

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

4 1/-	aufaalusad aad	loodified by			011011111 40			COOLD	**************************************	,							
i. Ma	nufactured and	certified by	ENERGY EX	CCHANGER C	UMPANY, 18	44 NURTI	LGAKNELL		TULSA, OK 74 e and addres:		nufacti	ırer)				171	
Ма	nufactured for	D-COK LLC, 36	57 BRIAR I	PARK DRIVE,	HOUSTON, T	TEXAS 77			4-7111		111						in red . in
		CIAUT II	IDUCTOICO	CDAFTON	MIDOINIA		(Na	ame and	l address of F	urchas	er)						
3. Lo	cation of installa	ation GIANT IN	IDO214159	, GHAFTUN,	VINGINIA	100	770	4)	Name and ad	dress)	T A in			_		7 7 2	
4. Ty	oe: HOF	NZONTAL	1	HEA	T EXCHANGE	ER	Term		7262-A.				-7262-A1 REV. 2	2	52	63	2007
	(Horiz., v	ert., or sphere)	(Tank	And the last	jkt. vessel,		VIII.	(Mfg's	serial No.)		(CRN)		(Drawing No.)	(N	at'l. E	3d. No.)	(Year built
5. AS	ME Code, Sec	tion VIII, Div. 1		of Street Control	EDITION, 20					2519			Cno	olol Co		UC 100	0(4)
lama (6 - 11 incl. to be	anniated for	cinalo wo		on and Add			II of hoa		ode Ca		of multi-c			rvice	per UG-120	U(a)
tems t 5. Sh		completed for course(s):	single wa	3	ackers or jac	yered ve			igth (ft & in.):		1111061	or maia-c	22'-7				
, OII	Course		T	Material		Thickne		1	Long, Joint (Circu	m. Joint (Cat. A		2) [Heat Tre	eatment
No.	Diameter, in.	Length (ft & in		/Grade or T		Nom. Corr.		Type Full, Spot,		None Eff.		Type Full, Spot, Non		ne E	ff.	Temp.	Time
1	59" I.D.	8'-0" 6'-7 1/2"		SA-516-70 SA-516-70		"	1/8"	1	FULL	20 191	1.0	1	FULL FULL	_	.0		-111
+	59" I.D.	0.7 112		3A-310-70		-	110	<u> </u>	TOLL		1.0		1011	+	.0		
, Ho	ads: (a)			SA-516-7	70				(b)								P . %
. 110	aus. (a)	(Mat'l Sp	ec. No., G		pe) H.T Ti	me & Ter	np	-			(Mat'l S	pec. No.	, Grade or Type	e) H.T	- Tim	e & Temp	
	Location (Top	Thickr	ness	Ra	dius	Elliptic	al Coni	ical H	lemispherical				o Pressure			Category A	
7-1	Bottom, Ends'	Min. 15/16"	Corr. 1/8"	Crown	Knuckle	Ratio 2:1	Apex A	Angle	Radius	Diam	eter	Conve	Concave	Type	Fu	ıll, Spot, No NONE	ne <u>Eff.</u> 1.0
(a) (b)	CND	15/10	110			2.1		1.50	2505000					-	+	HONE	110
		7	15	psi at max.	temp.	500	e il	366	(Mat'l Sp	sure _		325	escribe as oge			ted, describ	
lf ba	ır, give dimensi	nal) (ex	temal)	R UCS-66(a)(c		(interna)(f)		external)	Jacket clos	sure _		(C	Describe as oge		f bolt °F at	ted, describ	
If ba	r, give dimensi WP 49	7 nal) (ex SHELL SIDE DES	temal) SIGNED PEF	R UCS-66(a)(d (Indicat	c)(g) & UG-20	(interna (f) and the		external) nt(s) imp	Jacket clos	sure _		(C	Describe as oge		f bolt °F at	ted, describ	
If ba • MA 10. Imp	wP 49 (interpreted the state of	7 nal) (ex SHELL SIDE DES	temal) GIGNED PEF	R UCS-66(a)(d (Indicat	c)(g) & UG-20 te yes or no	(interna (f) and the	componen	external) nt(s) imp	Jacket clos	sure _		(C	Describe as oge		f bolt °F at	ted, describ	
If bank MA	when the second of the second	7 nal) (ex SHELL SIDE DES	temal) GIGNED PEF ess tube secti 2,CL1	R UCS-66(a)(c (Indicat 729 ions.	c)(g) & UG-20 te yes or no PSIG	(internal)(f) and the Pro	componen	external)	Jacket clos "F) Pact tested)	Min. o		(C	Describe as oge np. 0 at test	t tempe	of bolt Fal	ted, describ t 497 e of	7 p:
If bank MA	when the second of the second	7 nal) (ex SHELL SIDE DES	temal) GIGNED PEF ess tube secti 2,CL1	R UCS-66(a)(c (Indicat 729 ions.	e)(g) & UG-20 te yes or no PSIG	(internal)(f) and the Pro	componen	external)	Jacket clos	Min. o		(C	np. 0 at test	t tempe	of bolt Fal	ted, describ t 497	7 p:
If be MA	when the second of the second	7 nal) (ex SHELL SIDE DES COMPleted for SA-350-LF Stationary (Mat	temal) GIGNED PEF ess tube secti 2,CL1	729 ions.	te yes or no PSIG 60 Dia., in. (sub	(internal)(f) and the Pro	component of test	external)	°F) act tested) 6 3/4" Nom. thk., in	Min. o	design	(C	Describe as oge np. 0 at test	t tempe	of bolt F all rature	ted, describ t 497 e of	ps ps
If ba	wp 49 (interpoact test N0; ydro., prwitt, 66 12 and 13 to be besheet:	7 nal) (ex SHELL SIDE DES COMPleted for SA-350-LF Stationary (Mat'	temal) GIGNED PEF ess tube secti 2,CL1	R UCS-66(a)(c (Indicat 729 ions.	e)(g) & UG-20 te yes or no PSIG 60 Dia., in. (sub	(interna (it) and the Pro 9/16 oject to pr	component of test	external)	"F") eact tested) 6 3/4" Nom. thk., in in.	Min. c	design	(Corr.	Describe as oge np. 0 at test	t tempe	of bolt F all rature	ted, describ t 497 e of BOLTED nent (welded	ps ps
If be MA	wp 49 (interpoact test N0; ydro., prww, si 12 and 13 to be besheet: S Floating (Mat'l S bes:	7 nal) (ex SHELL SIDE DES COMPleted for SA-350-LF Stationary (Mat	temal) SIGNED PEF SSS tube secti 2,CL1 I Spec. No	R UCS-66(a)(c) (Indicat 729 ions.	e)(g) & UG-20 te yes or no PSIG 60 Dia., in. (sub	(internal)(f) and the Pro	component of test	external) at(s) imp	°F) act tested) 6 3/4" Nom. thk., in	Min. c	design	(Corr.	np. 0 at test	t tempe	of bolt of the second of the s	ted, describ t 497 e of BOLTED tent (welded	ps ps
If ba	wp 49 (interpoact test N0; ydro., prww, si 12 and 13 to be besheet: S Floating (Mat'l S bes:	7 nal) (ex SHELL SIDE DES EXCOMB. test pre completed for SA-350-LF Stationary (Matherina) Spec. No.) SA-179 Spec. No., Green	ess tube section of the section	R UCS-66(a)(c (Indicat 729 ions.	e)(g) & UG-20 te yes or no PSIG 60 Dia., in. (sub	(interna lift) and the c Pro 9/16 sject to pr	ess.)	external)	"F") act tested) 6 3/4" Nom. thk., in in. 0.083	Min. c	design	(Corr.	np. 0 at test 3/8 Allow., in. 785	t tempe	of bolt of the second of the s	ted, describ t 497 e of BOLTED tent (welded	p p
If ba	ydro., prwitt, 68 12 and 13 to be besheet: Floating (Mat'l 5 bes: Mat'l 4 - 18 incl. to be	7 nal) (ex SHELL SIDE DES EXCOMB. test pre completed for SA-350-LF Stationary (Matherina) Spec. No.) SA-179 Spec. No., Green	ess tube section of the section	R UCS-66(a)(c (Indicat 729 ions.	e)(g) & UG-20 te yes or no PSIG 60 Dia., in. (sub	(interna lift) and the c Pro 9/16 sject to pr	ess.)	external) ont(s) imp	"F") act tested) 6 3/4" Nom. thk., in in. 0.083	Min. o	design	(Corr.	np. 0 at test 3/8 Allow., in. 785	t tempe	of bolt of the second of the s	ted, describ t 497 e of BOLTED tent (welded	p p
If bank MAA	ydro., present seed of the see	nal) (ex SHELL SIDE DES EXECUTION test pre completed for SA-350-LF stationary (Mat' Spec. No.) SA-179 Spec. No., Grave completed for course(s):	ess tube secti 2,CL1 I Spec. No	R UCS-66(a)(c) (Indicat 729 ions. Dia., ir	e)(g) & UG-20 te yes or no PSIG 60 Dia., in. (sub n.	(interna)(i) and the c Pro 9/16 sject to pr 3/4 D., in. ssels or c	ess.) No hannels of (b) Ovess	ont(s) imp	"F") act tested) 6 3/4" Nom. thk., in in. 0.083 Nom. thk., in schangers. agth (ft & in.):	Min. or gai	Cor	Corr.	Describe as oge np. 0 at test 3/8 Allow., in. in. 785 Number 3'-6 7	Atta	of bolt for a factor of the fa	e of BOLTED Bent (welded Attachment U pe (Straight	d or bolted
If ba MA MA O. Imp 11. Hy 12. Tu 3. Tu 4. Sh No.	ir, give dimension WP 49 (interpolated NO; ydro., provide, see 12 and 13 to be besheet: Floating (Mat'l State) bes: Mat'l 4 - 18 incl. to be course Diameter, in.	nal) (ex SHELL SIDE DES Completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Grave completed for course(s):	temal) SIGNED PEF ess tube secti 2,CL1 I Spec. No	Constitution of the state of th	e)(g) & UG-20 te yes or no PSIG 60 Dia., in. (sub	(interna l(f) and the complete specific production of the complete	ess.) No hannels of (b) Overses	external) ont(s) imp	"F") act tested) 6 3/4" Nom. thk., in in. 0.083 Nom. thk., in xchangers. agth (ft & in.): Long. Joint	Min. or gar	design	Corr.	Describe as oge np. 0 at test 3/8 Allow., in. 785 Number	Atta	If bolt F al rature	e of	p p d or bolted
If ba	ydro., present seed of the see	nal) (ex SHELL SIDE DES EXECUTION test pre completed for SA-350-LF stationary (Mat' Spec. No.) SA-179 Spec. No., Grave completed for course(s):	temal) SIGNED PEF ess tube secti 2,CL1 I Spec. No	R UCS-66(a)(c) (Indicat 729 ions. Dia., ir	e)(g) & UG-20 te yes or no PSIG 60 Dia., in. (sub	(interna)(i) and the c Pro 9/16 sject to pr 3/4 D., in. ssels or c	ess.) No hannels of (b) Ovess	oxternal) ont(s) imp om. thk., f heat ex	"F") act tested) 6 3/4" Nom. thk., in in. 0.083 Nom. thk., in schangers. agth (ft & in.):	Min. or gar	Cor	Corr. Allow.,	Describe as oge np. 0 at test 3/8 Allow., in. 785 Number 3'-6 7	Atta	of bolt for a factor of the fa	e of	d or bolted
If ba MA MA 10. Imp 11. Hy 12. Tu 13. Tu 14. Sh	ir, give dimension WP 49 (interpolated NO; ydro., provide, see 12 and 13 to be besheet: Floating (Mat'l State) bes: Mat'l 4 - 18 incl. to be course Diameter, in.	nal) (ex SHELL SIDE DES Completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Grave completed for course(s):	temal) SIGNED PEF ess tube secti 2,CL1 I Spec. No	Constitution of the state of th	e)(g) & UG-20 te yes or no PSIG 60 Dia., in. (sub	(interna l(f) and the complete specific production of the complete	ess.) No hannels of (b) Overses	oxternal) ont(s) imp om. thk., f heat ex	"F") act tested) 6 3/4" Nom. thk., in in. 0.083 Nom. thk., in xchangers. agth (ft & in.): Long. Joint	Min. or gar	Cor	Corr. Allow.,	Describe as oge np. 0 at test 3/8 Allow., in. 785 Number 3'-6 7	Atta	of bolt for a factor of the fa	e of	d or bolted
If ba	ir, give dimension WP 49 (interpolated NO; ydro., provide, see 12 and 13 to be besheet: Floating (Mat'l State) bes: Mat'l 4 - 18 incl. to be course Diameter, in.	7 (ex. SHELL SIDE DES. SA-350-LE Stationary (Mathematical Spec. No.) SA-179 Spec. No., Grave completed for course(s): (s) Length (ft & in 3'-6 7/16"	ess tube section in the sectio	Construction of particular designs of partic	College & UG-20 te yes or no PSIG 60 Dia., in. (sub on acketed ves or no on acketed ves or no on	(interna)(f) and the complete properties of the	ess.) No hannels of (b) Ov ess Corr. 1/8"	oxternal) ont(s) imp om. thk., f heat ex	"F") act tested) 6 3/4" Nom. thk., in in. 0.083 Nom. thk., in xchangers. agth (ft & in.): Long. Joint	Min. of	Cor Eff.	Corr. Circi Type 1	at test 3/8 Allow., in. 785 Number 3'-6 7	Atta //16" A. B & (One E	Type	BOLTED e of BOLTED ent (welded Attachment U pe (Straight Heat Tr Temp	d or bolted
If ba	ir, give dimension with the product test NO; ydro., product, test NO; y	7 nal) (ex SHELL SIDE DES COMPleted for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Grave completed for course(s): (s) Length (ft & in 3'-6 7/16"	temal) SIGNED PEF ess tube secti 2,CL1 I Spec. No	Constitution of the second of	PSIG 60 Dia., in. (sub) O.t. acketed ves ype No 1 1 ,CL1 pe) H.T Tir	(interna l(f) and the complete process of the complete	ess.) No hannels of (b) Ov ess Corr. 1/8"	om. thk., f heat exerall len	Jacket clos "F") act tested) 6 3/4" Nom. thk., in in. 0.083 Nom. thk., in xchangers. igth (ft & in.): Long. Joint Full. Spot. FULL	MIN . or gas	Coruge) Eff. 1.0	Corr. Allow., Circ. Type 1	at test as oge app. 0 at test as allow., in. 785 Number 3'-6 7 um. Joint (Cat. Full. Spot. No Full.	Atta //16" A. B & (One E	of bolt for a factor of the fa	BOLTED BO	d or bolted
If ba MAA 110. Imp	ir, give dimension with the product test NO; office the product test NO; office test NO; offic	7 nal) (ex SHELL SIDE DES SHELL SIDE DES SHEUMBO. test pre completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Gra se completed for course(s): (s) Length (ft & in 3'-6 7/16"	temal) SIGNED PEF ess tube secti 2,CL1 I Spec. No	Constitution of the second of	College & UG-20 te yes or no PSIG 60 Dia., in. (sub on acketed ves or no on acketed ves or no on	(interna)(f) and the c Pro 9/16 oject to pr 3/4 D., in. ssels or ci	ess.) No hannels of (b) Ov ess Corr. 1/8"	om. thk., If heat experall len Type 1	or F) act tested) 6 3/4" Nom. thk., in in. 0.083 Nom. thk., in schangers. igth (ft & in.): Long. Joint of Full. Full.	MIN . or gai	Cor Eff.	Corr. r. Allow., Type 1 Spec. No	at test 3/8 Allow., in. 785 Number 3'-6 7	Atta //16" A. B. & (one 1	of bolt of the following of the followin	BOLTED e of BOLTED ent (welded Attachment U pe (Straight Heat Tr Temp	d or bolted
If ba MAA 110. Imp	ir, give dimension with the product test NO; ydro., product, test NO; y	7 nal) (ex SHELL SIDE DES SHELL SIDE DES SHEUMBO. test pre completed for SA-350-LF Stationary (Mat' Spec. No.) SA-179 Spec. No., Gra se completed for course(s): (s) Length (ft & in 3'-6 7/16"	signed PEF ess. tube section of the	Constitution of the second of	PSIG 60 Dia., in. (sub n. Co.t acketed ves ype Nc 1 1 cc ,CL1 pe) H.T Tin	(interna)(f) and the c Pro 9/16 oject to pr 3/4 D., in. ssels or ci	ess.) No hannels of (b) Ov ess Corr. 1/8"	om. thk., If heat experall len Type 1	Jacket clos "F") act tested) 6 3/4" Nom. thk., in in. 0.083 Nom. thk., in schangers. agth (ft & in.): Long. Joint Full. Spot. FULL (b) demispherica	Min. or gate	Coruge) Eff. (Mat'l	Corr. r. Allow., Type 1 Spec. No	at test at tes	Atta //16" A. B. & (one 1	of bolt of the following of the followin	BOLTED BOLTED BOLTED Bent (welded Attachment U Pe (Straight Heat Tr Temp. Temp. Category A	d or bolted

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

16. MAWP	625	·		si at max. temp.	500	366		Min.	design metal temp.	0	Fat _	625	psi.
(ir	itemal) (ex	temal)		(internal)	(extern	nal)						
17. Impact test	10; CH	ANNEL SIDE	DESIGNED PE	R UCS-66(a)(c)(g) & UG-2 (Indicate yes or no a		ant/e) im	nnact taste	ad)	A	at test ten	nperature of	**	_ °F
40 11 1					· ·	cin(s) iii	iipaci iesii	cuj					
18. Hydro., pwett, 19. Nozzles, inspe			-	813 PSIG	Proof test								=
Purpose (Inlet,	T	Diameter			terial		Mazzla T	Thickness	Deieferser	T			_
Outlet, Drain, etc.)	No.	or Size	Type	Nozzle	Flange		Nom.	hickness Corr.	Reinforcement Material	Nozzle	ttached Flange	Location (Insp. Ope	127
INLET/OUTLET	1/1	12"-600#	RFWN	SA-106-B	SA-105/		.688"	1/8"	SA-516-70N	WELDED	WELDED	CHANNE	
PG/TW	2/2	1%"600#	RFLWN	SA-105-N			.630"	1/8"	WELD	WELDED	.,,	CH. NOZ	-
INLET	1	14"-600#	RFWN	SA-106-B	SA-105/	1	.750* -	1/8*	SA-516-70	WELDED	WELDED	SHELL	
OUTLET	1	12"-600#	RFWN	SA-106-B	SA-105A	1	.688*	1/8"	SA-516-70	WELDED	WELDED	SHELL	
PG/TW	2/2	1%" 600#	RFLWN	SA-105-N			.630"	1/8"	WELD	WELDED		SH. NOZS	3.
		7,495-0			L					<u> </u>			
20. Supports: Skirt	-	NO	_ Lugs _		egs		Others	(2) 8	BELLY BANDS	Attached	SHELL;	WELDED	
	•	es or No)		(No.)	(No.	•			Describe)			and How)	
21. Manufacturer's	Partial	Data Repo	orts properly i	dentified and signed b	y Commission	ed Inspe	ectors have	e been fumi	shed for the following	items of the re	eport:		
(List the name o	f part,	item numbe	er, mfg's. nan	ne and identifying num	nber)								
									-				
	wor n	FLOTOD FF	- COURTE HIT IT	TYRILLIATE D.O. IIO	F0300 B 10 01				-:				
Particular Contract C		Van de la companya de	and the second second second second second	XCHANGER, P.O. NO:		IIEM N	NU: E-641 /	A, SIZE: 59	-264, TYPE: AFU				
		AND THE RESERVE OF		DEVICES PROVIDED BY						,			
		THE RESERVE OF THE PARTY	A STOCK AND A STOCK OF THE STOC	/8" THK., SA-350-LF2,C	PROBLEM TO THE PROPERTY OF THE								
LINES 14-18 INCI	.UDE (2) 69 5/8" 0.	D. x 59" I.D. x	8 15/16" THK., SA-350	-LF2,CL1, RING								
				CEI	RTIFICATE C	F SHC	OP COM	PLIANCE				200	
We certify	that t	he stateme	nts made in t	his report are correct						ship of this yes	eal conform t	a tha	
				ion VIII, Division 1,	oria trial tri doll	3113 01 00	Joign, mar	cital, collan	detion, and workman	mp or tills ves	sei comonn t	o tite	
		Authorizatio		12370		Ex	xpires		9/27	2007			
Date 4	1.11-	27	Nama sus				•	0!1	30	150	Α		
Date	77	01	Manie FNF	RGY EXCHANGER COME	'ANY nufacturer)			Signed _		epresentative)			
				28000	A PRINCIPAL SECTION OF THE BEST OF THE BES					epresentative)		***************************************	\dashv
					RTIFICATE (
		olding a va	alid commissi	on issued by The Nati							of OKI	AHOMA	
and employed				OneBeacon America Ins			. 5			V, MASS.		e inspected	1
				acturer's Data Report	1011105		411-07		and state that, to the				
				vessel in accordance								his	
				implied, concerning t									
inspector nor	his em	ployer shal	ll be liable in	any manner for any po	ersonal injury o	r propert	ty damage	e or a loss o	of any kind arising from	n or connected	with this insp	ection.	
Date 4-11	17	Sid	gned (P Mlan			Com	missions	N.B.# 11921 BA OKLA	W 823		*	
Buto 77			anod Th	(Authorized	Inspector)			11113510113	(Nat'l Board incl. en		ata Province	and No 1	
						D 400	25145134			doradinoni, Ota	ate, Flovince	and No.)	-
			1		ATE OF FIEL								
			on this report	are correct and that t	he field assemt	oly const	truction of	all parts of	this vessel conforms	with the require	ements of AS	ME	
Code, Section U Certificate			la.				-						
O Ceruncate (n Auu	onzation iv					E	xpires					- 1
Date	- 4	Na	ame					Signed					- 1
				(Ass	embler)			_		Representative	9)	¥	
				CERTIFIC	ATE OF FIE	LD AS	SEMBLY	Y INSPEC	TION		Č4		
I, the undersig	ned. h	oldino a va	lid commissio	on issued by The Nati						e or Province o	of .		
and employed					200/4 0/ 2	onor on	01100001	of	500 ·	o or r tovilles o	"		
1 / 1 per l'announce de la consentation de la conse		tatements	in this Manuf	acturer's Data Report	with the descri	had nrac	COULD MOC			o no data itomo			- 1
nare compare	0 4.0 .	ito to monto	in one manar						been inspected by m				
helief the Mar	ufact	rer has ac-	netructed and	assembled this press									
inspected and									e Inspector nor his en				1
				escribed in this Manul						employer shall	be liable in ar	ıy	
manner for any	perso	onal injury o	or property da	amage or a loss of any	y kind arising fr	om or co	onnected v	with this ins	pection.				
Date		Sic	ned				Com	miccione					

(Authorized Inspector)

(Nat'l Board incl. endorsement, State, Province and No.)

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F(at. The second	CER Energy Excl	TIFIED BY nanaer Co	moany
		(2) (2) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	OKLAHON	
	MAWP SHELL	P.S.I.G. DO	or Z	TEST P.S.I.G.
	MAWP 620	P.S.I.G. (1990)	of 6	TEST P.S.I.G.
W	- MIN. DESIGN METAL TEMP.	SHELL	V ○F @ V (P.S.I.G.
RT-11	-	TUBE	of @ 101	P.S.I.G.
	SERIAL NO.	262 A III L	YEAR BUILT	12007
	P.O. NO. 1966			
	SERIVCE REA	CITOR FFEIDZE	TYPE	CHANGERI A FILL
ITEM E		SIZE 5	O THE	Aru
				17 DelG
	STIPPESS.			

SSO QA Je. 4/13/07