

73011

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

1. Manufactured and certified by Yuba Heat Transfer Division 2121 N. 161st E. Ave. Tulsa, OK
(Name and address of Manufacturer)

2. Manufactured for Tennessee Eastman Division, Eastman Chemical Co. P.O. Box 511 Kingsport, TN 37662
(Name and address of Purchaser)

3. Location of installation Tennessee Eastman Division Chololote Bayou, Texas
(Name and address)

4. Type: Horizontal Exchanger 93-B-104-1 - 93-B-104-1 6307 1993
(Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exch., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Natl. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 1992 "A92"
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.): 27'-11 3/4"

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	49"	7'-9 3/4"	SA-516-70		5/8"	1/8"	Db1	Spot	85%	Db1	Spot	85%	-	-
2	49"	9'-7"	SA-516-70		5/8"	1/8"	Db1	Spot	85%	Db1	Spot	85%	-	-
3	49"	9'-10"	SA-516-70		5/8"	1/8"	Db1	Spot	85%	Db1	Spot	85%	-	-

(a) (Marl Spec. No., Grade or Type) H.T. - Time & Temp										(b) (Marl Spec. No., Grade or Type) H.T. - Time & Temp									
Location (Top, Bottom, Ends)		Thickness		Radius		Elliptical		Conical		Hemispherical		Flat		Side to Pressure		Category A			
		Min.	Corr.	Crown	Knuckle	Ratio		Apex Angle		Radius		Diameter		Convex	Concave	Type	Full, Spot, None	Eff.	
(a)		-	-	-	-									-	-	-	-	-	-
(b)		-	-	-	-									-	-	-	-	-	-

If removable, bolts used (describe other fastening)

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

9. MAWP 250 - psi at max. temp. 200 - °F Min. design metal temp. 0 250 °F at 250 psi.
(internal) (external) (internal) (external)

10. Impact test - (Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. 375 Proof test -

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA-516-70 50 1/8" 2 1/4" 1/8" Welded
Stationary (Marl Spec. No.) Dia., in. (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)

SA-516-70 50 1/8" 2 1/4" 1/8" Welded
Floating (Marl Spec. No.) Dia., in. Nom. thk., in. Corr. Allow., in. Attachment

13. Tubes: SA-179 3/4" .065 2238 Straight
Marl 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. ~~SA-516-70~~ (a) No. of course(s): 1 (b) Overall length (ft & in.): 1'-0 1/4"

Return Channel

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	49"	1'-0 1/4"	SA-516-70		1/2"	1/8"	Db1	Spot	85%	Db1	Spot	85%	-	-

15. Heads: (a)										(b)										
(Marl Spec. No., Grade or Type) H.T. - Time & Temp										(Marl Spec. No., Grade or Type) H.T. - Time & Temp										
Location (Top, Bottom, Ends)		Thickness		Radius		Elliptical		Conical		Hemispherical		Flat		Side to Pressure		Category A				
		Min.	Corr.	Crown	Knuckle	Ratio		Apex Angle		Radius		Diameter		Convex	Concave	Type	Full	Spot	None	Eff.
(a)	Return Channel Cvt	(SA-516-70) (2 15/16" thk) (1/8" C.A.) (54 1/8" O.D.)																		
(b)	Return Channel Flg	(SA-105-N) (3" thk) (1/8" C.A.) (54 1/8" O.D. x 49" I.D.)																		

If removable, bolts used (describe other fastening) 24 - SA-193-B7 3/4" studs & 48 - SA-194-2H 3/4" nuts

(Marl Spec. No., Grade, Size, No.)

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This form may be obtained from The National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Ave., Columbus, OH 43220

Rev. 10

16. MAWP 150 psi at max. temp. 150 °F Min. design metal temp. 0 °F at 150 psi.
(internal) (external) (internal) (external)

17. Impact test ---

18. Hydro., pneu., or comb. test press. 225

Proof test ---

(Indicate yes or no and the component(s) impact tested)

19. Nozzles, inspection, and safety valve openings:

Purpose (inlet, outlet, draft, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Channel Inlet	1	14"	RF80		SA-105	150#	1/8"	---		Welded	Channel
Channel Outlet	1	14"	RF80		SA-105	150#	1/8"	---		Welded	Channel
Channel Inlet	1	14"	Pipe	SA-106-B		.500	1/8"	---	Welded		Channel
Channel Outlet	1	14"	Pipe	SA-106-B		.500	1/8"	---	Welded		Channel
Shell Inlet	1	6"	RFLWN		SA-105	300#	1/8"	---		Welded	Shell
Shell Outlet	1	6"	RFLWN		SA-105	300#	1/8"	---		Welded	Shell
Liq. Lev. Conn.	1	2"	RFLWN		SA-105	300#	1/8"	---		Welded	Shell

20. Supports: Skirt No Lugs --- Legs --- Others 2 Saddles Attached Shell Welded
(Yes or No) (No.) (No.) (Describe) (Where and How)

21. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:

(List the name of part, item number, mfg's. name and identifying number)

22. Remarks: Vessel exempt from charpys per UCS-66

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 this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1,

U Certificate of Authorization No. 11,178 Expires 6-5, 19 95

Date 3/2/94 Name Tuba Heat Transfer Division Signed Faye Morgan
(Manufacturer) (Representative) Morgan

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the State or Province of OK and employed by Commercial Union Insurance Company of Boston, MA have inspected the pressure vessel described in this Manufacturer's Data Report on 8/29, 19 93, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 3/2/94 Signed Raymond White Commissions Nat'l Bld. # 8223A OK # 268
(Authorized Inspector) (Nat'l Board Incl. endorsement, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements on this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME Code, Section VIII, Division 1,

U Certificate of Authorization No. --- Expires ---, 19 ---

Date --- Name --- Signed ---
(Assembler) (Representative)

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 Province of --- and employed by --- of --- have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items ---, not included in the certificate of shop inspection, have been inspected by me and to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of --- psi. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date --- Signed --- Commissions ---
(Authorized Inspector) (Nat'l Board Incl. endorsement, State, Province and No.)