FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS

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

1. Manufactured by Ryan Industries 4800 Allmond Ave., Louisville, Ky 40214
(Name and address of Manufacturer)

2. Manufactured for Stock
(Name and address of Purchaser)

3. Type Vert. (Horiz. or Vert.) Kind Jacketed tank (Tank, Jacketed, Heat Exch.) Vessel No 6515 (Mfrs. Serial) (State & State No.) 6515 Yr Built 1976

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-T304 (Kind and Spec. No.) T.S. 75,000 (Fig. or F.B. & Spec. Min. T.S.) Nominal Thickness .264 In. Corrosion Allowance 0 In. Diam 3 Ft 0 In. Length 6 Ft 9 In.

5. SEAMS: Long Double butt (Welded, Dbl., Single, Lap, Butt) H.T. No (Yes or No)[1] R.T. RT-2 (Spot or Complete) Sectioned No (Yes or No) Efficiency 100

Girth Single butt H.T. No R.T. RT-2 Sectioned No No. of Courses 1

If riveted describe seams fully on reverse side of form.

6. HEADS (a) Material SA240-T304 T.S. 75,000 (b) Material SA240-T304 T.S. 75,000

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) Top	.262 min			2:1				Concave
(b) Bottom	.262 min			2:1				Concave

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] 250 psi at max. temp. 100 F. Min. Temp (when less than -20) -320 F. Hydrostatic / ~~Pneumatic~~ / ~~Combination~~ Test Press 404 psi

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary: Material (Kind & Spec. No.) Diam. (Subject to Pressure) In. Thickness In. Attachment (Welded, Bolted)

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

11. TUBES: Material (Kind & Spec. No.) O.D. Inches In. Thickness or Gage Number Type (Straight or U)

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

12. SHELL Material (Kind and Spec. No.) T.S. (Fig. or F.B. & Spec. Min. T.S.) Nominal Thickness In. Corrosion Allowance In. Diam. Ft In. Length Ft In.

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

Girth H.T. R.T. Sectioned No. of courses

If riveted describe seams fully on reverse side of form

14. HEADS (a) Material T.S. (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) Top, bottom, ends								
(b) Channel								
(c) Floating								

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

(c) Other fastening (Describe or Attach Sketch)

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

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number 1 Size 1" Location Vent line

17. NOZZLES

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
Instrument	2	.625	SA479-T304	Bar	.1175		Welded
Instrument	1	.875	SA479-T304	Bar	.390		"
Top & Bot. fill	2	2.500	SA479-T304	Bar	.680		"
Vent & Liq. draw	2	1.500	SA-479-T304	Bar	.180		"
Hydro	1	.750	SA479-T304	Bar	.105		"
Hydro	1	2.375	SA312-T304	Pipe	.154		"

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

(Over)

FORM U-1 (back)

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

19. **SUPPORTS:** Skirt _____ (Yes or No) Lugs _____ (Number) Legs _____ (Number) Other Straps (2) (Describe) Attached Welded on C/L of vessel (Describe)

20. **REMARKS** (List applicable special services in accordance with UG-120(d)): Data for T-330 gal. gross vacuum jacketed cryogenic storage vessel at 250 psig SA-240 stainless steel non-corrosive service. Inner vessel code stamp only. Outer vessel not code stamped.

2 Plus full external vacuum and hydro head

(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 13 Aug 19 76 Signed Ryan Industries, Inc. (Manufacturer) By William P. Landers Jr.
William P. Landers
Quality Control

Certificate of Authorization No. 7109 Expires 30 March 1979

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Ryan Industries, Inc. at 4800 Allmond Ave., Louisville, Ky.

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province Kentucky and employed by Commercial Union Insurance Co. of Boston, Mass. have inspected the pressure vessel described in this manufacturer's data report on 8-13 19 76, 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 8 19 76

M. Jennings Commissions N.B. 5536
Inspector's Signature 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 ____

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

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