

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. (Name and address of Manufacturer) CLEVELAND, OHIO

2. Manufactured for NATIONAL CYLINDER GAS DIVISION OF CHEMETRON CORP. (Name and address of Purchaser) CHICAGO, ILLINOIS

3. Type VERTICAL Kind JACKETED Vessel No. (3530) (Natl. Bd. No. 3530) Yr. Built 1966
(Horiz. or Vert.) (Tank, Jacketed, Heat Exch.) (Mfrs. Serial) (State & State No.)

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-240 T.S. 75,000 Nominal Thickness 0.240 In. Allowance 0 In. Diam. 3 Ft. 0 In. Length 5 Ft. 1-5/8 In.
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

5. SEAMS: Long DBL. BUTT WELD H.T. NO X.R. COMPLETE Sectioned NO Efficiency 90 %
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)

If riveted describe seams fully on reverse side of form.

6. HEADS: (a) Material SA-240 T.S. 75,000 (b) Material SA-240 T.S. 75,000
(Top, bottom, ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Pressure (Convex or Concave)

If removable, bolts used None (Material, Spec. No., T.S., Size, Number) Other fastening None (Describe or Attach Sketch)

7. STAYBOLTS: None If hollow None Attachment None Pitch None X None Diam. None
(Material) (Size of Hole) (Threaded, Welded) (Horiz.) (Vert.) (Nominal)

8. JACKET CLOSURE: None (Describe as open & weld, bar, etc. If bar, give dimensions, if bolted, describe or sketch)

9. Constructed for max. allowable working press. 200 psi at max. temp. +100 °F. less than -20° None Min. temp. (when Hydrostatic Pneumatic or Test Press 327 psi. Combination)

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary Material SA-240 (Kind & Spec. No.) Diam. 3/4 In. Thickness 0.240 In. Attachment Welded
 Floating Material SA-240 (Kind & Spec. No.) Diam. 3/4 In. Thickness 0.240 In. Attachment Welded

11. TUBES: Material SA-240 O.D. 3/4 In. Thickness 0.240 Inches or Gage Number None Type None
(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 T.S. 75,000 Nominal Thickness 0.240 In. Allowance 0 In. Diam. 3 Ft. 0 In. Length 5 Ft. 1-5/8 In.
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

13. SEAMS: Long DBL. BUTT WELD H.T. NO X.R. COMPLETE Sectioned NO Efficiency 90 %
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)

If riveted describe seams fully on reverse side of form.

14. HEADS: (a) Material SA-240 T.S. 75,000 (b) Material SA-240 T.S. 75,000 (c) Material SA-240 T.S. 75,000
(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, bottom, ends .212" MIN. (b) Channel None (c) Floating None

If removable, bolts used (a) None (Material, Spec. No., T.S., Size, Number) (b) None

(c) None Other fastening None (Describe or Attach Sketch)

15. Constructed for max. allowable working press. 200 psi at max. temp. +100 °F. less than -20° None Min. temp. (when Hydrostatic Pneumatic or Test Press 327 psi. Combination)

Items below to be completed for all vessels where applicable. WELD I.T.

16. SAFETY VALVE OUTLETS: Number None Size None Location None

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
	3	3/4" O.D.	SA-479 TYPE	304 S.S.	ROD BORED	.385" I.D.	WELDED
	3	1-1/8" O.D.	SA-479 TYPE	304 S.S.	ROD BORED	.885" I.D.	WELDED
	1	1-1/2" O.D.	SA-479 TYPE	304 S.S.	ROD BORED	1.135" I.D.	WELDED

(Items 18 through 20 continued on back)

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

CLEVELAND, OHIO

RYAN INDUSTRIES, INC.

18. INSPECTION Manholes, No. _____ Size _____ Location _____
 OPENINGS: Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____
 19. SUPPORTS: Skirt _____ Lugs _____ (Yes or No) _____ Lugs _____ (Number) _____ Legs _____ (Number) _____ Other _____ (Describe) _____
 20. REMARKS: **36" I.D. LIQUID OXYGEN STORAGE VESSEL - LENGTH O.A. 6' 11-1/8"**
INNER VESSEL ONLY
BRACE RODS WELDED TO TOP HEAD
BRACE RODS REACHED TOP HEAD
LEGS WELDED TO SIDE OF SHELL

JACKET VACUUM SERVICE - NOT CODE STAMPED
48" O.D. DIAMETER LENGTH O.A. 6' 4-1/2"

(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 JAN 10 1966 19 _____ Signed RYAN INDUSTRIES, INC. By J. Magyer
 (Manufacturer)

Certificate of Authorization Expires #956 12/31/67

CERTIFICATE OF SHOP INSPECTION

VESEL MADE BY RYAN INDUSTRIES, INC. at CLEVELAND, OHIO

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of NATIONAL BOARD and employed by HARTFORD STEAM BOILER INSPECTION & INSURANCE CO. of HARTFORD, CONN. have inspected the pressure vessel described in this manufacturer's data report on _____ 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 JAN 10 1966 19 _____ O.H.O. # 1186
PENNA # WC 982
N.B. # 3342

J. S. [Signature]
 Inspector's Signature

Commissions _____
 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 or State and No. _____