the Inspect	mpioyer i or nor bis	makes ar	ny warrai ar shall b	nty, expresse	ed or implie	ed, concern	ing the pr	essure	vessel de	escribed in this Manufac	turer's Data Report.	Futhermore,			
inspec	tion,			Gridii D	o navio in al	/	any per) ali iriju	ry or pi	operty da						
Date	5	15-0	1	Sigr	ned	7	athorized Inspecto)))	-		Commissions	JB104913	TX 1346			



AMERCOOL Manufacturing Inc. Date Wed* 1:22 pm*30-MAY-2001 P.O. Box 9310 • Tulsa, OK 74157 AIR COOLED EXCHANGER Proposal/Job No. 2001C-455-01 Phone: (918) 445-5366 • FAX (918) 445-0400 SPECIFICATION SHEET Reference EH10435 Customer **UCI** Calgary Item No. EJW Plant Location unknown Service ANTIFREE COOLER INDUCED Model 60VCI Type No. of Bays 1 Surface per Unit-Finned Tube 1,310 Bare Tubes 55.02 Ft2 5 Heat Exchanged 621,000 BTU/Hr MTD (Eff.) 63.41 (Crossflow) °F Transfer Rate-Finned Tube 7.47 Bare Tube, Service 178.00 BTU/Hr, F12 °F 7 PERFORMANCE DATA-TUBE SIDE 8 Fluid Name 9 **EGLY 50%** Lethal Service Yes No X IN OUT Total Fluid Entering Lb/Hr 47,810 Densily Lb/Ft3 63.6 64.0 10 OUT Specific Heat (Lig/Vap) BTU/Lb°F .869 / IN .862 / 11 BTU/HrFt°F Temperature ٥F 190.0 175.0 Cond. (Lig/Vap) 12 .233 / 47,810 13 Liquid Lb/Hr 47,810 Pour/Freeze Point °F Vapor Lb/Hr (MW) **Bubble Point** ٥F 14 Lb/Hr (MW) Nocond Latent Heat BTU/Lb 15 Steam Lb/Hr 10.00 16 Pressure Psia 17 Water Lb/Hr Pressure Drop Allow/Calc Psi 5.00 / 2.54 Viscosity (Lig/Vap) Ср .8914 / Fouling resist, Inside ft2 hr °F/BTU 0.00050 18 .8238 19 PERFORMANCE DATA-AIR SIDE Lb/Hr 60,330 Air Quantity **SCFM** 13,410 2,500 20 Altitude Ft 21 Air Quantity/Fan ACFM 42,260 ٩F 95.0 Temperature In 137.7 22 Temperature Out 23 **DESIGN - MATERIAL - CONSTRUCTION** 24 Design Pressure 25 14 Psig Test Pressure 21 Design Temperature 300 / MDMT -20 °F 26 **TUBE BUNDLE** HEADER, Type PLUG BOX **TUBE** Material **SA-214 WLD** 27 Size Material 2.1 x8.0 SA-516 GR-70 Slope 0.0000 No. No. Tube Rows No. Passes 2 In Min. Thick 0.0600 In/Ft OD 0.750 In Bays In Series In Parallel Plug A1051818 No./Bundle 35 Length 8.0 Ft 30 Bundles 1 In Parallel In Series Gasket CS1813 Pitch 2.0625 lnΔ Pass Arrangement (Top to Bottom) Corrosion Allowance 31 0.0000 FIN Type L-TENSION Rows / Pass 32 3/2 Size In Nozzle (1) 3.00 SCH XS SA-106B Material **ALUM** 33 Size Out Nozzle (1) 3.00 SCH XS SA-106B OD 2.000 In Stock Thick0.016 In Rating & Facing 34 Steam Coil NO 150 -RF SA-105 No/In 10 Support Chan. / Staple 35 Hailscreens Vent (0)Drain (0)Code-ASME VIII, Div 1 YES Stamp NONE NO Bugscreens YES 36 Louvers ALUM (1) VCI MANUAL TI PΙ Radiograph N Heat Treat N Frame Finish HTC 1 Coat Shop Primer 37 Tube Hole Grooving Header Finish HTC 1 Coat Shop Primer YES 38 MECHANICAL EQUIPMENT 39 FAN Mfg & Model MOORE 27 5000 **DRIVER** Type **SPEED REDUCER Type** 40 No./Bay **RPM** S.F. 597 Insul/TR 41 Dia. No./Bay HP No./Bay 5.0 Ft. No. Blades 4 Frame 42 Pitch **RPM** Ratio Duty **HP** Rating ADJUSTABLE Angle° 43 Mall, Blade ALUMINUM CASTALUM Enclosure V & D Support: 44 HP/Fan, Des. V/P/C 8.3 DBA 88. Space Heater Vibration Switch STRUCTURE WALKWAYS 45 Mounting GRADE Inlet Header in. None Windload - PSF Seismic None 46 30.0 Outlet/Return in. None 47 Finish HTC 1 Coat Shop Primer Drive Access in. None **NOTES** Items combined: EJW 48 IC-1 IC-2 AC 49 Coil Volume (ft^3): 1. 50 Hertz Band: 63 125 250 500 1K 2K 4K 8K 51 102 101 98 93 90 79 73 83 Assembled Drive, Structure & Bundles (Within Shipping Restrictions) 54 55 Plot Area ft Weight Bundle 706.0 4,903 Lbs | Total Shipping Lbs

	0 • Tulsa , C	/K /415/	AIR COOLED I	CACHANGER					Y-2	
	,	FAX (918) 445-0400				Proposal/Je			-02	
Character Ma			of Lonioni	IOI4 STILLI		Reference:		5		
Customer	UCI Calgary				Item No. IC-1					
Plant Location	unknown									
Service	NATURAL	GAS CLR-1								
Model			Type INDUCED			No. of Bays				
Surface per Uni	t-Finned Tube	495.	0		Ft ²	Bare Tubes	26.20		, F	
Heat Exchange	d	73,5	80		BTU/Hr	MTD (Eff.)	50.74 (Crossflow)) (
Transfer Rate-F	inned Tube	2.93	Bare Tube, Service	55.35				BTU/Hr. F	-t2 °	
		1,3	PERFORMANCE DA	ATA-TUBE SIDE					_	
Fluid Name	0.65 SG				Yes No X	IN		OUT		
Total Fluid Ente		2,069		Density	Lb/Ft3	.545		.613	-	
Total Fluid Ente	7111g CD/111	IN	OUT	Specific Heat (Lig/Vap		1.55	1	/ .551	-	
Tomporoluro	°F	184.5	120.0		<u> </u>	7.55	1		_	
Temperature		104.3	120.0	Cond. (Liq/Vap)	BTU/HrFt°F			.0230		
Liquid	Lb/Hr	2.2(2.4(2.2))	2.042 (10.0)	Pour/Freeze Point	°F					
Vapor	Lb/Hr (MW)	2,069 (18.8)	2,069 (18.8)	Bubble Point	°F					
Nocond	Lb/Hr (MW)			Latent Heat	BTU/Lb					
Sleam	Lb/Hr			Pressure	Psia	197.8	0			
Water	Lb/Hr			Pressure Drop Allow	/Calc Psi	3.00 /	0.50			
Viscosity (Liq/Va	ар) Ср	/.013	/.013	Fouling resist, Inside	fl2 hr °F/BTU	0.0020	00			
		-	PERFORMANCE D	ATA-AIR SIDE					_	
Air Quantity	SCFM 6,	425 L	o/Hr 28,910	Altitude F	t 2,500					
Air Quantity/Far				Temperature In °I					_	
7 iii Giddritty/ ai	M			Temperature Out °I						
				remperature Out	F 100.0				-	
		D.F.	SIGNI MATERIAL	COMPTRUCTION					_	
D 1 D			SIGN - MATERIAL -							
Design Pressure		Psig	Test Pressure 983					DMT -20	0	
TUBE BUNDLE			HEADER, Type PLU	G BOX	TUBE Ma	terial SA-	214 WLI)		
Size	1.1 x	8.0		516 GR-70						
No. I	No. Tube	Rows 3	No. Passes 1	Slope 0.0000 j	in/Ft OD 0.6	25 In	Min. Thi	ck 0.0600		
Bays 1	In Paral	lel In Series	Plug A 1051222		No./Bundl	e 20	Length	8.0	F	
Bundles 1	In Paral	lel In Series	Gasket CS1213		Pilch	ilch 1.6875 Ind				
Pass Arrangeme	ent (Top to Bott	om)	Corrosion Allowance	0.1250	In FIN Type	FIN Type L-TENSION				
Rows / Pass	3/ 1		Size In Nozzle (1) 3.00	SCH 160 SA-106B	In Material	ALUM				
			Size Out Nozzle (1) 3.0				Stock Th	nick0.015		
Steam Coil N	0			-RF SA-105	No/In	10	Support			
Hailscreens N			Vent (0)	Drain (0)		ME VIII,Div 1		Stamp C		
		VCI MANUAL	TI	PI	Radiograp			eat Treat N		
) VCI MANUAL						eat neat N	<u> </u>	
Frame Finish 1	iici Coat S	nop ramer	Header Finish HTC 1		I Tube Hole	Grooving	YES		_	
CAN NAC O			MECHANICAL I	: WUIPMENI	1					
FAN Mfg & Mod	iei		DRIVER Type		SPEED R	EDUCER Ty	pe			
No./Bay		RPM		ul/TR						
Dia.	Ft.	No. Blades	No./Bay Fra	me HP	No./Bay					
Pitch		Angle°	RPM	Duty	HP Rating		Ratio			
Mall, Blade		Hub	Enclosure	V & D	Support:					
HP/Fan, Des.		DBA	V/P/C	Space Heater	Vibration	Switch				
		STRUCTURE				(WAYS			_	
Mounting		VIROCIONE		Inlet Header in.	WAL	MAIS				
Windload - PSF		Seismic		Outlet/Return in.						
Finish		COLOTTIO		Drive Access in.			_		_	
1 111011			NOTE						_	
Coil Volum	0 (f+^2)	0	NOTE	3					_	
COLI VOLUM	ie (IC3):	0 -								
		_ii								

AMERCOOL Manufacturing Inc. Date Wed* 1:22 pm*30-MAY-2001 P.O. Box 9310 • Tulsa, OK 74157 AIR COOLED EXCHANGER Proposal/Job No. 2001C-455-03 Phone: (918) 445-5366 • FAX (918) 445-0400 SPECIFICATION SHEET Reference E1110435 Customer UCI Calgary Item No. IC-2 Plant Location unknown Service NATURALGAS CLR-2 Model INDUCED Type No. of Bays 1 Surface per Unit-Finned Tube 717.8 Bare Tubes 37.99 Ft2 Ft2 5 Heat Exchanged 182,700 BTU/Hr MTD (Eff.) 61.85 (Crossflow) ٥F 6 Transfer Rate-Finned Tube 4.11 Bare Tube, Service 77.74 BTU/Hr. Ft2 °F PERFORMANCE DATA-TUBE SIDE 8 Fluid Name 0.65 SG No X 9 Lelhal Service Yes IN OUT Total Fluid Entering 1.49 1.80 Lb/Hr 2,768 Lb/Ft3 Density 10 Specific Heat (Liq/Vap) 11 IN OUT BTU/Lb°F 1.594 1.594 Temperature 231.0 120.0 Cond. (Lig/Vap) BTU/HrFt°F 12 .0280 Liquid Lb/Hr Pour/Freeze Point ٥F 13 2,768 (18.8)2,768 Vapor Lb/Hr (MW) (18.8)°F **Bubble Point** 14 Nocond Lb/Hr (MW) BTU/Lb 15 Latent Heat Steam Lb/Hr Pressure 581.20 16 Psia Waler Lb/Hr Pressure Drop Allow/Calc 5.00 / 1.27 Psi 17 Viscosity (Lig/Vap) /.013 /.013 Cp Fouling resist, Inside ft2 hr °F/BTU 0.00200 18 19 PERFORMANCE DATA-AIR SIDE Lb/Hr 41,140 Air Quantity **SCFM** 9,142 2,500 20 Altitude Ft 21 Air Quantity/Fan ACFM .0 ٥F 90.0 Temperature In 22 108.4 Temperature Out 23 24 DESIGN - MATERIAL - CONSTRUCTION 25 Design Pressure 1,973 1,315 Psig | Test Pressure Psig | Design Temperature 300 / MDMT -20 °F **TUBE BUNDLE** HEADER, Type PLUG BOX 26 **TUBE** Material **SA-214 WLD** 27 Size 1.5 x 8.0 Material SA-516 GR-70 No. No. Tube Rows 3 No. Passes 2 Slope 0.0000 1 In/Ft OD 0.625 In Min. Thick 0.0600 In Bays In Parallel 1 In Series Plug A1051222 No./Bundle 29 Length 8.0 Ft Bundles 1 In Parallel In Series CS1213 Gasket Pitch 1.6875 lnΔ Pass Arrangement (Top to Bottom) Corrosion Allowance FIN Type L-TENSION 31 0.1250 32 Rows / Pass 3/2 Size In Nozzle (1) 2.00 SCH 160 SA-106B Material ALUM ln 33 Size Out Nozzle (1) 2.00 SCH 160 SA-106B In OD 1.625 In Slock Thick 0.015 ln 34 Steam Coil Rating & Facing 600 -RF SA-105 NO 10 Support Chan. / Staple No/In 35 Hailscreens NO Vent (0)Drain Code-ASME VIII.Div 1 YES Stamp CRN 36 Louvers ALUM (1) VCI MANUAL TI PI Radiograph N Heat Treat NO Frame Finish HTC 1 Coat Shop Primer 37 Header Finish HTC 1 Coat Shop Primer Tube Hole Grooving YES MECHANICAL EQUIPMENT 38 39 FAN Mfg & Model **DRIVER** Type **SPEED REDUCER Type** 40 No./Bay **RPM** S.F. Insul/TR 41 Dia. Ft. No. Blades No./Bay HP No./Bay Frame 42 Pitch Angle° **RPM** Duly **HP** Rating Ratio 43 Matl. Blade Enclosure V & D Support: Hub HP/Fan, Des. V/P/C Space Heater Vibration Switch DBA STRUCTURE WALKWAYS Mounting 45 Inlet Header Windload - PSF 46 Seismic Outlet/Return in. 47 Finish Drive Access in. **NOTES** Coil Volume (ft^3): 48 49 50 51 54 ft Weight Bundle 608.0 4.903 Plot Area Lbs | Total Shipping Lbs

AMERCOOL Manufacturing Inc. Date Wed* 1:22 pm*30-MAY-2001 P.O. Box 9310 • Tulsa, OK 74157 AIR COOLED EXCHANGER Proposal/Job No. 2001C-455-04 Phone: (918) 445-5366 • FAX (918) 445-0400 SPECIFICATION SHEET Reference EH10435 Customer **UCI** Calgary Item No. AC Plant Location unknown Service NATURALGAS CLR-3 Model Type INDUCED No. of Bays 1 Surface per Unit-Finned Tube 569.3 Bare Tubes 30.13 Ft2 Ft² 5 Heat Exchanged 155,300 BTU/Hr MTD (Eff.) 59.42 (Crossflow) ٥F Transfer Rate-Finned Tube 4.94 Bare Tube, Service 86.74 BTU/Hr. Ft2 °F 8 PERFORMANCE DATA-TUBE SIDE Fluid Name 0.65 SG No X 9 Lethal Service Yes IN OUT Total Fluid Entering Lb/Hr 2,505 3.01 3.56 Density Lb/Ft3 10 OUT IN Specific Heat (Lig/Vap) BTU/Lb°F 7.639 11 1.639 Temperature 217.0 120.0 12 Cond. (Lig/Vap) BTU/HrFl°F .0300 Liquid Lb/Hr Pour/Freeze Point °F 13 Vapor Lb/Hr (MW) 2,505 (18.8)2,505 (18.8) ۰F **Bubble Point** 14 Nocond Lb/Hr (MW) BTU/Lb 15 Latent Heat 16 Steam Lb/Hr Pressure Psia 1148.20 17 Water Lb/Hr Pressure Drop Allow/Calc Psi 5.00 / 0.71 Viscosity (Lig/Vap) Ср /.013 /.013 Fouling resist, Inside ft2 hr °F/BTU 0.00200 18 19 PERFORMANCE DATA-AIR SIDE Air Quantity 7,309 Lb/Hr 32,890 2,500 20 **SCFM** Altitude Ft Air Quantity/Fan ACFM 90.0 21 0. Temperature In °F 22 ٥F 109.6 Temperature Out 23 **DESIGN - MATERIAL - CONSTRUCTION** 24 25 Design Pressure 1,315 Test Pressure 1,973 Psig Design Temperature 300 / MDMT -20 ٥F **TUBE BUNDLE** 26 HEADER, Type PLUG BOX **TUBE** Material **SA-214 WLD** 27 1.2 x Size 8.0 Material SA-516 GR-70 No. No. Tube Rows No. Passes 2 Slope 0.0000 In/Ft OD 0.625 In Min. Thick 0.0600 In Bays In Parallel In Series Plug A1051222 No./Bundle 23 Length 8.0 Ft 30 Bundles 1 In Parallel In Series CS1213 Pitch Gasket ln∆ 1.6875 Pass Arrangement (Top to Bottom) 31 Corrosion Allowance FIN Type L-TENSION 0.1250 32 Rows / Pass 3/2 Size In Nozzle (1) 2.00 SCH 160 SA-106B Material **ALUM** In 33 OD 1.625 In Slock Thick 0.015 Size Out Nozzle (1) 2.00 SCH 160 SA-106B In 34 Steam Coil NO Rating & Facing 600 -RF SA-105 No/In 10 Support Chan. / Staple 35 Hailscreens NO Vent (2) 1-6000 Drain Code-ASME VIII, Div 1 YES Stamp CRN 36 Louvers TI PI ALUM (1) VCI MANUAL Radiograph N Heat Treat NO 37 Frame Finish HTC 1 Coat Shop Primer Header Finish HTC 1 Coat Shop Primer Tube Hole Grooving YES 38 MECHANICAL EQUIPMENT 39 FAN Mfg & Model **DRIVER** Type **SPEED REDUCER Type** 40 No./Bay S.F. **RPM** Insul/TR 41 Dia. No./Bay HP Ft. No. Blades No./Bay Frame 42 Pitch RPM **HP Rating** Angle° Duty Ratio 43 Matl. Blade Enclosure V & D Support: Hub HP/Fan, Des. 44 V/P/C Space Heater Vibration Switch DBA STRUCTURE WALKWAYS Mounting 45 Inlet Header Windload - PSF Seismic 46 Outlet/Return in. Finish 47 Drive Access in. **NOTES** 48 Coil Volume (ft^3): 49 50 51 54 537.0 55 Plot Area ft Weight Bundle Lbs | Total Shipping 4,903 Lbs