104256 R.P.F. # 42422

FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS

As required by the Provisions of the ASME Code Rules, Section VIII, Division 1 K-6497

1. Manufactured by MISSOURI BOILER & TANK CO. (DIV. OF NOOTER CORP.) ST. LOUIS, MISSOURI
(Name and address of Manufacturer)

2. Manufactured for HERCULES, INC. WILMINGTON, DELAWARE
(Name and address of Purchaser)

3. Type Vert. (Horiz. or Vert.) Kind Ht. Exch. (Tank, Jacketed, Heat Exch.) Vessel No. K-6497 (Mfrs. Serial) ( ) (State & State No.) Natl. Bd. No. 3393 Yr. Built 1972

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-516-70 (Kind and Spec. No.) T.S. 70,000 (Fig. or F.B. & Spec. Min. T.S.) Nominal Thickness 1/2 In. Corrosion Allowance 1/16 In. Diam. 4 Ft. 9 In. Length 9 Ft. 11 7/8" In.

5. SEAMS: Long Dbl. Butt (Welded, Dbl., Single, Lap, Butt) H.T. No (Yes or No)[1] R.T. Spot (Spot or Complete) Sectioned No (Yes or No) Efficiency 85 %

Girth Dbl. Butt H.T. No R.T. Spot Sectioned No No. of Courses 2

If riveted describe seams fully on reverse side of form.

6. HEADS (a) Material ____ T.S. ____ (b) Material ____ T.S. ____

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 ____ (Material, Spec. No., T.S., Size, Number) Other fastening ____ (Describe or Attach Sketch)

7. STAYBOLTS: ____ (Material) If hollow ____ (Size of Hole) Attachment ____ (Threaded, Welded) Pitch ____ (Horiz.) X ____ (Vert.) Diam. ____ (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[2] 165 psi at max. temp. 370 °F. Min. temp. (when less than −20°) — °F. Hydrostatic [illegible] or [illegible] Test Press 248 psi.

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material SA-240-304 (Kind & Spec. No.) Diam. 57 (Subject to Pressure) In. Thickness 2 5/8 In. Attachment Welded (Welded, Bolted)

Floating. Material ____ (Kind & Spec. No.) Diam. ____ In. Thickness ____ In. Attachment ____

11. TUBES: Material SA-249-304 (Kind & Spec. No.) O.D. 3/4 In. Thickness #18 BWG Inches or Gage Number 3060 Type STR. (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-240-304 (Kind and Spec. No.) T.S. 75,000 (Fig. or F.B. & Spec. Min. T.S.) Nominal Thickness 1/4 In. Corrosion Allowance 0 In. Diam. 4 Ft. 9 1/2 In. X 1 11 1/2 Length 6 Ft. 2 In.

13. SEAMS: Long Dbl. Butt (Welded, Dbl., Single, Lap, Butt) H.T. No (Yes or No)[1] R.T. Spot (Spot or Complete) Sectioned No (Yes or No) Efficiency 85 %

Girth Dbl. Butt H.T. No R.T. Spot Sectioned No No. of courses 4

If riveted describe seams fully on reverse side of form.

14. HEADS (a) Material SA-240-304 T.S. 75,000 (b) Material ____ T.S. ____ (c) Material ____ T.S. ____

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a) [illegible], bottom [illegible]	.282" MIN.	53"	3.44" MIN.	—	—	—	—	Concave
(b) Channel								
(c) Floating								

If removable, bolts used (a) ____ (Material, Spec. No., T.S., Size, Number) (b) ____

See Remarks

(c) ____ Other fastening Welded (Describe or Attach Sketch)

15. Constructed for max. allowable working press[2] 100 psi at max. temp. *370 °F. Min. temp. (when less than −20°) — °F. Hydrostatic [illegible] or [illegible] Test Press Hydro-150 PSI Air-10 PSIG

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number ____ Size ____ Location ____

17. NOZZLES

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
In & Out	2	6"	SER150	SA-53-B	SCH80	—	Welded
do	1	3"	do	SA-312-304	SCH40S	—	do
do	1	20" OD	SER15LJ	SA-240-304	1/4"	SA-516-70	do
do	1	24" OD	do	do	do	—	do

[1] If postweld heat-treated. [2] List under remarks other internal or external pressures with coincident temperature when applicable.

(Over)

P.O. 026-35110-FCJ EQU. No. E-4520-5 PROJ. 026035

FORM U-1 (back)

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

19. SUPPORTS: Skirt No (Yes or No) Lugs 4 (Number) Legs _____ (Number) Other _____ (Describe) Attached Welded (Where & How) To Shell

20. REMARKS:. Meho Recovery Condenser
P.O. No. 336-826-38110-03-000
Equip. No. E-4520-S
Tube & Tubesheet Design Temp. = 100° F.

(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 Pressure Vessels, Section VIII, Division I.

Date Aug 18 19 72 Signed Mo. Bo. & Tank Company (Manufacturer) By Robert J. Quan

Certificate of Authorization Expires 12-31-73

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Mo. Bo. & Tank Company at St. Louis, Missouri

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province Mo. Bo. and employed by Lumbermans Mutual Casualty Company of Chicago, Illinois have inspected the pressure vessel described in this manufacturer's data report on Aug 18 1972 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 Aug 18 1972

R. L. Erickson (Inspectors Signature) Commissions 6180 (Nat'l Board, State, or Province 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 ____

_____ (Inspector's Signature) Commissions _____ (Nat'l Board, State, or Province and No.)