

**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  
5/7/1991

1. Manufactured and certified by Estrella AG, Brühlmattweg 20, CH-4107 Ettingen - Switzerland  
(Name and address of manufacturer)
2. Manufactured for Americ, Cyanamid  
(Name and address of purchaser)
3. Location of installation unknown (USA)  
(Name and address)
4. Type vert. Tank 90'828 N/A 900.35.269rev.2 21 1990  
(Horiz. or vert., tank) (Mfr's serial No.) (CRN) (Drawings) (Nat'l. Bd. 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 1989  
Year
- N/A 1970 Lethal Service  
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, or shells of heat exchangers

6. Shell: SA 285 Gr.C 0,315 0,039 3'6,68" Top shell 9" bottom shell 16,57"  
(Matl. (Spec. No., Grade)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft & in.)) (Length (Overall) (ft & in.))
7. Seams: sngl. N/A 0,7 1562  
(Long. (Dbl., Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F))
- 35' sngl. no RT 1  
(Time) (Girth (Dbl., Sngl.)) (R.T. (Spot, Partial, or Full)) (No. of Courses)
8. Heads: (a) Matl. SA 516 CL.60 (b) Matl. N/A  
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	bottom	0,315	0,039	43,26	4,33	--	--	--	--	concave
(b)	--	--	--	--	--	--	--	--	--	--

If removable, bolts used (describe other fastenings) N/A  
(Matl., Spec. No., Gr., Size, No.)

9. Type of Jacket Typ 1 + 3 Proof Test N/A
10. Jacket Closure welded If bar, give dimensions N/A If bolted, describe or sketch.  
(Describe as ogee & weld, bar, etc.)

11. MAWP 100 psi at max. temp. 350 °F. Min. design metal temp. -20 °F at 172,5 psi.  
Hydro., pneu., or comb. test press. 172,5 psi.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: N/A -- -- -- --  
Stationary Matl. (Spec. No., Gr.) (Diam. (in.) (Subject to pressure)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Attach. (Welded, Bolted))
- N/A -- -- -- --  
Floating Matl. (Spec. No., Gr.) (Diam. (in.)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Attach.)
13. Tubes: N/A -- -- -- --  
Matl. (Spec. No., Gr.) (O.D. (in.)) (Nom. Thk. (in. or Gauge)) (Number) (Type (Straight or "U"))

Items 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: SA 285 Gr.C 0,47 0,039 (on jacketed part) 39" Top shell 13,15" Bottom shell 13,27"  
(Matl. (Spec. No., Grade)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft & in.)) (Length (Overall) (ft & in.))
15. Seams: sngl. full 100 1562  
(Long. (Dbl., Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F))
- 35' sngl. full 1  
(Time) (Girth (Dbl., Sngl.)) (R.T. (Spot, Partial, or Full)) (No. of Courses)
16. Heads: (a) Matl. SA 516 CL.60 (b) Matl. SA 516 CL.60  
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	Top	0,47	0	39,37	3,94	--	--	--	--	both
(b)	Bottom	"	0,039	"	"	--	--	--	--	"

If removable, bolts used (describe other fastenings) SA 193 B7 28 piece UNC 1" x 6", and 28 piece UNC 1" x 3 3/4"  
(Matl., Spec. No., Gr., Size, No.)

17. MAWP -15/50 psi at max. temp. 350 °F. Min. design metal temp. -20 °F at 65 psi.  
Hydro., pneu., or comb. test press. 65 psi.



## Form U-1 (Back)

## 18. Nozzles, Inspection and Safety Valve Openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
inlet	N1+N2	6"	150 lbs	SA181C160	0,472	N/A	welded	top
inlet	N3+4+5	2"	150 lbs	SA181C160	0,433	N/A	welded	top
outlet	N6+N7	2"	150 lbs	SA181C160	0,433	N/A	welded	top
heat.nozzle	eH1-H4	G 1"	N/A	SA106GrB	0,177	N/A	welded	jacket
wend.nozzle	eK1-K4	G 1/2"	N/A	SA106GrB	0,1	N/A	welded	jacket
inspot open.	G1-G4	4"	NPT	SA 105	0,75	N/A	welded	jacket

19. Supports: Skirt --- Lugs 4 Legs --- Other --- Attached welded on jacket  
 (Yes or no) (No.) (No.) (Describe) (Where and how)

20. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: \_\_\_\_\_  
 (Name of part, item number, mfr's. name and identifying stamp)

Glass lined vessel

Hydrostatic test in vertical position

Glass lining in accordance with Code Case 1970

Mat exempted from impact testing acc. to UG 20 (f) UCS 66 (a) (1)

## 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. 20453 expires Aug. 5, 19 91.  
 Date 7.12.1990 Co. name Estrella AG, 4107 Ettingen Signed Hr. R. Wirthrich  
 (Manufacturer) (Representative)

## CERTIFICATE OF SHOP INSPECTION

Vessel constructed by ESTRELLA AG, 4107 ETTINGEN at SWITZERLAND

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 NEW JERSEY and employed by LR INSURANCE INC

of NEW YORK have inspected the pressure vessel described in this Manufacturer's Data Report on DECEMBER 17, 19 90, 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 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 MAY 8, 91 Signed E.P. SUMMERS Commissions P654 N.J. 665  
 (Authorized Inspector) (Nat'l Board, State, Province and No.)

## CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly construction of all parts of this vessel conforms with the requirements of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code.

"U" Certificate of Authorization No. \_\_\_\_\_ expires \_\_\_\_\_, 19 \_\_\_\_\_.  
 Date \_\_\_\_\_ Co. name \_\_\_\_\_ Signed \_\_\_\_\_  
 (Assembler that certified and constructed field assembly) (By 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/or 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 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 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. endorsements), State, Prov., and No.)