

**FORM U-1A MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS**  
(Alternative 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 COOLING PRODUCTS, INC. 500 NORTH PECAN, BROKEN ARROW, OK 74012

2. Manufactured for Union Carbide Corporation Tonawanda, New York

3. Location of installation NIJECT Wyoming

4. Type Finned Sec. 2772-1A H-98-2 692 Year Built 1982  
(Horiz. or Vert. Sec.) (Mfg. Serial No.) (CRN) (Drawing No.) (Nat'l Bd. No.)

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 (Year) and Addenda to Winter 81 (Date) and Code Case Nos. NONE Special Service NONE  
Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: NONE

6. Shell: \_\_\_\_\_  
Mat'l (Spec. No., Grade) \_\_\_\_\_ Nom. Thk. (in) \_\_\_\_\_ Corr. Allow. (in) \_\_\_\_\_ Diam. (ft. & in) \_\_\_\_\_ Length (overall) (ft. & in) \_\_\_\_\_

7. Seams: Wld. Sngl. Corn. Jnt. NONE C-20 1100 2 \_\_\_\_\_  
Long (Welded, Dbl. Sngl. Lap, Butt) RT (Spot or Full) Eff. (%) HT Temp. (°F) Time (hr) Girth (Welded, Dbl. Sngl. Lap, Butt) RT (Spot, Partial or Full) No. of Courses

8. Heads: (a) Mat'l. SA-515-70 (b) Mat'l. SA-515-70  
(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) | <u>Tube &amp; Plug Sheet</u>   | <u>2"</u>         | <u>1/16"*</u>       |              |                |                  |                    |                      | <u>7-3/8"</u> |                                      |
| (b) | <u>Wrapper &amp; End Plate</u> | <u>1-1/8"</u>     | <u>1/16"*</u>       |              |                |                  |                    |                      | <u>4"</u>     |                                      |

If removable, bolts used (describe other fastenings) \_\_\_\_\_  
(Mat'l, Spec. No., Gr., Size, No.)

9. Const. for max. allow. working press. 1500 psi at max. temp. 350 °F Min. temp. (when less than -20° F) \_\_\_\_\_ °F.  
Hydro. ~~2250~~ test pressure 2250 psi.

10. Safety Valve Outlets: No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

11. Nozzles and Inspection Openings:

| Purpose (Inlet, Outlet, Drain) | No. | Diam. or Size | Type          | Mat'l  | Nom. Thk. | Reinforcement Mat'l | How Attached | Location  |
|--------------------------------|-----|---------------|---------------|--------|-----------|---------------------|--------------|-----------|
| Inlet                          | 1   | 8" ANSI       | 900RFRWN Flg. | SA-105 | XH        |                     | Wld'd.       | Header    |
| Outlet                         | 1   | 8" ANSI       | 900RFRWN Flg. | SA-105 | XH        |                     | Wld'd.       | Header    |
| Vent                           | 1   | 1"-6000#      | Cplg.         | SA-105 |           |                     | Wld'd.       | Header    |
| Drain                          | 1   | 1"-6000#      | Cplg.         | SA-105 |           |                     | Wld'd.       | Header    |
| Tubes                          | 98  | 1" OD         | Straight      | SA-214 | 14 GA     |                     | Rolled       | Tube Sht. |
| Insp.                          | 196 | 1-1/8"        | Thd'd.        |        |           |                     |              | Plug Sht. |

12. Supports: Skirt \_\_\_\_\_ Lugs \_\_\_\_\_ Legs \_\_\_\_\_ Other \_\_\_\_\_ Attached \_\_\_\_\_  
(Yes or no) (No) (No) (Describe) (Where and how)

13. Remarks: Four row, two pass box type headers. Dimensions: 7-3/8" x 54-1/4" Air Cooled Heat Exchanger  
\* Corrosion allowance does not include nozzles.  
Two 8" Swages SA-216-WCB with two 1" plugs each SA-105  
98B43602 P.O. #825-45256-Z BLIC Intercooler #3

**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 5-21-82 Signed COOLING PRODUCTS, INC. by David Under  
(Manufacturer) (Representative)

"U" Certificate of Authorization No. 5746 Expires April 30, 19 84

**CERTIFICATE OF SHOP INSPECTION**

Vessel made by COOLING PRODUCTS, INC. at BROKEN ARROW, OKLAHOMA 74012

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 C.U. Ins. Co.

have inspected the pressure vessel described in this Manufacturer's Data Report on 7-8, 19 82, 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 J. J. Rayner Date 7-8-82 Commissions NB5652  
(Inspector) (Nat'l Board, State, Province and No.)

(12/81) This form (E00117) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017