

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

1. Manufactured by Superior Welding Co., 900 E. Division, Decatur, Ill 62526
(Name and address of manufacturer)
2. Manufactured for Monsanto Co., P.O. Box 7239, St. Louis, Mo 63177
(Name and address of purchaser)
3. Location of Installation Monsanto Company, Chocolate Bayou, Alvin, Texas 77581
(Name and address)
4. Type Vert. Tank Vessel No. 75172-B L75-172
(Horiz. or vert. tank) (Mfr's Serial No.) (CRN) (Drawing No.)
4174 (Nat'l Bld No.) Year Built 1976
5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME Code AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1974 (Year) and Addenda to 6-30-75 (Date) and Code Case no. _____
Special service per UG-120(d) Inner vessel for Lethal Service.

Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: Coils 2201-F2, 2201-G2, 2201-B2, 2201-C2, 2201-D2, 2201-E2, 2201-A2, Philadelphia Pipe Bending Co., "U"
(Name of part, item number, mfr's name and identifying stamp)

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers

6. Shell: Material SA-285-C PVO (Spec. No., Grade) Nominal Thickness 3.55000 Corrosion Allowance _____
Diam. 4 ft 8 ID in. Length 0 ft 8 in.

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 3-12-76 Signed Superior Welding Co. by [Signature]
(Manufacturer) (Representative)

"U" Certificate of Authorization No. 1900 expires 3-30 1979

CERTIFICATE OF SHOP INSPECTION

Vessel made by Superior Welding Co. at Decatur, Ill
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 _____ and employed by Hartford S.B.I. & I. Co. of Hartford, Conn. have inspected the pressure vessel described in this Manufacturers' Data Report on 3-12-76 19 76, 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.

Date 3-12-76
Signed [Signature] Commissions Nat'l Bd# 7818
(Inspector) (Nat'l Board, State, Province and No.)

CERTIFICATE OF COMPLIANCE FOR FIELD WORK

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 _____ Signed _____ by _____
(Manufacturer) (Representative)

"U" Certificate of Authorization No. _____ expires _____ 19 _____

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

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 _____ and employed by _____ of _____ have compared the statements in this Manufacturers' 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 that, 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 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.

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

7. Seams: Longitudinal wld-sngl-butt R.T. spot Efficiency 85 %
 (Welded, Dbl., Sngl., Lap, Butt) (Spot or Full)
 H.T. Temp --- F Time --- Girth none
 (Welded, Dbl., Sngl., Lap, Butt)
 R.T. --- (Spot, Partial, or Full) No. of Courses 2

8. Heads: (a) Material SA-285-C PVO (b) Material ---
 (Spec. No., Grade) (Spec. No., Grade)

Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio
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(a) Bottom	5/16"	1/16"	54	3-3/4	
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(b) <u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
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Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
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(a) <u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
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(b) <u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
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If removable, bolts used (describe other fastenings) --- (Material, Spec. No., Gr., Size, No.)

9. Type of Jacket Bar, Welded Proof Test ---
 (Describe as ogee & weld, bar, etc.) If bar, give dimensions 1" thk, x 1-1/16" wd.

10. Jacket Closure Bar, Welded
 (Describe as ogee & weld, bar, etc.)
 If bolted, describe or sketch.
 11. Constructed for max. allowable working pressure 50 psi at max. temp. 59 F. Min. temp. (when less than -20 F) --- F. Hydrostatic, --- test pressure 75 psi.

Items 12 and 13 to be completed for external internal coils

12. Tubesheets: Stationary—Material --- (Spec. No., Gr.) Diam. --- in. (Subject to pressure)

Nominal Thickness --- in. Corrosion Allowance --- in. Attachment --- (Welded, Bolted)

Floating—Material --- (Spec. No., Gr.) Diam. --- in.

Nominal Thickness --- in. Corrosion Allowance --- in.

Attachment ---

Coils 13. Material SA-312-304 SMLS o.d. 1.315 in. Nominal Thickness .133 in. or gauge

Number --- Type --- (Straight or "U")

Items 14-17 incl. to be completed for inner chambers of jacketed vessels or external internal coils

14. Shell: Material SA-240-304 (Spec. No., Gr.) Nominal Thickness 5 3/8 in. Corrosion Allowance 1/32 in.

Diam. 4 ft 6 in. Length 1 ft 3 in.

15. Seams: Longitudinal wld-dbl-butt R.T. full Efficiency 100 %
 (Welded, Dbl., Sngl., Lap, Butt) (Spot or Full)

H.T. Temp --- F Time --- Girth wld-dbl-butt
 (Welded, Dbl., Sngl., Lap, Butt)

R.T. full (Spot, Partial or Full) No. of courses 1

16. Heads: (a) Material SA-240-304 (b) Material ---
 (Spec. No., Grade) (Spec. No., Grade)

Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio
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(a) Top	3/16	1/32	54	3-3/4	
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(b) Bottom	3/16	1/32	54	3-3/4	
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Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
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(a) <u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
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(b) <u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
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concave

concave & convex

If removable, bolts used (describe other fastenings) SA-193-B7, 7/8" d, 56
 (Material, Spec. No., Gr., Size, No.)

17. Constructed for max. allowable working pressure 30 psi at max. temp. 158 F. Min. temp. (when less than -20 F) --- F. Hydrostatic, --- test pressure 45 psi.

Items below to be completed for all vessels where applicable

18. Safety Valve Outlets: Number * Size --- Location ---

19. Nozzles: *Safety valves in external piping by customer.

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached
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Coil In & Out	14	1"	Nozz	SA-312-304	Sch. 40S	---	Welded
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Thermowell	4	1 1/2"	"	"	Sch. 80S	---	"
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Inlets & Outlets	3	2"	"	"	"	---	"
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Sparger Inlet	1	2"	"	"	Sch. 40S	---	"
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20. Inspection Openings: Top head removable for access for insp.

Manholes No. --- Size --- Location ---

Handholes No. --- Size --- Location ---

Threaded No. --- Size --- Location ---

21. Supports: Skirt no Lugs 4 (No.) Legs --- (No.) Other --- (Describe)

Attached Welded to jacket. (Where and how)

22. Remarks: Used as Reactor. Contents unknown to fabricator. Inner vessel for

Lethal service: UW-2(a), UW-11(a)(1) & UCS-79(d)(2)(a).

*Coil design: 50 PSIG at 110°F no corrosion allowance.

** Relief & Spare 2 4" Nozz SA-312-304 Sch. 80S --- Welded

Jkt In&Out 4 1" SA-53-B Sch. 160S --- "

*Also see
remarks

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