



NOTE: FOR ALL STAINLESS STEEL
 0.03% MAX. CARBON, 0.02% MAX. NICKEL, 0.2% MAX. NIOB
 THE CRISTAL STRUCTURE OF THE STEEL SHALL BE FULLY AUSTENITIC
 AND SHALL NOT CONTAIN CARBON CHANGES, FERRITE OR SORBY PHASE.
 THE MATERIAL SHALL BE TESTED BY THE AUSTENITIC METHOD ACCORDING TO
 ASTM SPEC. A-262-55T FOR FIVE PERIODS OF 48 HOURS EACH.
 THE AVERAGE RATE OF CORROSION AS DETERMINED BY THIS METHOD
 SHALL NOT EXCEED 0.002" PER MONTH.

OVERLAY MATERIAL:
 FERRITE --- 20% MAX.
 CARBON --- 0.03% MIN.
 CARBON --- 0.030% MAX.
 MOLYBDENUM --- 0.2% MIN.
 NICKEL --- 0.04% MIN.
 OVERLAY NOT TO BE GRIND

DESIGN DATA - VESSEL STAMPING

MAX. WORK PRESS.	2130 PSI @ 400 °F
MAX. WORK TEMP.	400 °F @ 3130 PSI
THESE PRESSURES AND TEMPERATURES WITH 2" LINER CORROSION ALLOW	
JOINT EFFICIENCY	100 %
HAMMER TEST PRESS.	
HYDRO. TEST PRESS.	4695

STRESS RELIEVE:
 * F. HOLD HOURS AND FURNACE COOL
 RADIOGRAPH 100% LONGIT. (GIRTH BEAMS LONG. SEAM IN LINER 100% X-RAY)
 WELD FINISH AS REQD FOR X-RAY

GENERAL NOTES
 ALL FLANGE BOLT HOLES TO STRADDLE NATURAL CENTERLINES, EXCEPT AS NOTED.
 ALL DIMENSIONS NOTED THUSLY --- ARE TO BASE LINE.
 APPLY RUST PREVENTATIVE TO MACHINED SURFACES AND PROVIDE COVERS
 TO CLOSE OPENINGS DURING SHIPMENT.
 SURFACE FINISH: INSIDE TO BE FREE OF ALL FOREIGN MATTER & WELD SPATTER
 NO ACID WASH OUTSIDE

APPROX. WEIGHT EMPTY --- 145,000 #
 APPROX. WEIGHT FULL OF WATER --- 175,750 #

CERTIFIED
 BY [Signature]
 DATE [Date]

REVISION	STRUTHERS WELLS CORPORATION TITUSVILLE, PENNSYLVANIA
A	GENERAL ASSEMBLY
B	42" I.D. LINED UREA REACTOR
C	
D	
E	DRAWN W.P. 4-23-65 SCALE 1/2" = 12"
F	CHECKED [Signature] 11/9/65
G	APPROVED

48-2163 71-704
 54908

54908

JAN 13 1966 LML

D-901

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

As required by the American Society of Mechanical Engineers Code Rules

1. Manufactured by Struthers Wells Corporation, Titusville, Pennsylvania
2. Manufactured for C. F. Braun & Company, Alhambra, California

3. Type Vert. Kind Tank Vessel No. 48-2163 Yr. Built 1965

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. F.B. 70,000 Nominal Thickness 4-5/16 Corrosion Allowance 1/16 In. Diam. 3 Ft. 6 In. Length 58'-9-3/8"

5. SEAMS: Long Weld, Dbl. Butt H.T. Yes X.R. Complete Sectioned No Efficiency 100%

If riveted describe seams fully on reverse side of form.

6. HEADS (a) Material SA-266 Gr. II T.S. 70,000 (b) Material SA-212 Gr. B Fbx T.S. 70,000

(a) Top 6-5/16" Min. 2:1 21-3/8" Concave
(b) Bottom 2" Min. Concave

If removable, bolts used SA-193-B7 100,000 #3-16 Other fastening

7. STAYBOLTS: (Material) If hollow Attachment Pitch X 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. 3130 psi at max. temp. 400 F. less than -20 F. Hydrostatic Test Press 4695 psi

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 In. 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) X.R. (Spot or Complete) Sectioned (Yes or No) Efficiency %

If riveted describe seams fully on reverse side of form.

14. HEADS (a) Material (Kind & Spec. No.) T.S. (b) Material (Kind & Spec. No.) T.S. (c) Material (Kind & Spec. No.) T.S.

(a) Top, bottom, ends Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Pressure (Convex or Concave)

(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 press. psi at max. temp. F. less than -20 F. Hydrostatic Test Press 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

Inlet 1 3"-1500# W.N. Flg. SA-182 Type 316L - Welded to Pipe

Outlet 1 1 1/2"-1500# " SA-182 Type 316L - " " Cover

Outlet 1 2"-1500# " SA-182 Type 316L - " " "

(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.

80P42

FORM U-P (back)

18. INSPECTION Manholes, No. _____ Size _____ Location _____
 OPENINGS: Handholes, No. _____ Size _____ Location _____
 Threaded No. _____ Size _____ Location _____
 19. SUPPORTS: Skirt Yes Lugs _____ Legs _____ Other _____ Attached Welded to Bott. Hd.
 (Yes or No) (Number) (Number) (Describe) (Where & How)

20. REMARKS: **For use in the Chemical Industry as a Urea Reactor**

C. F. Braun & Co., P.O. #26871-112-3 Item D-901
Installed at Collier Carbon & Chemical Corp., Brea, Calif.
Collier Project P-8141 --- Braun Project 2687-P

(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. **S.W.C. Dwg. 71-704**

Date **Jan. 5, 1966** Signed **Struthers Wells Corp.** By W. T. Stec
 (Manufacturer) **W. T. Stec**

December 31, 1967

Vessel has been accepted by the State of California per A.I. Snyder letter dated July 7, 1965

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY **Struthers Wells Corp.** at **Titusville, Penna.**

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 **Hartford Stm. 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. **Drawing 71-704**

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 6 19 66
Harry Burke Signature Commissions **N.B. #3760**
 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____
 _____ Signature Commissions _____
 Nat'l Board or State and No.