FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS

As required by the Provisions of the ASME Code Rules, Section VIII, Division 1 # 104215

1. Manufactured by Camden Alloy Fabricators Camden, New Jersey
(Name and address of Manufacturer)

2. Manufactured for Hercules Incorporated Hanover Plant Wilmington, No. Car.
(Name and address of Purchaser)

3. Type Vert. (Horiz.or Vert.) Kind Heat Exch. (Tank, Jacketed, Heat Exch.) Vessel No. 73-5577 (Mfrs.Serial) ( ) (State & State No.) Natl. Bd. No. 943 Yr. Built 1973

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 C/SSA515-70 (Kind and Spec. No.) T.S. 70000 (Fig.or F.B.& Spec.Min.T.S.) Nominal Thickness 3/8 Corrosion In. Allowance 1/16 In. Diam. 2 Ft. 11-3/4 In. Length 8 Ft. 0-1/16"

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 %
** Dbl.& Sing.Butt
Girth UW13.2(d) H.T. No R.T. Spot Sectioned No No.of Courses 4
If riveted describe seams fully on reverse side of form. F/F

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] 175 psi at max. temp. 365 °F. Min. Temp.(when less than -20°) ----- °F. Hydrostatic / Pneumatic / Combination Test Press 285 psi.

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material 304S/SSA240 (Kind & Spec. No.) Diam. 35-3/4 (Subject to Pressure) In. Thickness 1-1/8 In. Attachment Welded (Welded, Bolted)
Both Fixed
Floating. Material 304S/SSA240 (Kind & Spec. No.) Diam. 35-3/4 In. Thickness 1-1/8 In. Attachment Welded

11. TUBES: Material 304S/SSA249 (Kind & Spec. No.) O.D. 3/4 In. Thickness 16 Inches or Gage Number 1166 Type Straight (Straight or U)

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

12. SHELL Material 304S/SSA240 (Kind and Spec. No.) T.S. 75000 (Fig. or F.B. & Spec. Min. T.S.) Nominal Thickness 3/8 In. Corrosion Allowance 0 In. Diam. 2 Ft. 11-3/4 In. Length 3 Ft. 3-3/8 In. 1'-1-3/8"

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 %
UW13.2(d)
Girth UA 48(1a) H.T. No R.T. No Sectioned No No. of courses 1 each end
If riveted describe seams fully on reverse side of form.

14. HEADS (a) Material C/SSA515-70 T.S. 70000 (b) Material ____ T.S. ____ (c) Material ____ T.S. ____
304S/S Liner

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	1"						7-3/8	
(b) Channel								
(c) Floating								

If removable, bolts used (a) Al.St,SA193B7,125000,7/8,88 (b) ____ (Material, Spec. No., T.S., Size, Number)
(c) ____ Other fastening ____ (Describe or Attach Sketch)

15. Constructed for max. allowable working press[2] Full Vac. psi at max. temp. 350 °F. Min. temp. (when less than -20°) ----- °F. Hydrostatic / Pneumatic / Combination Test Press 50 psi.

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number ____ Size ____ Location Elsewhere in system

17. NOZZLES

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
Inlet	1	20"	L.O.	304S/SSA240	3/8	None	Welded
Outlet	1	8"	L.J.	304S/SSA240	1/4"	None	Welded
Inlet & Outlet	2	6"	S.O.	C/SSA106B	Sch80	None	Welded
Vent & Drain	2	3/4"	Coup	Fg.St.	3000#	None	Welded

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

(Over)

P.O. 026-57010-FCD EQU. No. E-6408-11 PROJ. 026057

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 2 (Number) Legs No (Number) Other _____ (Describe) Attached Shell, Welded (Where & How)

20. REMARKS: This vessel is a 1 Pass 1830 sq. ft. Ester still vent condenser. Vessel is not designed for lethal service. Overall length 12'-7-5/16". * Data Report 6651, Partial, Long seam was fabricated by Phoenix Steel Corp. * Vessel has fabricated expansion joint consisting of (2) flanged & flued heads. Material is C/S SA515-70. Contents Tube Side Air-Metol Shell Side Water.

(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 1.

Date March 29 19 73 Signed Camden Alloy Fabricators (Manufacturer) By Frank E. Hoffman

Certificate of Authorization No. _____ Expires 12/31/74

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Camden Alloy Fabricators at Camden, New Jersey

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province Pa. and employed by Factory Mutual Grp. of Ins. Co. /MBI Co of Massachusetts have inspected the pressure vessel described in this manufacturer's data report on MAR 29 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 MAR 29 1973

Inspectors Signature

Commissions NB3954 PA1515
Nat'l Board, State, 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, Province and No.

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