

FORM U-1 MANUFACTURER'S DATA REPORT FOR UNFIRED PRESSURE VESSELS

As Required by the Provisions of the ASME Code Rules

#104059

E-406-19B

1. Manufactured by **STRUTHERS WELLS GULFPORT, INC., Gulfport, Mississippi 39001**
2. Manufactured for **HERCULES, INC. WILMINGTON, DEL. P.O. #336-030-01090-11-000**
Type **HORIZ.** Kind **HEAT EXCH.** Vessel No. **4-6219-2** Nat'l Bd. No. **481** Yr. Built **1967**

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 **A-285-C** T. S. **55,000** Nominal **7/16** Corrosion **1/16** Thickness **3** in. Allowance **15** in. Diam. **3** ft. Length **15** ft. in.

5. Seams: Long **DEL. BUTT** H. T. **NO** X. R. **SPOT** Sectioned **NO** Efficiency **85** %
Girth **DEL. BUTT** H. T. **NO** X. R. **SPOT** Sectioned **NO** No. of Courses **3**

6. Heads: (a) Material **A-285-C** T. S. **55,000** (b) Material **A-285-C** T. S. **55,000**
Location **ENDS SEE TUBESHEETS** Crown Radius **0** Knuckle Radius **0** Elliptical Ratio **0** Conical Apex angle **0** Hemispherical Radius **0** Flat Diameter **0** Side to Pressure **CONVEX**
If removable, bolts used **NO** Other fastening **NO**

7. Staybolts: **NO** If hollow **NO** Attachment **NO** Pitch **NO** X. **NO** Diam. **NO**

8. Jacket Closure: **NO** (Describe or give weld, bar, etc. if bar, give dimensions. If bolted, describe or sketch.)

9. Constructed for **Int.** pressure of **200** psi. Max. Temp. **600** °F. Subzero **NO** °F. Hydrostatic Test **300** psi.

Items 10 and 11 to be completed for tube sections.

10. Tube Sheets: Stationary. Material **A-212-B** Diam. **38** in. Thickness **3-5/8** in. Attachment **WELDED**

11. Tubes: Material **A-212-B** O. D. **1 1/2** in. Thickness **.065 (AVG.)** inches or gage. Number **348** Type **STRAIGHT**

Items 12-15 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

12. Channel: Material **A-212-B** T. S. **75,000** Nominal **7/8** Corrosion **0** Thickness **0** in. Allowance **0** in. Diam. **3** ft. Length **0** ft. in.

13. Seams: Long **DEL. BUTT** H. T. **NO** X. R. **SPOT** Sectioned **NO** Efficiency **85** %
Girth **DEL. BUTT** H. T. **NO** X. R. **SPOT** Sectioned **NO** No. of Courses **1**

14. Heads: (a) Material **A-212-B** T. S. **75,000** (b) Material **A-212-B** T. S. **75,000** (c) Material **A-212-B** T. S. **75,000**

Location **5 1/2" W/2 A-240-TP316 LINERS JACK WELDED** Crown Radius **0** Knuckle Radius **0** Elliptical Ratio **0** Conical Apex angle **0** Hemispherical Radius **0** Flat Diameter **48-1/8"** Side to Pressure **CONVEX**

(a) Top, bottom, ends **5 1/2" W/2 A-240-TP316 LINERS JACK WELDED**

(b) Channel **NO**

(c) Floating **NO**

If removable, bolts used **NO** Other fastening **NO**

15. Constructed for **Int.** pressure of **600** psi. Max. Temp. **600** °F. Subzero **NO** °F. Hydrostatic Test **1055** psi.

Items below to be completed for all vessels where applicable.

16. Safety Valve Outlets: Number **NONE** Size **NONE** Location **NONE**

17. Nozzles:

Purpose (Inlet, Outlet, Drain)	Number	Size	Type	Material	Thickness	Reinforcement Material	How Attached
MAN. INLET	2	3"	RTJ LWN	A-182-TP316			WELDED
1" & OUTLET	2	3"	SOI. 40(216) PIPE	A-312-TP316			WELDED
SEE BACK							

18. Inspection Openings: Manholes, No. **0** Size **0** Location **0**
Handholes, No. **0** Size **0** Location **0**
Threaded, No. **0** Size **0** Location **0**

19. Supports: Skirt **NO** Legs **NO** Other **NO**

20. Remarks: **SHELL BELLOW TYPE EXP. JOINT TYPE 321 STNLS. W/A-285-C WELD STUBS**
ACID PREHEATER SHELL SIDE P-CYMEHE, TUBE SIDE ORGANICS

(List description of purpose of the vessel, or Air Tank, After Cooler, Jacketed Cooler, etc. State contents of each part.)

(Over)

Form No. 8418

1701 17 (CONT'D.)

SHELL INLET 2 300/ RFWN FLGS. A-181-1
& OUTLET 2 SCH. 80 (1,337) PIPE A-106-B

WELDED
WELDED

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this unfired pressure vessel conform to the ASME Code for Unfired Pressure Vessels.

Date NOVEMBER 17, 19 67 Signed STRUTHERS WELLS GULFPORT, INC. By *[Signature]*

December 31st 19 70 #7847

Certificate of Authorization Expires

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY STRUTHERS WELLS GULFPORT, INC. at Gulfport, Mississippi

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of HARTFORD, CONN. and employed by HARTFORD STEAM BOILER INSP. & INS. CO. of

data report on NOVEMBER 17, 19 67, have inspected the pressure vessel described in this manufacturer's data report 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 NOVEMBER 17, 19 67

[Signature] Commission NB8907
Inspector's Signature National Board or State and No.

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

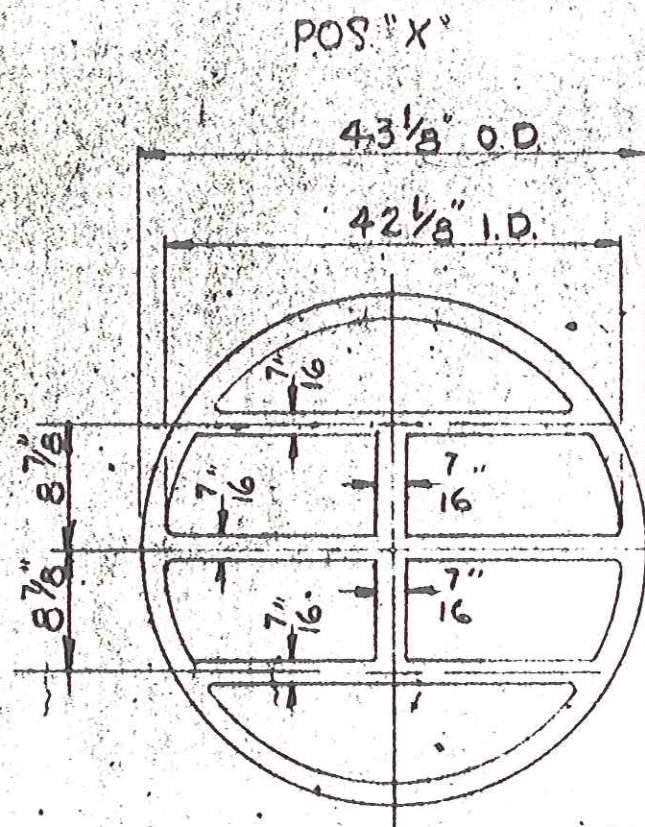
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of _____ and employed by _____ of

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 _____

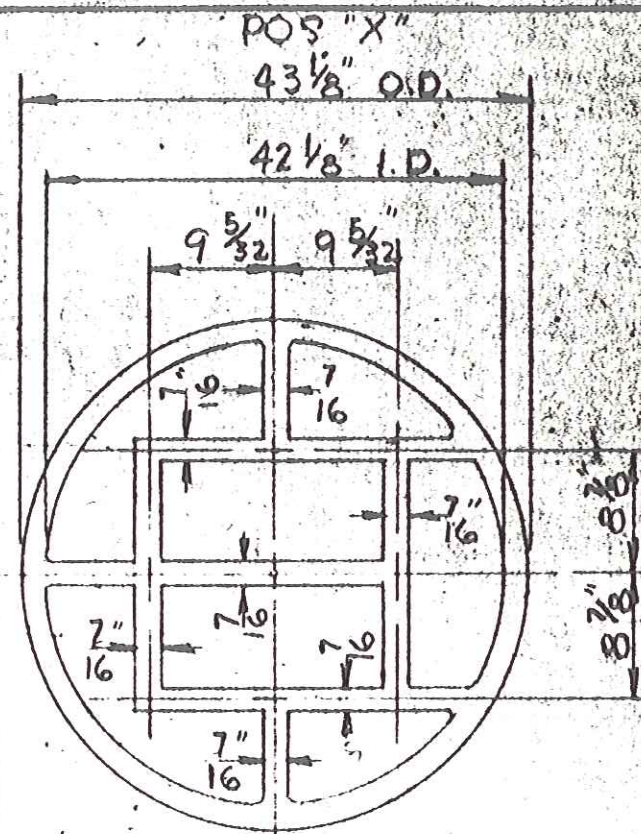
[Signature] Commission _____
Inspector's Signature National Board or State and No.



6 REQ'D. (8)
MK "B" (60)
SHIP-2 LOOSE

GASKET MATERIAL:
TYPE 304 STAINLESS JACKET,
ASBESTOS FILLED

HERCULES, INCORPORATED
CUST. ORD. NO. 336-01090-11-000 FCD
EQUIP. NO. E-203-10/11 & E-2203-10/11
ACID PREHEATER
S.W. ORD. NO. 66-94-6219
4-UNITS REQ'D.



6 REQ'D. (8)
MK "A" (59)
SHIP-2 LOOSE

REV. Δ	CKD:	REV. Δ	CKD:
#104057			
GASKET DETAILS			
DRAWN: TEB 2-17		66-94-6219A2	
CHECKED: J.M. 2-21			
APPROVED:			
SCALE: CH DATE:			

STRUTHERS WELLS CORPORATION • WARREN, PA.

10-5-28 100-1 ALKANE A & B SMITH CO. PHO. PA. PR 7061-564

VPF# 37334
E-2106-19