

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

B. BILLINGSLEY
Inspector

1. Manufactured by HAPPY DIVISION, THERMA TECHNOLOGY / TULSA, OKLAHOMA
 2. Manufactured for PHILADELPHIA, PA.
 3. Location of Installation PHILADELPHIA, PA.
 4. Type HORIZONTAL 3416-3-5 --- --- -17882 955 1977
 (Horiz. or vert. tank) (Mfg's Serial No.) (CRN) (Drawing No.) (Nat'l Bld No.) (Year Built)
 5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 and Addenda to 12-31-76 and Code Case Nos. ---
 (Year) (Date)
 Special Service per UG-120(d) ---
 Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: ---

6. Shell: Matl. No Shell Norm. Thk. --- in. Allow. --- in. Diam. --- in. Lgth. --- ft --- in.
 (Spec. No., Grade)
 7. Seams: Long. Welded R.T. No Efficiency --- % H.T. Temp. --- F Time --- hr
 (Welded, Dbl. Sngl. Lap, Butt) (Spot or Full)
 Girth Welded R.T. No No. of Courses ---
 (Welded, Dbl. Sngl. Lap, Butt) (Spot, Partial, or Full)
 8. Heads: (a) Material SA-240-304L (b) Material SA-240-304L
 (Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Min. Thk.	Corr. Allow.		Flat Diam.	Side to Pressure (Convex or Concave)
(a) T & P Sht	1	1 1/8"	1/20"	Max Span = 8.225	(9 3/8" x 2' - 6 1/2")	Flat
(b) Wrapper Sht	1	5/8"	1/20"	Max Span = 4.1	(3 3/4" x 2' - 6 1/2")	Flat

If removable, bolts used (describe other fastenings) --- (Material, Spec. No., Gr., Size, No.)

9. Constructed for max. allowable working pressure 330 & FV psi at max. temp. 410 F. Min. temp. (when less than -20 F) --- F. Hydrostatic test pressure 752 psi.

10. Safety Valve Outlets: Number --- Size --- Location ---

11. Nozzles and Inspection Openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
Inlet	1	6"-300#	RFWN	SA-182-F304L	SCH80S	Weld	Welded @ Front	Head
Outlet	1	4"-300#	RFWN	SA-182-F304L	SCH80S	Weld	Welded @ Back	Head
Vent	1	3/4"	CPLG	SA-182-F304L	6000#	Weld	Welded @ Back	Head
Drain	1	3/4"	CPLG	SA-182-F304L	6000#	Weld	Welded @ Front	Head
Inlet	1	6"	SWAGE	SA-403-F304L	SCH80S	Weld	Welded @ Front	Head
Outlet	1	4"Ø	PIPE	SA-312-TP304L	SCH80S	Weld	Welded @ Back	Head

12. Supports: Skirt --- Lugs 4 Legs --- Other --- Attached Welded to Tube Sht
 (Yes or no) (No.) (No.) (Describe) (Where and how)

13. Remarks: Box Header at Tube Ends 4 Row, 1 Pass, Tubes; Mat'l SA-249-304
 Qty 46 O.D. 1 X13 BWG AW X 32'-0" Long.
 F.W. REQ. NO. 1776-1231-L
 P.C.W. EQUIP NO. 2-154-11
 Unit Service: RECYCLE GAS TRIM COOLER ITEM NO. E-223

CERTIFICATE OF 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.
 Date 10-5-77 Signed Happy Div. Therma-Tech. by Charles P. Lataola
 (Manufacturer) (Representative)
 "U" Certificate of Authorization No. 10,491 expires May 11 1980

CERTIFICATE OF SHOP INSPECTION

Vessel made by Happy Div. Therma-Technology at Tulsa, Oklahoma
 I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Arkansas and employed by Com. Union Ins. Co have inspected the pressure vessel described in this Manufacturers' Data Report on 10-5 19 77 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 the Manufacturers' 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.
 Signed Frank E. Dought Date 10-5-77 Commissions N.B. 7935
 (Inspector) (Nat'l Board, State, Province and No.)