

#104547

66-181A FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS E-203-13

As required by the Provisions of the ASME Code Rules and the National Board

1. Manufactured by SOUTHERN HEAT EXCHANGER CORPORATION, TUSCALOOSA, ALABAMA
(Name and address of Manufacturer)

2. Manufactured for HERCULES P.O.D.R. COMPANY, Wilmington, N. C. 336-026-01085-11-000-RCD
(Name and address of Purchaser)

3. Type Horiz Kind HT EXCHG Vessel No. (226) (Serial) (State & State No.) Nat'l Bd. No. 726 Yr. Built 1967
(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 Gr. B T.S. 70,000 Nominal Thickness 3/8 in. Allowance 1/16 in. Diam 21 3/4 in. Length 16 ft. 0 in.
(Kind and Spec. No.) (Fig. or F.B. & lowest T.S.)

5. SEAMS: Long DBL Butt S.R. NO X.R. NONE Sectioned NO Efficiency 70 %
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)

6. HEADS: (a) Material SA-212 Gr. B T.S. 75,000 (b) Material SA-212 Gr. B T.S. 75,000
(Location) (Top, bottom, ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex angle Hemispherical Radius Flat Diameter Side to Pressure (Convex or Concave)

(a) Center 3/8 1 1/8 4 1/2 13 1/2
(b) DBL Butt

If removable, bolts used (Material, Spec. No., T.S., Size, Number) Other fastening DBL Butt (Describe or Attach Sketch)

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

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

9. Constructed for maximum allowable working pressure 200 psi. at Max. temp. 600 °F Min. temp. (when less than -20°) 0 °F Pneumatic Hydrostatic or Combination Test Pressure 300 psi.

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material SA-240 TP. 316 Diam 36 in. Thickness 3 1/2 in. Attachment welded
(Kind & Spec. No.) (Subject to Pressure) (Welded, Bolted)

11. TUBES: Material SA-249 O.D. 3/4 in. Thickness 16 Brg inches Number 1000 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-240 TP 316 T.S. 75,000 Nominal Thickness 1/16 in. Allowance 0 in. Diam 3 1/4 in. Length 1 ft. 7 in.
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

13. SEAMS: Long DBL Butt S.R. NO X.R. complete Sectioned NO Efficiency 100 %
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)

14. HEADS: (a) Material SA-212 Gr. B T.S. 70,000 (b) Material SA-212 Gr. B T.S. 70,000 (c) Material SA-212 Gr. B T.S. 70,000
(Location) (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 4 5/8 0 0 0 0 38 flat
(b) Channel 0 0 0 0 0 0 0
(c) Floating 0 0 0 0 0 0 0

If removable, bolts used (a) (Material, Spec. No., T.S., Size, Number) (b) 44 - 1 1/4" studs

(c) STUDS SA193 GRADE B7 NUTS SA194 CLASS 2H (Describe or Attach Sketch)

15. Constructed for maximum allowable working pressure 600 psi. at Max. temp. 600 °F Min. temp. (when less than -20°) 0 °F Pneumatic Hydrostatic or Combination Test Pressure 900 psi.

Items below to be completed for all Vessels where applicable.

16. SAFETY VALVE OUTLETS: Number NONE Size Location

17. NOZZLES: Purpose (Inlet, Outlet, etc.) Number Diam. or Size Flg'd Material Thickness Reinforcement Material How Attached
IN INLET 2 6" Flg'd SA-240 TP. 316 X-H SA-240 TP. 316 welded
IN OUT 2 6" Flg'd SA-53 Gr. B X-H SA-212 B welded

18. INSPECTION Manholes, No. Size Location

OPENINGS: Handholes, No. Size Location

Threaded, No. Size Location

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

20. REMARKS: * Lined with 3/8" thk. SA-240 TP. 316 a/s T. S. = 75,000
Heat Exchanger. Contents unknown.

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

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

Date August 18 1967

Signed SOUTHERN HEAT EXCHANGER CORP.
(Manufacturer)

By Norman L. Ingram
Norman L. Ingram

Certificate of Authorization Expires

DECEMBER 31, 1967

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY SOUTHERN HEAT EXCHANGER CORP. at TUSCALOOSA, ALABAMA

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Louisiana and employed by HARTFORD STEAM BOILER INSP. & INS. CO. of HARTFORD, CONN. have inspected the pressure vessel described in this manufacturer's data report on Sept 27 19 67 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 Sept 27 19 67

John Wilkinson
Inspector's Signature John Wilkinson

Commissions NAT'L BOARD 6069
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 manufactured 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.