

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

1. Manufactured by Midland Steel Corporation
2. Manufactured for Hardwicke Chemical Company
3. Location of Installation Elgin, South Carolina
4. Type Vert. (Horiz. or vert. tank) 4389-134 (Mfr's Serial No.) - (CRN) 4389-1 (Drawing No.) 134 (Nat'l Brd No.) (Year Built) 1981
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 1980 and Addenda to Summer 1981 and Code Case Nos. N/A
(Year) (Date)
Special Service per UG-120(d) N/A
Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A

6. Shell: Matl. SA-240-304 S/S Nom. Thk. .3125 Corr. in. Allow. 0 in. Diam. 60 in. Lgth. 10 ft 7 in.
(Spec. No., Grade)
7. Seams: Long. Welded, Dbl. Butt. R.T. Spot Efficiency .85 % H.T. Temp. N/A F Time N/A hr
(Welded, Dbl. Singl. Lap. Butt) (Spot or Full) R.T. Spot No. of Courses 1
Girth Welded, Dbl. Butt. w/ Backup (Spot, Partial, or Full)
8. Heads: (a) Material SA-240-304 S/S (b) Material SA-240-304 S/S
(Spec. No., Grade) (Spec. No., Grade)

Location (Top, Bottom, Ends)	Min. Thk.	Corr. Allow	Crown Radius	Knuckle Radius	Ellipse Ratio	Conical Apex Angle	Hemishp Radius	Flat Diam	Side to Pressure (Convex or Concave)
(a) <u>Top</u>	<u>.250</u>	<u>0</u>	<u>48</u>	<u>6.5</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Concave</u>
(b) <u>Bottom</u>	<u>.250</u>	<u>0</u>	<u>48</u>	<u>6.5</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Concave</u>

If removable, bolts used (describe other fastenings) N/A

8. Constructed for max. allowable working pressure 100 psi at max. temp. 350 F. Min. temp. (when less than -20 F) N/A
F. Hydrostatic, pneumatic, or combination test pressure 172 psi
10. Safety Valve Outlets: Number 1 Size 2" Location Top

11. Nozzles and Inspection Openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
<u>Inlets</u>	<u>3</u>	<u>2"</u>	<u>Flange</u>	<u>SA-182-E/312-TP</u>	<u>.154</u>	<u>-</u>	<u>Welded</u>	<u>top</u>
<u>outlet</u>	<u>1</u>	<u>2"</u>	<u>Flange</u>	<u>SA-182-F/312-TP</u>	<u>.322</u>	<u>SA-240-304</u>	<u>Welded</u>	<u>shell</u>
<u>Outlet</u>	<u>1</u>	<u>2"</u>	<u>HL6. Cplg</u>	<u>SA-182-F</u>	<u>.250</u>	<u>-</u>	<u>Welded</u>	<u>Bottom</u>
<u>Thermo</u>	<u>1</u>	<u>1 1/2"</u>	<u>HL6. Cplg</u>	<u>SA-182-F</u>	<u>.345</u>	<u>-</u>	<u>Welded</u>	<u>Shell</u>

12. Supports: Skirt No Lugs - Legs 4 Other N/A Attached Shell, Welded
(Yes or no) (No.) (No.) (Describe) (Where and how)
13. Remarks: Vessel Fabricated For Noncorrosive Service Contents -Toluene

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 10/14/81 Signed Midland Steel Corp. by [Signature] (Representative)

"U" Certificate of Authorization No. 8168 expires January 30, 1983

CERTIFICATE OF SHOP INSPECTION

Vessel made by Midland Steel Corporation at 1940 Shop Road, Columbia, S.C. 29201

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 North Carolina and employed by [Signature] have inspected the pressure vessel described in this Manufacturers' Data Report on 10/14 19 81, 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 [Signature] (Inspector) Date 10/14/81 Commissions NE 9526 (Nat'l Board, State, Province and No.)