

MARYLAND CASUALTY COMPANY V.P.F.# 43409
FORM U-1 MANUFACTURERS' DATA REPORT FOR UNDESIGNED PRESSURE VESSELS
 As required by the Provisions of the ASME Code Rules

1. Manufactured by **OLD DOMINION IRON & STEEL CORP., Subsidiary of ADAMSON COMPANY, INC., RICHMOND, VIRGINIA** E-6422-13
 (Name and Address of Manufacturer)
 Manufactured for **Hercules, Inc., Wilmington, Delaware** # 104340
 (Name and Address of Purchaser)
 3. Type **Horiz.** Kind **Heat Exch.** Vessel No. **73-23** (Mfrs. Serial) Natl. Bd. No. **21076** Yr. Built **197**
 (Horiz. or Vert.) (Tank, Jacketed, Heat Exch.) (State & State No.)

Items 4-9 incl. to be completed for single wall vessels (such as air tanks), jackets of jacketed vessels, or shells of heat exchangers.

4. SHELL: Material **SA240-304** T. S. **75,000** Nominal Thickness **3/16** Corrosion Allowance **0** In. In. Diam. **2** Ft. **3-3/8** In. Length **15** Ft. **11**
 (Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

5. SEAMS: Long **Dbl. Butt** H. T. **No** X. R. **None** Sectioned **NO** Efficiency **70**
 (Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)

Girth **Dbl. Butt** H. T. **No** X. R. **None** Sectioned **NO** No. of Courses **2**

If riveted or scribe seams fully on reverse side of form.

6. HEADS (a) Material T.S. (b) Material T.S.
 Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press.
 (Top, bottom, ends) (Convex or Conca)

If removable, bolts used (Material, Spec. No., T.S., Size, Number) Other fastening (Describe or Attach Sketch)

7. STAYBOLTS If hollow Attachment Pitch X Diam.
 (Material) (Size of Hole) (Threaded, Welded) (Horiz.) (Vert.) (Nominal)

8. JACKET CLOSURE: (Describe as ogee & weld, bar, etc. If bar, give dimensions, if bolted, describe or sketch)

9. Constructed for max. allowable working press. **75** psi at max. temp. **300** °F. Min. temp. (when less than -20°) **300** °F. Hydrostatic Test Press **127**

Items 10 and 11 to be completed for tube sections.

TUBE SHEETS: Stationary. Material **SA240 TP304** Diam. **23** In. Thickness **1-1/4** In. Attachment **Welded**
 (Kind & Spec. No.) (Subject to Pressure) (Welded, Bolt)
 Floating. Material (Kind & Spec. No.) Diam. In. Thickness In. Attachment

11. TUBES: Material **SA249 - TP304** O.D. **3/4** In. Thickness **16** or Gage Number **624** Type **Straight**
 (Kind & Spec. No.) (Straight or U)

Items 12-15 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

12. SHELL Material **SA515 Gr. 70** T.S. **70,000** Nominal Thickness **5/16** Corrosion Allowance **1/16** In. In. Diam. **2** Ft. **3-5/8** In. Length **1** Ft. **7-3/4**
 (Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

13. SEAMS: Long **Dbl. Butt** H.T. **No** X.R. **None** Sectioned **NO** Efficiency **70**
 (Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)

Girth **S.W.B.-W/BU** H.T. **No** X.R. **None** Sectioned **NO** No. of courses **1**

If riveted or scribe seams fully on reverse side of form.

14. HEADS (a) Material T.S. (b) Material **SA515-70** T.S. **70,000** (c) Material T.S.
 Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Pressure
 (a) Top, bottom, ends (Convex or Conca)
 (b) Channel **Cover** **1-5/8"** **31-3/8"**
 (c) Floating

If removable, bolts used (a) (Material, Spec. No., T.S., Size, Number) (b) **SA193-B7 125,000 5/8" 24**

(c) Other fastening (Describe or Attach Sketch)

15. Constructed for max. allowable working press. **100** psi at max. temp. **300** °F. Min. temp. (when less than -20°) **300** °F. Hydrostatic Test Press **150**

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number Size Location
 PURPOSE (Inlet, Outlet, Drain)
 In - Out 2 10" 150# R.F.S.O. SA53-B Sch.30 None Welder
 Inlet 1 18" 150# Lap Jt. SA240-304 3/16" P1 " "
 Outlet 2 3" 150# SA312-304 Sch.10S " "

(Items 18 through 20 continued on back)

P.O. 026-57325-FCD

EQUIP No E-6420-6

Project 026057

FORM U-1 (back)

18. INSPECTION Manholes, No. _____ Size _____ Location _____
 OPENINGS: Handholes, No. _____ Size _____ Location _____
 Threaded No. _____ Size _____ Location _____
 19. SUPPORTS: Skirt _____ Lugs _____ Legs _____ Other Saddles _____ Welded to S. _____
 (Yes or No) (Number) (Number) (Describe) (Where & 1)
 20. REMARKS: Condenser (Cooling Water in Tubes) with flanged and flued expansion joint in shell
 3/16" Thick x 35" O.D. - SA240 TP304.
 (2 2" 150# Lap Joint Conn. - SA312 TP304) (4 3/4" 3000# N.P.T.)

(Brief description of purpose of the vessel, as Air Tank, After Cooler, Jacketed Cooker, etc. State contents of each part.)

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 ASME Code for Unfired Pressure Vessels.

Date June 22, 1973 Signed Old Dominion Iron & Steel Corp. By *Serge J. Jerni*
 (Manufacturer)

Certificate of Authorization Expires Dec. 31, 1973

CERTIFICATE OF SHOP INSPECTION

VESEL MADE BY OLD DOMINION IRON & STEEL CORP., Subsidiary of ADAMSON COMPANY, INC., RICHMOND, VIRGINIA
 I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of OHIO /PENNA. and employed by Maryland Casualty Company have inspected the pressure vessel described in this manufacturer's data report on June 22, 1973, and state that to the best of my knowledge and belief, the manufacturer has constructed this pressure vessel in accordance with the applicable sections of the ASME Boiler and Pressure Vessel Code.

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 June 22, 1973

Charles A. Hitchcock
 Inspector's Signature

Commissions NB 5656 - Pa. WC 1559
 Nat'l Board or State and No.

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 of _____ and employed by _____ 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 the applicable sections of the ASME Boiler and Pressure Vessel Code. 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 _____ 19 _____

Inspector's Signature _____
 Commissions _____

Nat'l Board or State and No. _____