

105749

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

1. Manufactured and certified by ENERGY EXCHANGER COMPANY, 1844 NORTH GARNETT ROAD, TULSA, OK 74116
(Name and address of Manufacturer)

Manufactured for D-COK LLC, 3657 BRIAR PARK DRIVE, HOUSTON, TEXAS 77042-5205
(Name and address of Purchaser)

3. Location of installation GIANT INDUSTRIES, GRAFTON, VIRGINIA
(Name and address)

4. Type: HORIZONTAL HEAT EXCHANGER X-7264 A X-7264-A1 REV. 2 5272 2007
(Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exch., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 2004 EDITION, 2005 ADDENDA 2519
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): 3 (b) Overall length (ft & in.): 22'-6 1/16"

Course(s)			Material	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter, in.	Length (ft & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
2	59" I.D.	8'-0"	SA-387-11,CL2	1 1/4"	1/8"	1	FULL	1.0	1	FULL	1.0	1275°F.	1 1/4-HR.
1	59" I.D.	6'-6 1/16"	SA-387-11,CL2	1 1/4"	1/8"	1	FULL	1.0	1	FULL	1.0	1275°F.	1 1/4-HR.

7. Heads: (a) SA-387-11,CL2; 1 1/4-HR. AT 1275°F. (b) _____
(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A			
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full	Spot	None
(a)	END	1 1/8"	1/8"			2:1					X	S		NONE	1.0
(b)															

If removable, bolts used (describe other fastening) _____
(Mat'l Spec. No., Grade, size, No.)

8. Type of jacket _____ Jacket closure _____
(Describe as ogee & weld, bar, etc.)

If bar, give dimensions _____ If bolted, describe or sketch.

MAWP 497 15 psi at max. temp. 875 366 °F Min. design metal temp. 0 °F at 497 psi.
(internal) (external) (internal) (external)

10. Impact test YES; SHELLSIDE DESIGNED PER UG-84. at test temperature of 0 °F
(Indicate yes or no and the component(s) impact tested)

11. Hydro., ~~per UG-84~~, test press. 729 PSIG Proof test _____

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA-182-F11 CL2 62 7 5/8" (x) 0'Lay BOLTED
Stationary (Mat'l Spec. No.) Dia., in. (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)

Floating (Mat'l Spec. No.) Dia., in. Nom. thk., in. Corr. Allow., in. Attachment

13. Tubes: SA-213-TP321 3/4 0.065 MIN 752 U
Mat'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 (b) Overall length (ft & in.): 3'-4 3/16"

Course(s)			Material	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter, in.	Length (ft & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	59" I.D.	3'4 3/16"	SA-387-11,CL2	1 3/16"(y)	0'Lay	1	FULL	1.0	1	FULL	1.0	1275°F.	1-HR.

15. Heads: (a) SA-182-F11,CL2; 1-HR. AT 1275°F. (b) _____
(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	END	7 7/16"(x)	0'Lay						60 7/16"					
(b)														

If removable, bolts used (describe other fastening) (a) SA-193-B16, 1 1/2", 64; CHANNEL-TO-SHELL: SA-193-B16, 1 3/4", 52
(Mat'l Spec. No., Grade, Size, No.)

105749

(name and address of manufacturer)

(name and address of purchaser)

(name and address)

(mfg's serial no.)

2007

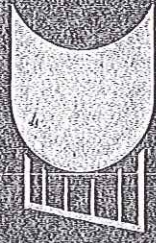
(year built)

Remarks


(2) INCLUDES 3/16" (MIN) 347/309L WELD OVERLAY ON I.D. AND AT GASKET SURFACE

(Nat'l. Board incl. endorsement, state, province and no.)

NE 15272



CERTIFIED BY
Energy Exchanger Company
TULSA, OKLAHOMA

 W RT-1 HT	MAWP SHELL	497 *	PSIG @	875 *	OF	729	TEST PSIG	
	MAWP TUBE	625 *	PSIG @	350 *	OF	813	TEST PSIG	
MIN-DESIGN METALTEMP		SHELL		0		OF @	497 *	PSIG
		TUBE		0		OF @	625 *	PSIG
SERIAL NO		X-7264A				YEAR BUILT	2007	
P.O. NO.		56603-P-12-04						
SERVICE		REACTOR FEED/EFFLUENT EXCHANGER						
ITEM	E-641E			SIZE	59-264	TYPE	AFU	
*MAX.ALLOW.EXT.PRESS.=15 PSIG @ 366°F.								
FIELD TEST PRESS.: SHELL-647 PSIG; TUBE-813 PSIG								

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SSO
