

Ammonia

FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS

As required by the Provisions of the ASME Code Rules

340.2100

1. Manufactured by The HeaTran Equipment Company, Inc., Houston, Texas 1E-310B
(Name and address of Manufacturer)

2. Manufactured for Bechtel Corporation, San Francisco, California
(Name and address of Purchaser)

3. Type Horiz. Kind Heat Exch. Vessel No. 1619B (Mfrs. Serial) (State & State No.)
(Horiz. or Vert.) (Tank, Jacketed, Heat Exch.)

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-212-B T.S. FB 70000 Nominal Thickness 3-1/2 Corrosion Allowance 1/8 M. Diam. 4 Ft. 0 In. Length 38 Ft. 6 In. 3/4"
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

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

If riveted describe seams fully on reverse side of form.

Girth WSB, WDB H.T. Yes X.R. Complete Sectioned No No. of Courses 5

6. HEADS (a) Material T.S. (b) Material T.S.
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Pressure
(Top, bottom, ends) (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 Attachment Pitch X Diam.
(Size of Hole) (Threaded, Welded) (Horiz.) (Vert.) (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. 2600* psi at max. temp. 600 °F. Min. temp. (when less than -20°) °F. Hydrostatic or Pneumatic or Combination Test Press 3900 psi.

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary Material Sa-105-II Diam. 48-3/4 In. Thickness 3-7/8 Attachment Welded
(Kind & Spec. No.) (Subject to Pressure) (Welded, Bolted)

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

11. TUBES: Material Sa-214 O.D. 5/8 In. Thickness 060(MW) Inches or Gage Number 1850 Type Straight
(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-105-II T.S. 70000 Nominal Thickness 3-5/8 Corrosion Allowance 1/8 M. Diam. 4 Ft. 0-3/4 Length 3 Ft. 9 In.
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

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

If riveted describe seams fully on reverse side of form.

Girth WDB H.T. Yes X.R. Complete Sectioned No No. of courses 2 Ea.

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
(Top, bottom, ends) (Convex or Concave)

(a) Top, bottom, ends

(b) Channel 9-1/4" 40-1/8" Flat

(c) Floating

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

(c) Other fastening 42-1/2" OD x 38" ID x 5-3/4" lg. THD Ring, 10° Mod Sq. 4TPI CL 2G

15. Constructed for max. allowable working press. 2600* psi at max. temp. 600 °F. Min. temp. (when less than -20°) °F. Hydrostatic or Pneumatic or Combination Test Press 3900 psi.

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	One Ea.	16" Stub	13-1/8" ID	Sa-105-II	1-7/16"	Sa-105-II	Welded
Inlet	One	16" Stub	13-9/16" ID	Sa-105-II	1-7/32"	Sa-105-II	Welded
Outlet	One	16" Stub	13-1/8" ID	Sa-105-II	1-7/16"	Sa-105-II	Welded

(Items 18 through 20 continued on back)

¹ If postweld heat-treated.

² List other internal or external pressures with coincident temperature when applicable.

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

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

(Brief description of purpose of the vessel, as Air Tank, After Cooler, Jacketed Cooker, etc. State contents of each part.)

***Enclosed Ring Closure seals with Sections of 6" X-17y (0.74") Pipe 35-116-A.

Date 12-9- 1965 Signed The Healy Corp., Inc. H. Healy

Certificate of Authorization Expires Dec. 31, 1967

VESEL MADE BY The RailTran Equipment Co., Inc. Houston, Texas

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of INDIA and employed by EMPLOYERS COUNTY COMPANY of INDIA, have issued the pressure work described in the foregoing certificate.

_____ 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 19

Inspectors Signature

Commissions

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Nat'l Board or State and No.

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.