

#104337

FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS

As required by the Provisions of the ASME Code Rules Section VIII Division 1

MELJER #19284

1. Manufactured by MANNING & LEWIS ENG. CO., 675 RAHWAY AVE., UNION, N. J. 07083
(Name and address of manufacturer)
2. Manufactured for HERCULES INCORPORATED, WILMINGTON, NORTH CAROLINA
(Name and address of Purchaser)
3. Type VERT Kind HEAT EXCH Vessel No. (7151) (Mfrs. Serial) (State & State No.)
(Horiz. or Vert.) (Tank, Jacketed, Heat Exch.)
- Natl. Bd. No. 3778 Yr. Built 1974

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 SA-285-C T.S. 55000 Nom. Tks. 5/16 in. Allow. 1/16 in. Dia. 2 Ft. 4 in. Lgth. 15' Ft. 9 3/4 in.
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)
5. SEAMS: Long DBL BUTT H.T. NO R.T. NO Sectioned NO Efficiency 70 %
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)
- Girth DBL BUTT H.T. NO R.T. NO Sectioned NO No. of Courses 4

If riveted describe seams fully on reverse side of form

6. HEADS: (a) Material SA-285-C T.S. 55000 (b) Material SA-285-C T.S. 55000
- | Location (Top, bottom, ends) | Thickness | Crown Radius | Knuckle Radius | Elliptical Ratio | Conical Apex Angle | Hemispherical Radius | Flat Diameter | Side to Pressure (Convex or Concave) |
|------------------------------|-----------|--------------|----------------|------------------|--------------------|----------------------|---------------|--------------------------------------|
| (a) | | | | | | | | |
| (b) | | | | | | | | |
- If removable, bolts used SA-193-B7-125000, 3/8"-10 (2A) Other fastening Other fastening
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)

7. STAYBOLTS: SA-193-B7-125000, 3/8"-10 (2A) If hollow NO Attachment WELDED Pitch X Diam. 1/2 in. (Nominal)
(Material) (Size of Hole) (Threaded, Welded) (Horiz.) (Vert.)

8. JACKET CLOSURE: WELDED
(DESCRIBE AS GREEK & WELD, BAR, ETC. IF BAR, GIVE DIMENSIONS. IF BOLTED, DESCRIBE OR SKETCH)

9. Constructed for max. allowable working press. 175 psi. at max. temp. 350 °F. Min. temp. (when less than -20°) NO °F. Hydrostatic Pneumatic or Test Combination Press. 113 psi.

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material SA-240-316 Dia. 27 1/16 in. Tks. 1 1/8 in. Attachment WELDED
(Kind & Spec. No.) (Subject to Pressure) (Welded, Bolted) (CLAMPED)
- Floating. Material SA-240-316 Dia. 27 1/16 in. Tks. 1 1/8 in. Attachment WELDED
(Kind & Spec. No.) (Subject to Pressure) (Welded, Bolted) (CLAMPED)

11. TUBES: Material SA-240-316 O.D. 1" In. Thickness 14 In. Lgth. 316 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 SA-240-316 T.S. 75000 Nom. Tks. 1/4 in. Allow. 0 in. Dia. 2 Ft. 4 in. Lgth. 1 Ft. 8 3/4 in.
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)
13. SEAMS: Long DBL BUTT H.T. NO R.T. SPOT Sectioned NO Efficiency 85 %
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)
- Girth GROOVE H.T. NO R.T. NO Sectioned NO No. of courses 1

If riveted describe seams fully on reverse side of form

14. HEADS: (a) Material SA-285-C T.S. 55000 (b) Material SA-285-C T.S. 55000 (c) Material SA-285-C T.S. 55000
- | Location | Thickness | Crown Radius | Knuckle Radius | Elliptical Ratio | Conical Apex Angle | Hemispherical Radius | Flat Diameter | Side to Pressure (Convex or Concave) |
|-----------------------|-----------|--------------|----------------|------------------|--------------------|----------------------|---------------|--------------------------------------|
| (a) Top, bottom, ends | | | | | | | <u>285/8</u> | <u>FLAT</u> |
| (b) Channel | | | | | | | | |
| (c) Floating | | | | | | | | |

- If removable, bolts used (a) SA-193-B7-125000, 3/8"-10 (2A) (b) SA-193-B7-125000, 3/8"-10 (2A)
(Material, Spec. No., T.S., Size, Number) (Material, Spec. No., T.S., Size, Number)
- (c) SA-193-B7-125000, 3/8"-10 (2A) Other fastening Other fastening
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)

15. Constructed for max. allowable working press. 175 psi. at max. temp. 350 °F. Min. temp. (when less than -20°) NO °F. Hydrostatic Pneumatic or Test Combination Press. 116 psi.

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number 1 Size 1/2 Location Top

17. NOZZLES:
- | Purpose (Inlet, Outlet, Drain) | Number | Diam. or Size | Type | Material | Thickness | Reinforcement Material | How Attached |
|--------------------------------|--------|---------------|---------|------------|-----------|------------------------|--------------|
| INLET | 1 | 16"-150" | FLANGED | SA53-B | 3/32 | | WELDED |
| OUTLET | 1 | 3"-150" | FLANGED | SA53-B | 5/16 | | WELDED |
| INLET | 1 | 12"-150" | FLANGED | SA-240-316 | 1/25 | | WELDED |
| OUTLET | 1 | 24"-150" | FLANGED | SA-240-316 | 250 | | WELDED |
| INLET | 1 | 4"-150" | FLANGED | SA-240-316 | 5/16 | | WELDED |
| VENT/DRAIN | 2 | 3/4" NPT | SCREWED | SA-181-1 | 3000" | | WELDED |
| VENT/DRAIN | 2 | 3/4" NPT | SCREWED | SA-182-316 | 3006" | | WELDED |

18. INSPECTION Manholes, No. _____ Size _____ Location _____
 OPENINGS: Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

19. SUPPORTS: Skirt _____ Lugs 4 Legs _____ Other _____ Attached WELDED TO SHELL
 (Yes or No) (Number) (Number) (Describe) (Where & How)

20. REMARKS: 2B-192 PURGE MECH STILL REBOILER WITH STEAM ON SHELL
SIDE AND MECH, H₂O, H.C. ON TUBE SIDE
SHELL SIDE HAS EXP. JOINT.

(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 the ASME Code for unfired Pressure Vessels, Section VIII Division 1

Date 9/18/77 19 _____ Signed MANNING & LEWIS ENG. CO. By A.W. Sault
 MANUFACTURER
 Certificate of Authorization No. 1574 EXPIRES 2/31/78
3/31/77

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY MANNING & LEWIS ENG. CO. at UNION, N. J.
 I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province _____ and employed by EMPLOYERS—COMMERCIAL UNION INSURANCE CO. OF AMER. of BOSTON, MASS. have inspected the pressure vessel described in this manufacturer's data report on 2-13-78 19 _____, 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 2-13-78 19 _____
J.D. Camacho Commissions NAT'L. BD. 3874
 Inspector's Signature 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 or Province _____ 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 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 _____
 _____ Commissions _____
 Inspector's Signature Nat'l Board or State and No.

