

MANUFACTURED BY

# GREENE & BOILER WORKS

*Signature*

HAZARD-51

4  
10  
01 E

TEMPERATURE 200

13148

TEMP 400

RELEASE NO

PRODUCTION NO

MONTH 6

YEAR 1952

P-O-T-307

ITEM T-31

17550

#95503

Form No. 1 for Manufacturers' Report on an Unfired Pressure Vessel as Required by the Provisions of the API-ASME Code

- 1 Manufactured by WYATT METAL & BOILER WORKS, Houston, Tex Mfrs. Shop Job No. 1929
- 2 Manufactured for Brown & Root, Houston, Texas Purchaser's Order No. T-397  
(NAME AND ADDRESS OF THE PURCHASER)
- 3 Type Vertical Vessel No. H-1929-51 To be installed in Texas Date built JUL 1952  
(HORIZONTAL OR VERTICAL—WHEN IN SERVICE) (MFRS. SERIAL NO.) (STATE AND STATE NO.) (MONTH AND YEAR)  
HSB #13146
- 4 Have mill test reports been checked on all the plates entering this unfired pressure vessel? Yes  
Do the chemical and physical properties of all plates meet the requirements of the Code? Yes  
(SEE FORMS NOS. 2 AND 3 AND CHEMICAL AND PHYSICAL REPORTS)
- 5 Shell or Drums: No. one Diameter 3 ft. 0 in. Length over all 25 ft. 10-1/2 in.  
(OR WIDTH) ID Out to Out Hd. Alloy Studs
- 6 Stamps on Shell plates \* ASTM-A-240 Gr.M 75,000 PSI Bolts A-193 B7  
(BRAND AND LOWEST TENSILE STRENGTH) (A.S.T.M. OR OTHER SPECIFICATIONS CARBON STEEL OR ALLOY)
- 7. Shell Plates 1/4 in. Style of Seams: Longitudinal Fusion Welded. Type Double Butt  
(THICKNESS)
- 8 Joints Radiographed No Vessel Stress Relieved No (yes or No) Efficiency of Joint 80 per cent  
(VESSEL AS BUILT)
- 9 Girth Joints Fusion Welded. Type Double Butt No. of Courses 5
- 10 Heads, (thickness) 1/4" Min in. Radius of dish \_\_\_\_\_ in. Radius of knuckle \_\_\_\_\_  
Flat, dished, elliptical, integral Ratio of ellipse axis 2:1 Side to pressure { Top or one end Concave  
Conical, Hemispherical \_\_\_\_\_ Included angle if conical \_\_\_\_\_ Bottom or opposite end Concave  
If removable, head bolts used \_\_\_\_\_ or method of fastening \_\_\_\_\_  
(NUMBER AND SIZE) (DESCRIBE OR SKETCH ON SEPARATE SKETCH SHEET)
- 11 Stress Relieving  
a If part of vessel only \_\_\_\_\_ Heads \_\_\_\_\_ Ring Nos. \_\_\_\_\_ Controlling Thickness \_\_\_\_\_ Temp. of Vessel \_\_\_\_\_ Time Temp. Is Held \_\_\_\_\_ Hr.  
b If entire vessel None \_\_\_\_\_ in. \_\_\_\_\_ F. \_\_\_\_\_ Hr.  
See Form #2 A-312-49T; A-240 Gr.M\*
- 12 Nozzle Outlets in Heads:<sup>1</sup> No. \_\_\_\_\_ Size \_\_\_\_\_ Material of Nozzle or Reinforcement \_\_\_\_\_ How attached: Welded IS&OS  
See Form #2 A-312-49T; A-240 Gr.M\*  
Nozzle Outlets in Shell: No. \_\_\_\_\_ Size \_\_\_\_\_ Material of Nozzle or Reinforcement \_\_\_\_\_ How attached: Welded IS&OS
- 13 Handholes or Sight Holes<sup>1</sup> \_\_\_\_\_  
(NUMBER, SIZE AND LOCATION)
- 14 Manholes: In Heads<sup>1</sup> \_\_\_\_\_ Reinforcement \_\_\_\_\_  
In Shell 2- 20" Special Reinforcement Welded IS & OS  
(NUMBER) (SIZE AND LOCATION OF EACH, DISTANCE OFF CENTER OF HEAD) (WELDED, ETC., OUTSIDE ONLY OR ALSO INSIDE)
- 15. Method of supporting vessel \_\_\_\_\_  
(LUGS, SKIRTS, OR RING IF ON END, OR LUGS IF HORIZONTAL)
- 16 a<sup>2</sup> Allowable working pressure at atmospheric temperature (See W-525) 206 lb per sq in. f Location of yield if yielding occurred \_\_\_\_\_  
b Initial Hydrostatic test pressure 309 lb per sq in. g<sup>2</sup> Hydrostatic test stress in longitudinal joints (W vessels only) 22,403 lb per sq in.  
c Hydrostatic test pressure when hammer tested 258 lb per sq in. b Allowable operating stress (Two-thirds stress obtained in g<sup>2</sup>) 14,935 lb per sq in.  
d Final Hydrostatic test pressure 309 lb per sq in.  
e Proof test pressure if applied \_\_\_\_\_ lb per sq in.
- 17 Constructed for pressure of 206 lb per sq in. With specified operating temperature of 400 F. With corrosion allowance of None in.

Remarks See Wyatt's Sketch #1929 for Form #2 Data

<sup>1</sup> Indicate location and size on Form 2 or 3.

<sup>2</sup> When there are shell sections of different thicknesses, each section shall be treated separately.

WE CERTIFY the above data to be correct and that all details of material, construction, and workmanship on this unfired pressure vessel conform to the API-ASME Code for Unfired Pressure Vessels for Petroleum Liquids and Gases. & Case #897 of ASME Boiler Code

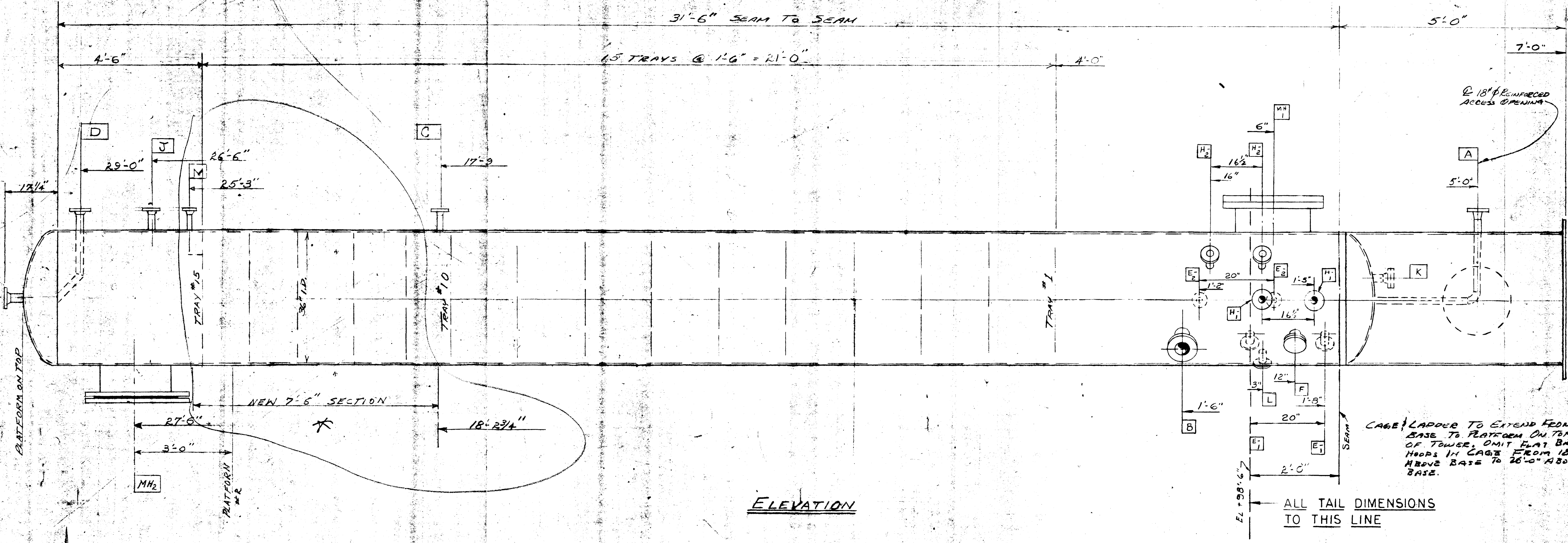
Date JUL 1 1952 Signed WYATT METAL & BOILER WORKS. By J. J. Powell  
(MANUFACTURER)

JUL 1 1952 Checked By [Signature] For Hartford S.B.I. & I. Co.  
(INSPECTOR) National Board #1195  
Texas State Comm. #33

\*S.S. Type 316 Mod. to .07% Max. Carbon, 17% Min Chrome & 2.25% Min Moly

30455  
DWS.



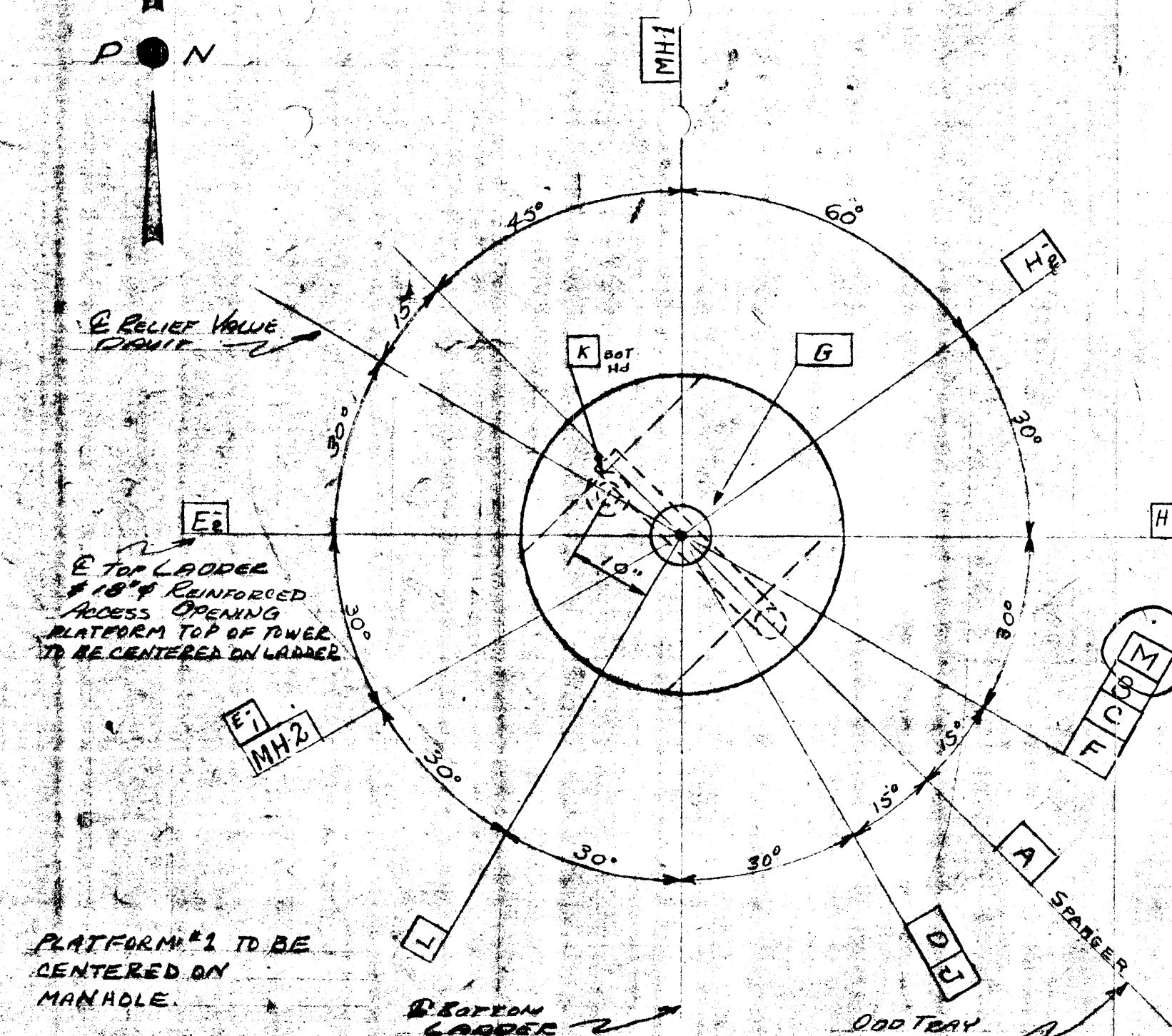


**ELEVATION**

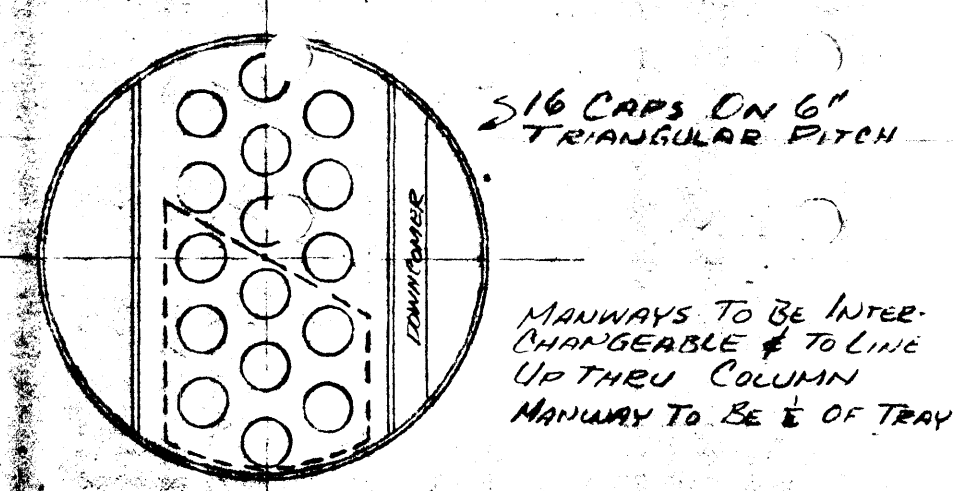
ALL TAIL DIMENSIONS TO THIS LINE

Use 8-1/4" dia HOLES FOR 8-1/2" BOLTS ON 44# BAR CIRCLE

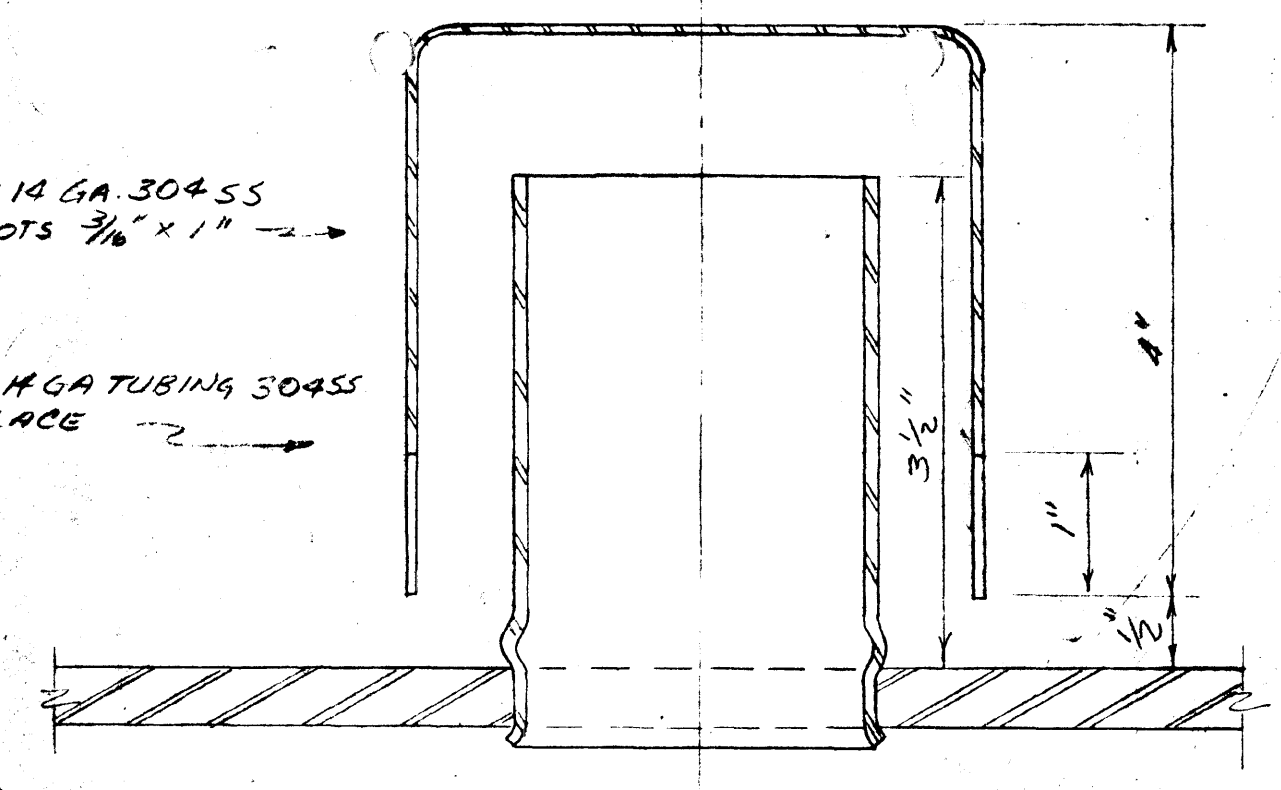
CAGE LADDER TO EXTEND FROM BASE TO PLATFORM ON TOP OF TOWER. OMIT FLAT BAR HOOPS IN CAGE FROM 18'-0" ABOVE BASE TO 26'-0" ABOVE BASE.



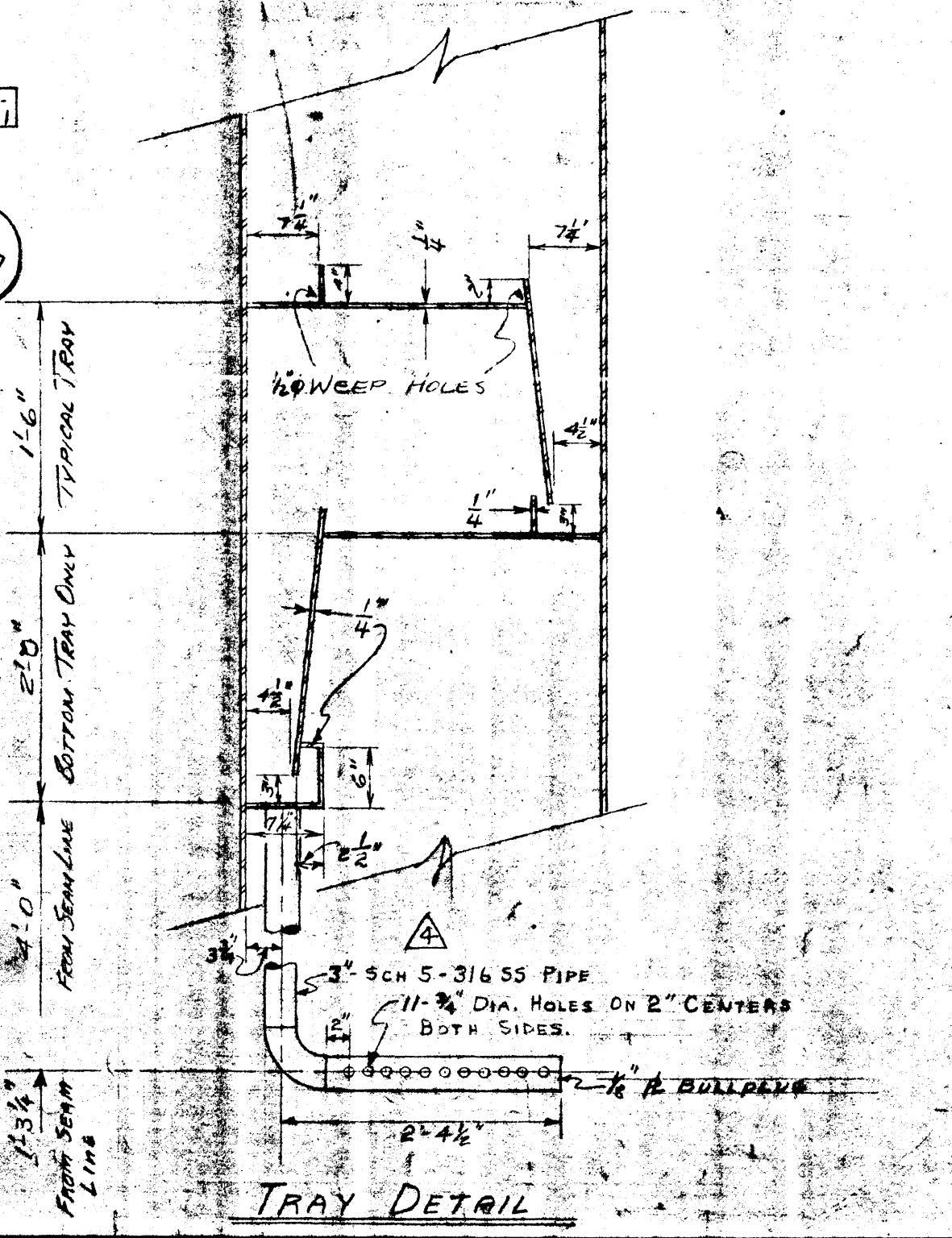
**ORIENTATION**



4" O.D. X 4" HIGH X 14 GA. 304 SS CAP WITH 33 SLOTS 3/16" X 1" RISER - 2 1/2" O.D. X 14 GA TUBING 304 SS PROSSER IN PLACE



TYPICAL BUBBLE CAP DETAIL



TRAY DETAIL

**SPECIFICATIONS**

ALL WELDED CONSTRUCTION IN ACCORDANCE WITH API-ASME CODE. STAMP APPLIED.  
 DESIGN PRESSURE: MAX FOR 1/2" WALL THICKNESS = 206 PSI.  
 TEST PRESSURE: 1 1/2 X DESIGN PRESS.  
 CORROSION ALLOWANCE: NONE.  
 MATERIALS - HEADS & SHELL: TYPE 304 STAINLESS STEEL  
 NOZZLE NECKS: SEE DWG. WT 22035  
 FLANGES - SEE DWG. WT 22035  
 GASKETS: JM-60  
 FITTINGS: 304 S.S. WELD STUDS - ASTM A-193-B7  
 INTERNALS: 304 S.S.  
 SKIRT & BASE - ASTM A-285 GR. B6 BAR  
 PAINT: ONE SHOP COAT PRIMER, C.S. ONLY  
 FABRICATOR TO SHOW SHIPWING WITH SHOP ANGLES. DISTANCE FROM FACE TO COLUMN TO BE 2'-0" ON 4" & SMALLER - TO BE 2'-2" ON 6" & LARGER.  
 ALL BOLT HOLES STADDLE & CLANGES & STRESS RELIEVE NO X-RAY NO VESSELS TO BE THOROUGHLY CLEANED & DRAINER & OPENINGS PLUGGED FOR SHIPMENT. TWO COPIES OF SHOP DRAWINGS TO BE SENT TO CELANESE CORP OF AMERICA AT: MR. ALEX COCHRAN FOR APPROVAL BEFORE FABRICATION IS BEGUN. AREA II

NO.	DESCRIPTION	BY	APPROV. DATE	REVISIONS	
MH-1	ONE 20"	150#	MH	MANHOLE	LAP JOINT
MH-2	ONE 20"	150#	MH	MANHOLE	LAP JOINT
M	ONE 2"	150#		NOZZLE	H2O IN
K	ONE 1"	150#		NOZZLE	SPARE
L	ONE 1"	150#		NOZZLE	H.C. OUT
J	ONE 1 1/2"	150#		NOZZLE	TW
H2	TWO 1 1/2"	150#		NOZZLE	LC
H1	TWO 1 1/2"	150#		NOZZLE	LIC
G	ONE 2"	150#		NOZZLE	RELIEF VALVE
F	ONE 1 1/2"	150#		NOZZLE	STEAM OUT
E2	TWO 3/4"	150#		NOZZLE	GAGE GLASS
E1	TWO 3/4"	150#		NOZZLE	GAGE GLASS
D	ONE 3"	150#		NOZZLE	GAS OUT
C	ONE 2"	150#		NOZZLE	H2O IN
B	ONE 4"	150#		NOZZLE	GAS IN
A	ONE 2"	150#		NOZZLE	RESIDUE
MK	QUAN	SIZE	SERIES	TYPE	SERVICE

SCHEDULE OF OPENINGS

NO.	DESCRIPTION	BY	APPROV. DATE
5	Added New 7'-6" SECTION	KES	11/14/51
1A	COOR. DIM. NOZZLES ON 1/2" DIA. PADDED 3"	AWC	11/14/51
1B	ADDED NOZZLES ON 1/2" DIA. PADDED 3"	BDF	11/14/51
2	RELOCATED NOZZLE "E" ORIENTED 90°	CCD	11/14/51
1	RELOCATED NOZZLE "E" ORIENTED 90°	GHO	11/14/51

#95503

W.O. NO. - EST. NO. -

CELANESE CORPORATION OF AMERICA  
CHEMCEL - ENGINEERING DEPT.

WEST TEXAS PLANT  
3'-0" X 10'-0" TOWER X 100# STS.

DATE 7-25-51  
BY VJV  
DATE 11-8-51

WT 22036