

FORM U 1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS
As required by the Provisions of the ASME Code Rules and the National Board

1. Manufactured by MITTERNIGHT BOILER WORKS, INC. at SATSUMA (MOBILE) ALABAMA
(Name and address of Manufacturer) Blue Island, Ill.

2. Manufactured for United Engineers & Constructors for Clark Oil & Refining Co.
(Name and address of Purchaser)

3. Type Vert. Kind Tank Vessel No. (813) (Mfrs. Serial) (State & State No.) Nat'l Bd. No. — Yr. Built 1969
(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 SA240Tp304 T.S. 75,000 Nominal Thickness 5/16 Corrosion Allowance 0 in. Diam. 7 ft. 0 in. Length 4 ft. 4 in.
(Kind and Spec. No.) (Plg. or F. B. & Spec. Min. T.S.)

5. SEAMS: Long W. Dbl. Bt. H.T. No X.R. Spot Sectioned No Efficiency 85 %
(Welded, Dbl., Single, Lap, Butt) (Yes or No)¹ (Yes or No)

Girth W. Dbl. Bt. H.T. No X.R. No Sectioned No No. of Courses 1

6. HEADS: (a) Material SA240Tp304 T.S. 75,000 (b) Material SA 240 Tp 304 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) <u>Top</u>	<u>5/16</u>	<u>84"</u>	<u>5 1/8"</u>					<u>Concave</u>
(b) <u>Bott.</u>	<u>5/16</u>	<u>84"</u>	<u>5 1/8"</u>					<u>Concave</u>

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

7. STAYBOLTS: _____ If hollow _____ Attachment _____ Pitch _____ Diam. _____
(Material) (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. F.V./15 psi. at max. temp. 200 °F Min. temp. (when less than -20°) _____ °F Hydrostatic Test Press. 25 psi.
Hydrostatic Combination

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material _____ Diam. _____ in. Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to Pressure) (Welded, Bolted)

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

11. TUBES: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(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 _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Diam. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind and Spec. No.) (Plg. or F. B. & Spec. Min. T.S.)

13. SEAMS: Long _____ H.T. _____ X.R. _____ Sectioned _____ Efficiency _____ %
(Welded, Dbl., Single, Lap, Butt) (Yes or No)¹ (Spot or Complete) (Yes or No)

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

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 (Convex or Concave)

(a) Top, bottom, ends _____

(b) Channel _____

(c) Floating _____

If removable, bolts used (a) _____ (b) _____
(Material, Spec. No., T.S., Size, Number)

(c) _____ Other fastening _____
(Describe or Attach Sketch)

15. Constructed for max. allowable working press.² _____ psi. at max. temp. _____ °F Min. temp. (when less than -20°) _____ °F Hydrostatic Test Press. _____ psi.
Hydrostatic Combination

Items below to be completed for all Vessels where applicable.

16. SAFETY VALVE OUTLETS: Number _____ Size _____ Location _____

Nozzles:	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
Inlet/Outlet	<u>1</u>	<u>1 1/2"</u>	<u>Pipe</u>	<u>SA312Tp304</u>	<u>.145</u>		<u>Welded</u>
Inlet/Outlet	<u>3</u>	<u>3"</u>	<u>Pipe</u>	<u>SA312Tp304</u>	<u>.216</u>		<u>Welded</u>
Inlet/Outlet	<u>2</u>	<u>10"</u>	<u>Pipe</u>	<u>SA312Tp304</u>	<u>.365</u>		<u>Welded</u>

18. INSPECTION Manholes, No. 2 Size 18" Ø Location Shell
OPENINGS: Handholes, No. Size Location
Threaded, No. 6 Size 3/4" & 1" Location Shell & Nozzles
19. SUPPORTS: Skirt No Lugs No Legs 4 Other Attached Shell Welded
(Yes or No) (Number) (Number) (Describe) (Where & How)
20. REMARKS: Charcoal Adsorber, Item V-41C, P.O. COC-10,9579.01-246-1,
Job #1692

(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.

Date.....5/14..... 19.69. Signed Mitternight Boiler Works, Inc. By Barney L. Shull
Manufacturer

Certificate of Authorization Expires.....December 31, 1970.....

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY MITTERNIGHT BOILER WORKS, INC. at SATSUMA (MOBILE) ALABAMA

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of ~~MISSISSIPPI~~ and employed by HARTFORD STEAM BOILER INSPECTION & INSURANCE CO. of HARTFORD, CONN. ~~LOUISIANA~~ have inspected the pressure vessel described in this manufacturer's data report on

.....May 14, 1969, 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.....May 14, 1969

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Inspector's Signature

Commissions L.A. 468
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 LOUISIANA and employed by HARTFORD STEAM BOILER INSPECTION & INSURANCE CO. of HARTFORD, CONN. 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.....

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Inspector's Signature

Commissions
Nat'l Board or State and No.