FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS
As required by the Provisions of the ASME Code Rules

1. Manufactured by Ryan Industries, Inc., 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. (Mfrs. Serial) 5014 ( ) (State & State No.) Natl. Bd. No. 5014 Yr. Built 1969

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 SA240T304SS (Kind and Spec. No.) T.S. 75,000 (Flg. or F.B. & Spec. Min. T.S.) Nominal Thickness .278 Corrosion Allowance 0 In. Diam. 5 Ft. 0 In. Length 9 Ft. 4½ In.

5. SEAMS: Long Double Butt (Welded, Dbl., Single, Lap, But) H.T. No (Yes or No) X.R. Complete (Spot or Complete) Sectioned No (Yes or No) Efficiency 100 %

Girth Double Butt H.T. No X.R. 100% Sectioned No No. of Courses One

If riveted describe seams fully on reverse side of form.

6. HEADS (a) Material SA240 T304SS T.S. 75,000 (b) Material SA240 T304SS 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	.276	-	-	2:1	-	-	-	Concave
(b) Bottom	.276	-	-	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. + full ext. vac & hydro head psi at max. temp. 150 F. Min. temp. (when less than −20°) 100 F. Hydrostatic / Pneumatic or Combination Test Press -320 F. 258 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. In. Thickness Inches 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. (Flg. or F.B. & Spec. Min. T.S.) Nominal Thickness Corrosion Allowance In. Diam. Ft. In. Length Ft. In.

13. SEAMS: Long (Welded, Dbl., Single, Lap, But) H.T. (Yes or No) X.R. (Spot or Complete) Sectioned (Yes or No) Efficiency %

Girth H.T. X.R. 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) (Material, Spec. No., T.S., Size, Number) (b)

(c) Other fastening (Describe or Attach Sketch)

15. Constructed for max. allowable working pressure 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 One Size 1" Location Vent Line

17. NOZZLES

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
Trycock	1	.625	304SS	Bar	.1175	-	Welded
Low Pres.	1	.625	304SS	Bar	.1175	-	Welded
High Pres.	1	.875	304SS	Bar	.2425	-	Welded
Top Fill	1	2.000	304SS	Bar	.1800	-	Welded
Bot. Fill	1	1.900	304SS	Pipe	.1450	-	Welded
Vent	1	1.500	304SS	Bar	.1450	-	Welded
Vap. Return	1	1.500	304SS	Bar	.1450	-	Welded
Pump Inlet	1	1.430	304SS	Bar	.1450	-	Welded

(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 2 straps (Describe) Attached Welded (Where & How) to shell centerline

20. REMARKS: 1625 gallon gross 150 psi vertical vacuum jacketed cryogenic storage vessel

Data for inner vessel only, outer protective vessel non-coded

(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.

Date Oct. 10, 19 69 Signed Ryan Industries, Inc. (Manufacturer) By John Copeland Quality Control Dept.

Certificate of Authorization Expires December 31, 1970

CERTIFICATE OF SHOP INSPECTION

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

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Kentucky and employed by Commercial Union Ins. Co. of Amer. of Boston, Mass. have inspected the pressure vessel described in this manufacturer's data report on Oct. 10, 19 69 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 Oct. 10, 19 69 Penn. W.C. 1254

M. P. Jennings Inspectors Signature — Commissions N B 5536 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 ____ 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 and No.

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