

98869

105-CA

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

As required by the Provisions of the ASME Code Rules

W.O. S-3076-C

1. Manufactured by Industrial Fabricating Company 3159 South Sheridan Road Tulsa, Oklahoma
(Name and address of Manufacturer)2. Manufactured for M. W. Kellogg Company New York, New York
(Name and address of Purchaser)3. Type Vert. Kind Heat Exch. Vessel No. (3076-3) (La.) Natl. Bd. No. _____ Yr. Built 1966
(Horiz. or Vert.) (Tank, Jacketed, Heat Exch.) (Mfrs. 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-212-B T.S. 70,000 Nominal 3/8 Corrosion 1/8* 9-3/4 10-1/4
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.) Thickness In. Allowance In. Diam. 4 Ft. In. Length 10 Ft. In.5. SEAMS: Long Dbl Butt H.T. No 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.

6. HEADS (a) Material _____ T.S. _____ (b) Material SA-212-B T.S. 70,000
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter (Side to Pressure, Convex or Concave)(a) _____ (b) Shell Cover 15/16(M) 2:1 ConcaveIf removable, bolts used Stl; SA-193-B7; 125,000; Other fastening _____
(Material, Spec. No., T.S., Size, Number) 1-3/8; 64 (Describe or Attach Sketch)7. STAYBOLTS: _____ If hollow _____ Attachment _____ Pitch _____ X _____ 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 press² 440 psi at max. temp. 380° F. Min. temp. (when less than -20°) _____ °F. Hydrostatic Test Press 660 psi.
(Describe or Attach Sketch)

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material SA-240 TP316SS Diam. 57 1/2 In. Thickness 4-7/8 In. Attachment Bolted
(Kind & Spec. No.) (Subject to Pressure) (Welded, Bolted)Floating. Material SA-240 TP316SS Diam. 55-1/4 In. Thickness 4-7/8 In. Attachment Bolted
(Kind & Spec. No.)11. TUBES: Material TP 316 SS SA-249 O.D. 3/4 In. Thickness 16 AVG XXXXXX Number 2790 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 Conc. Cone TP304SS T.S. 75,000 Nominal 3/8 Corrosion 0 8-3/4 11-1/8
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.) Thickness In. Allowance In. Diam. 4 Ft. In. Length 1 Ft. In.13. SEAMS: Long 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.

14. HEADS (a) Material _____ T.S. _____ (b) Material _____ T.S. _____ (c) Material SA-240 T.S. 75,000
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 2-1/8(M) 54" D.R. BothIf removable, bolts used (a) _____ (b) _____
(Material, Spec. No., T.S., Size, Number)(c) Stl; SA-193-B7; 125,000; 1-1/8; 72 Other fastening _____
(Describe or Attach Sketch)15. Constructed for max. allowable working press² 75 psi at max. temp. 270° F. Min. temp. (when less than -20°) _____ °F. Hydrostatic Test Press 145 psi.
(Describe or Attach Sketch)

Items below to be completed for all vessels where applicable.

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

17. NOZZLES * To Mate With 12" 150 # RF

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
Chan In	1	12"	*Split to	SA-312**	3/8	SA-212-B	Welded
Chan Out	1	30" 90° Ell	150#WN	SA-312**	Std. Wt.	Weld	Welded
Shell In	1***	16"	300#WN	SA-106-B	Sch 60	SA-212-B	Welded
Shell Out	1***	14"	300#WN	SA-106-B	Sch 60	SA-212-B	Welded

(Items 18 through 20 continued on back)

* On 304 SS Clad ** 304 SS *** 304 SS Overlay

¹ If postweld heat-treated.² List under remarks other internal or external pressures with coincident temperature when applicable.

(Over)

FORM U-1 (back)

W. O. S-3076-C

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

20. REMARKS: M. W. Kellogg Company (Commercial Solvent Corporation)
M. W. Kellogg Company P. O. 5276-620-105
Item: 105-CA
Service: CO₂ Stripper Gas Reboiler
Shell Side: Shift Effluent
Tube Side: MEA Solution
Full X Ray Shell Cover Expansion Joaint located in Shell
 (Brief description of purpose of the vessel, as Air Tank, After Cooler, Jacketed Cooker, etc. State contents of each part.) Cover.

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 July 7 19 66 Signed Industrial Fabricating Co By M. L. Ferguson
 (Manufacturer)

Certificate of Authorization Expires December 31, 1967

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Industrial Fabricating Co at Tulsa, Oklahoma

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Nat'l Board and employed by Commercial Union N.B.G. of New York, New York have inspected the pressure vessel described in this manufacturer's data report on 6-30 19 66, 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 JUL 20 1966 19 66

J. C. Deyson
 Inspectors Signature

Commissions _____ 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.

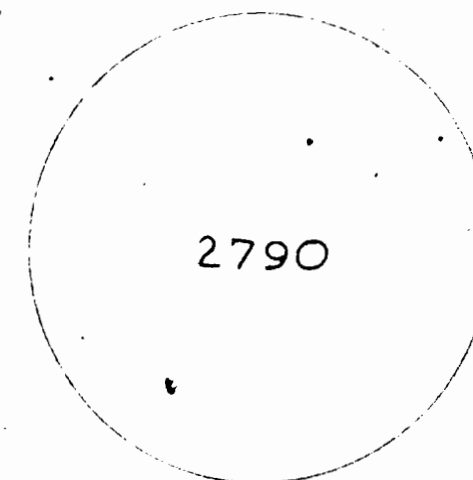
By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date _____ 19 _____

 Inspector's Signature

Commissions _____ Nat'l Board or State and No. _____

98869



2790

NO. OF TUBES PER PASS

NOTES

- 1) DRILL & REAM TUBE HOLES IN TUBE SHEETS TO $.760 \pm .002$ FOR 2790- $\frac{3}{4}$ " O.D. TUBES
- 2) TUBE PITCH: $1\frac{5}{16}" \Delta$
- 3) 1 PASS
- 4) SEE DWG S-3076 C-5 FOR TUBE HOLE GROOVING DETAIL.
- 5) TAPE PROGRAM BASED ON $58\frac{1}{8}"$ O.D. TUBE SHEET

INDUSTRIAL FABRICATING COMPANY

TULSA OKLAHOMA

TUBE LAYOUT 105CA

SIZE: 56" x 12'

JOB: S-3076

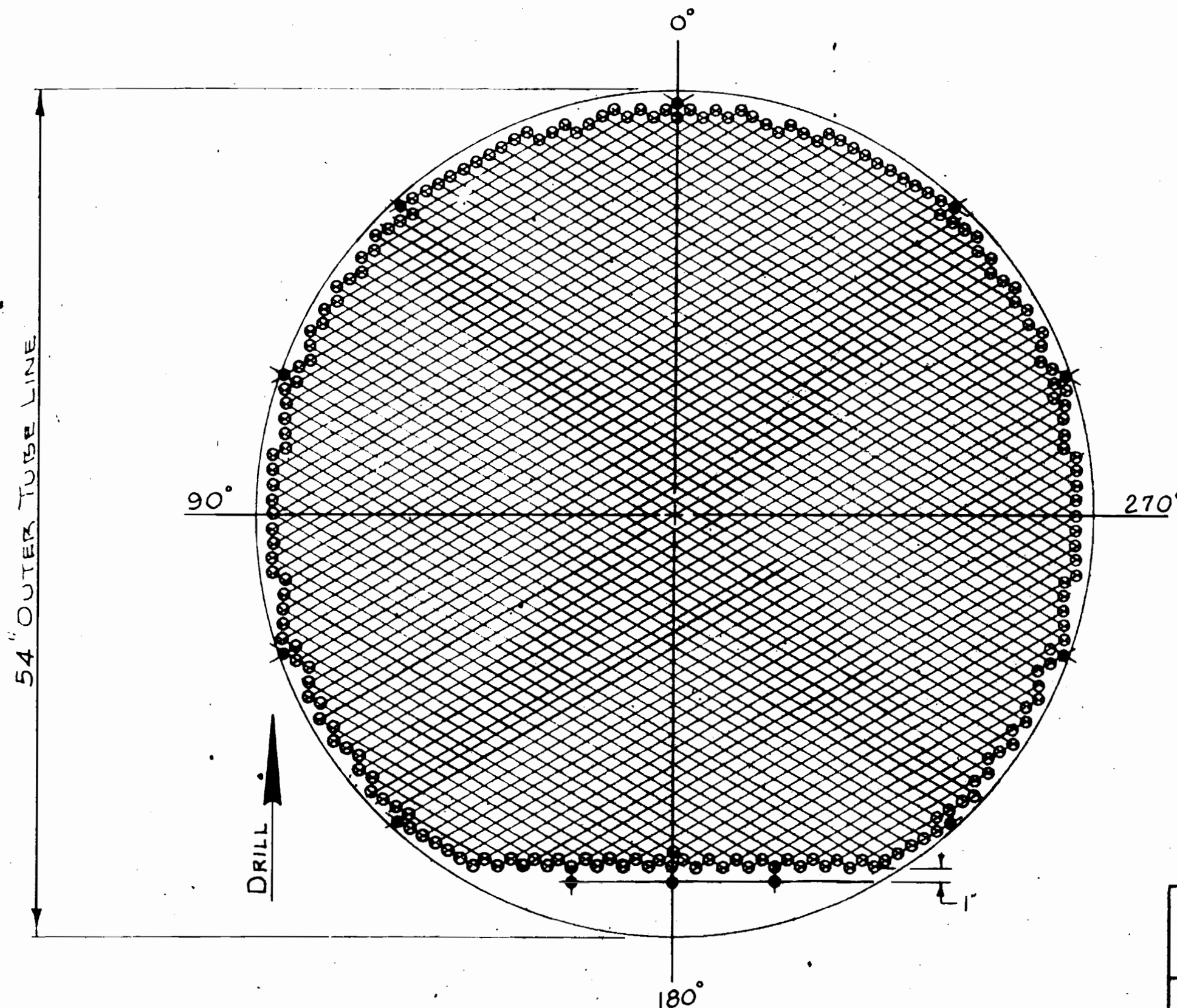
1-REQ'D.

OWN RON DATE 2-4-66

S-3076

SCALE

C-6



NOTE:

TAPE SAME AS W.O. S-2746-N.

VIEW LOOKING @ SHELL SIDE OF #19 TUBE SHEET