

94203

AMMONIA CONVERTER

311 9 1965

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

As required by the Provisions of the ASME Code Rules

1. Manufactured by Struthers Wells Corporation, Titusville, Pa.
(Name and address of Manufacturer)

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

3. Type Vert Kind Tank Vessel No. 18-2070 () Natl. Bd. No. () Yr. Built 1965
(Horiz. or Vert.) (Tank, Jacketed, Heat Exch.) (Mrs. 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-100-302 T.S. 100,000 Nominal Thickness 4-1/8 Corrosion Allowance 1/16 In. In. Diam. 77 1/8 Ft. In. Length 213 1/2 Ft. In.
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

5. SEAMS: Long Weld, Dbl. Butt 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 Weld, Dbl. Butt H.T. Yes X.R. Complete Sectioned No No. of Courses 7

6. HEADS (a) Material SA-105-II T.S. 70,000 (b) Material SA-182-F22 T.S. 70,000
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 23" 94-5/8" Flat
(b) Bottom Pad 18" 57" Flat

If removable, bolts used SA-103-B7(115,000) Other fastening (32) 2-1/4"
(Material, Spec. No., T.S., Size, Number) (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. 725 ° F. less than -20°
Top Head & Shell - 475° F
Bott. Head Min. temp. (when Hydrostatic Test Press. 3900 psi.
F. Combination)

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material (Kind & Spec. No.) Diam. 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 or Gage Number Inches 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. In. Diam. Ft. In. Length Ft. In.

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

If riveted describe seams fully on reverse side of form.

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

14. HEADS (a) Material T.S. (b) Material T.S. (c) Material T.S.

(a) Top, bottom, ends (b) Channel (c) Floating
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) APPROVED
 - (b) Channel (1A) APPROVED FOR FABRICATION AS MARKED. REVISED DWG. NOT REQ'D.
 - (c) Floating (2) APPROVED FOR FABRICATION AS MARKED. REVISED DWG. REQ'D.
- If removable, bolts used (a) (Material, Spec. No., T.S., Size, Number) (b) (c) (3) NOT APPROVED. REVISED DWG. REQ'D.

Code Certificate - Supporting Document
CCSD-4915-1-C-1-1-0
EQUIP. NO. 10-301

(c) This approval of general compliance with our requirements does not relieve Supplier of responsibility to furnish material or equipment meeting all service and dimensional conditions stipulated and implied by the purchase order.
15. Constructed for max. allowable working press. 2600 psi at max. temp. 725 ° F. less than -20°
BECHTEL CORPORATION
Hydrostatic } Test
Pneumatic or } Press 3900 psi.
F. Combination }

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number 7/20/65 BY W.A. HENKEL Location

17. NOZZLES

| Purpose (Inlet, Outlet, Drain) | Number | Diam. or Size | Type | Material | Thickness | Reinforcement Material | How Attached |
|--------------------------------|--------|---------------|-------------|------------|-----------|------------------------|--------------------|
| | 1 | Spec. 2500# | W.N. Flg | SA-336-F5A | | | Bolted-Bott. Pl |
| | 1 | Spec. 2600# | W.N. Flg | SA-182-F22 | | | " " " |
| | 2 | 10"-1500# | W.N. Flg | SA-105-II | | | Welded to Stub |
| | 2 | 4"-1500# | Pads R.T.J. | | | | Integral w/she Flg |

(Items 18 through 20 continued on back)

¹ If postweld heat-treated.

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

344 ANN

18. INSPECTION Manholes, No. _____ Size _____ Location _____
 OPENINGS: Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location Bottom Head
 19. SUPPORTS: Skirt No Lugs _____ Legs _____ Other Rings Attached Welded
(Yes or No) (Number) (Number) (Describe) (Where & How)
 20. REMARKS: For use as a Converter in the Ammonia Industry

(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, **insofar as applicable.**

Date 4/6/65 19 _____ Signed Struthers Wells Corp. By W. T. Stec
(Manufacturer) **W. T. Stec**

Certificate of Authorization Expires December 31, 1967

**Design of vessel has been approved by State of Arkansas
 Letter dated Jan. 27, 1965**

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Struthers Wells Corp. at Titusville, Pa.

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Arkansas and employed by Hartford Sta. Bldg. Insp. & Ins. 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, **insofar as applicable**

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 JUN 28 1965 19 _____

Harry Burke Commissions N.B. #2760 Ark. #530
Inspector's Signature Nat'l Board or State and No.
Harry Burke

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.