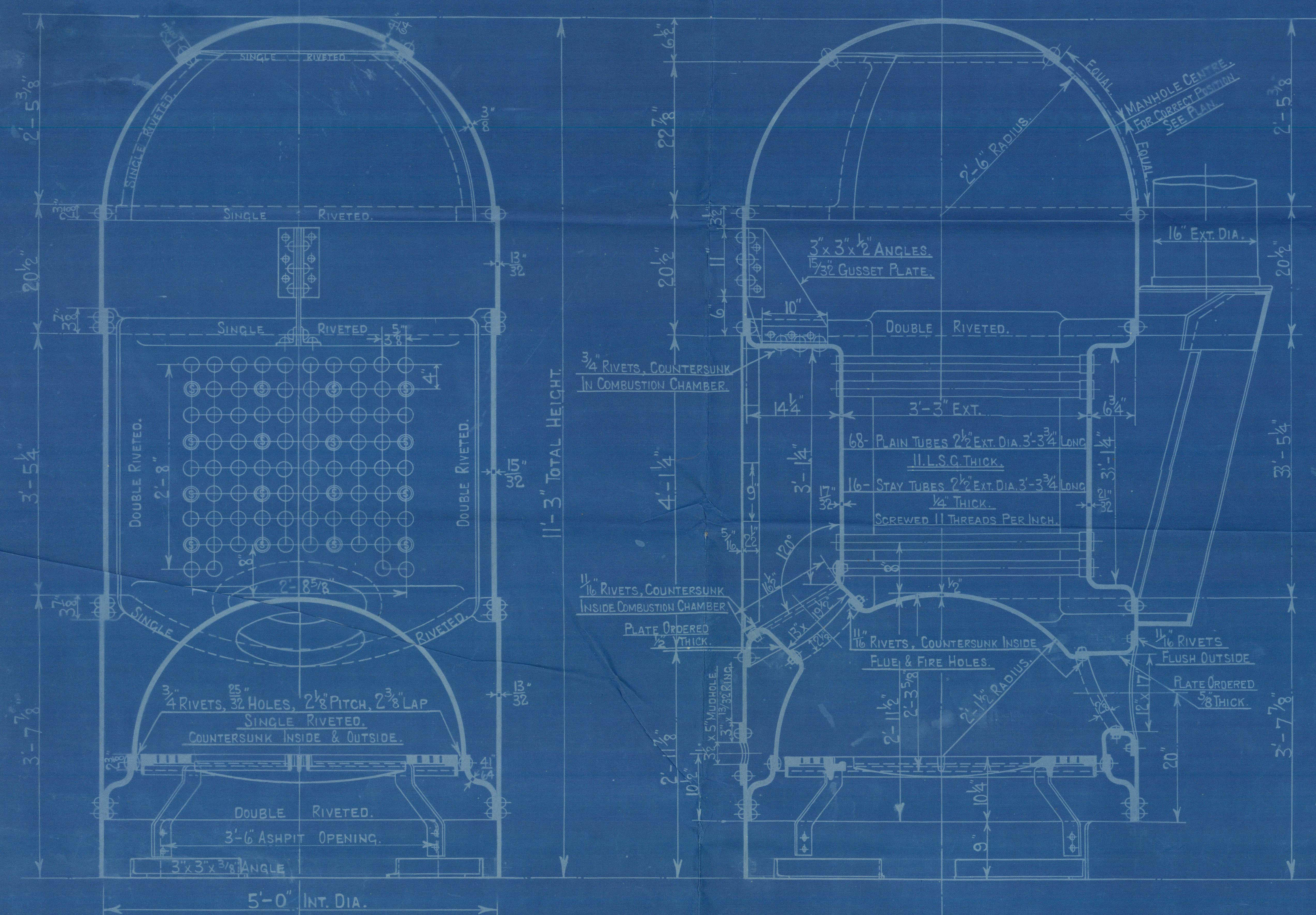


COCHRAN PATENT VERTICAL MULTITUBULAR BOILER.

HORIZONTAL FLUE TUBES.

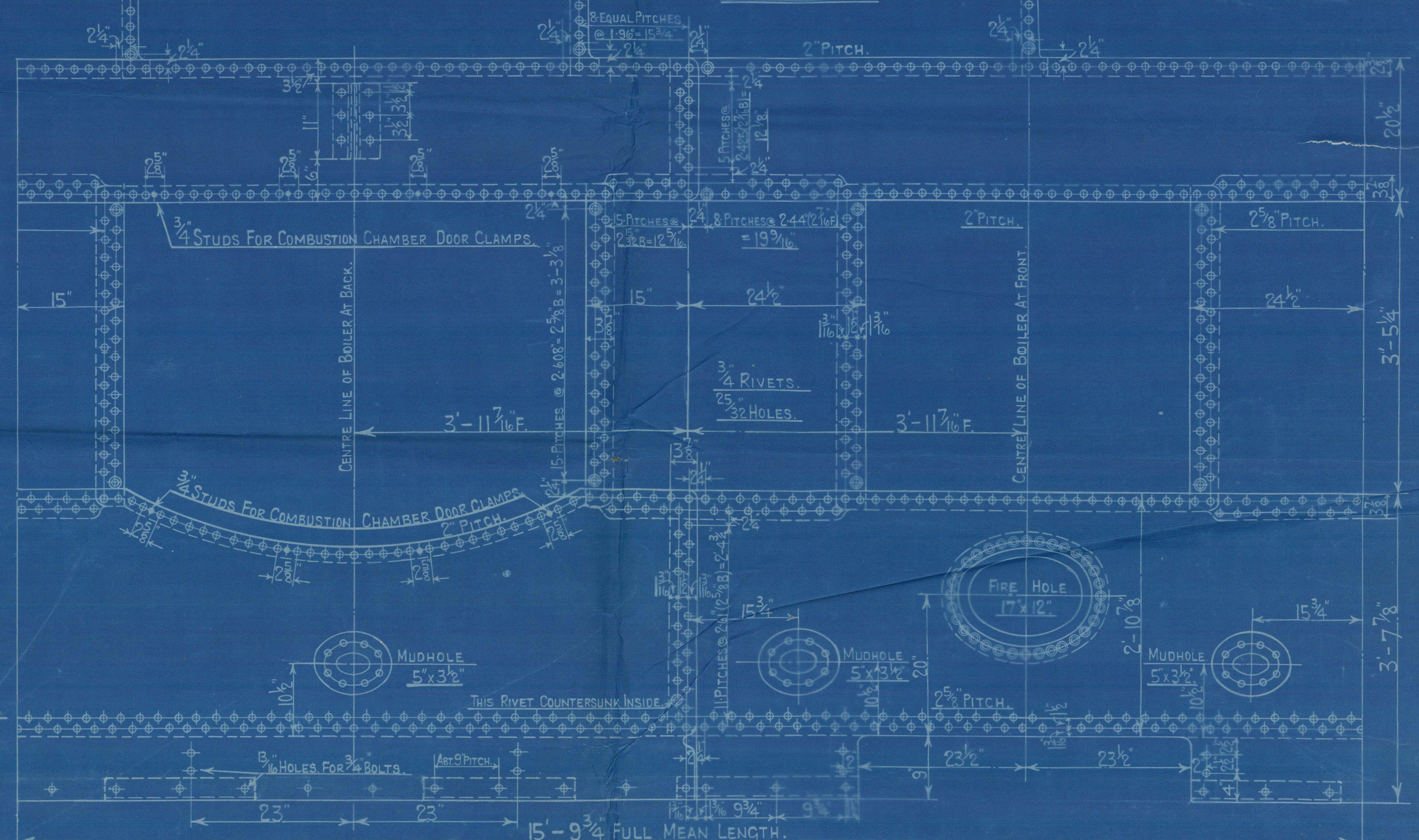
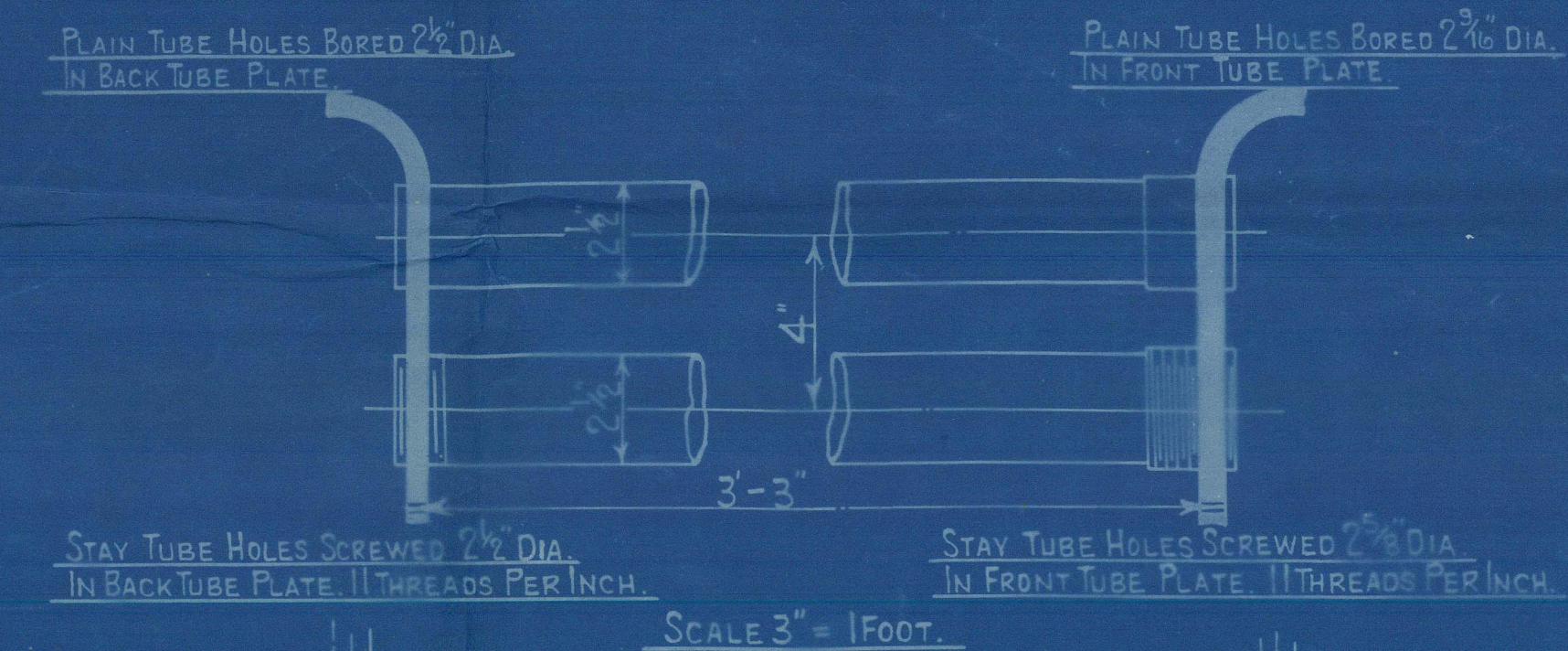


HEATING SURFACE.	
TUBES.	173. SQ. FT.
PLATE.	47. SQ. FT.
TOTAL.	220. SQ. FT.
GRATE AREA.	12.5. SQ. FT.

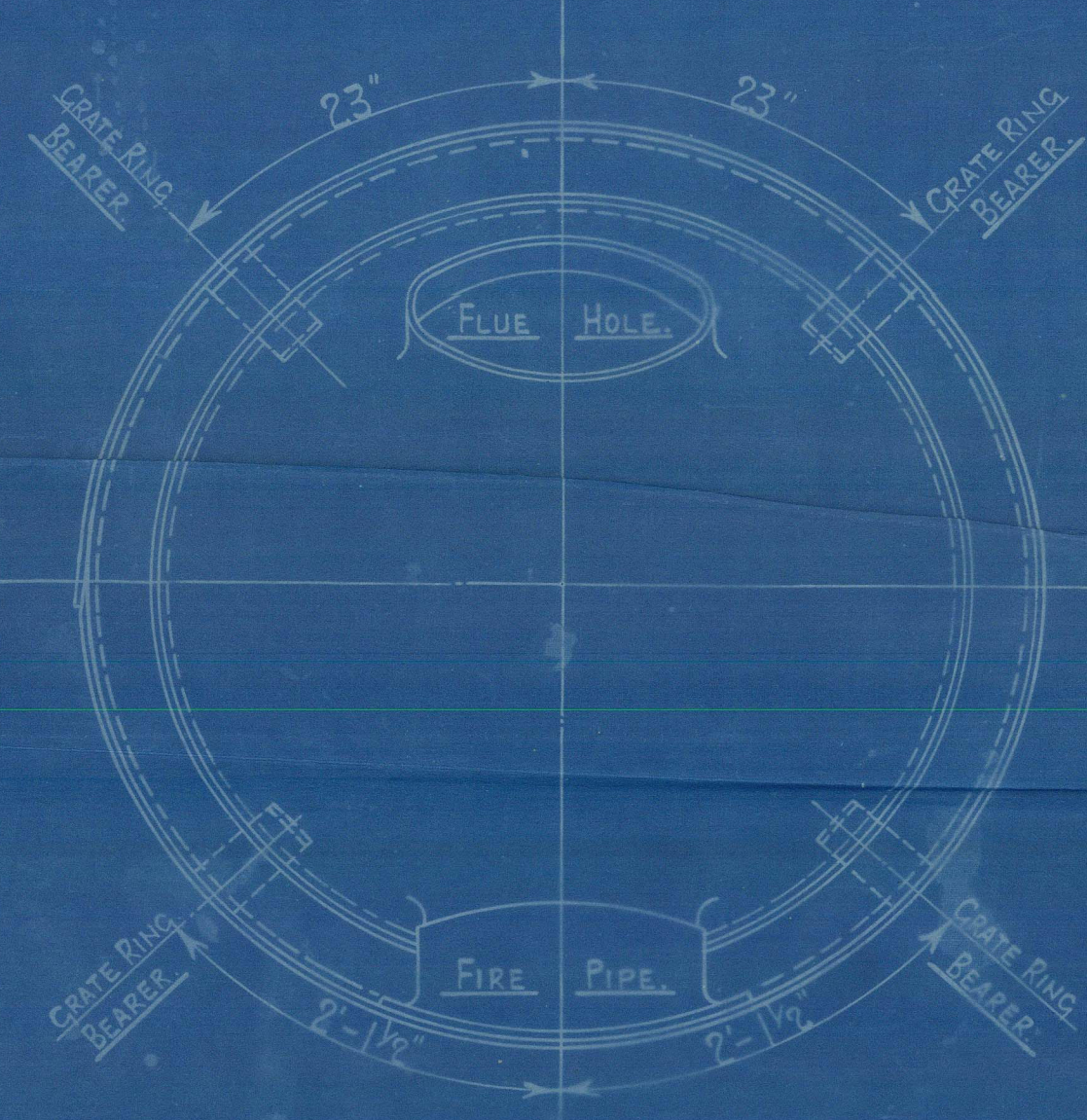
LLOYDS.	
PLATE.	2425 x 78125 x 100 = 67.7%
RIVETS.	24 x 4992 x 85 = 76.8%
FRONT TUBE PLATE.	4 x 253375 x 100 = 35.1%
BACK TUBE PLATE.	4 x 253375 x 100 = 37.5%
SHELL.	20.5 (6.5 x 2) 107.7 = 104. LBS.
FRONT TUBE PLATE.	20.5 (10.5 x 2) 35.1 x 26 = 102. LBS.
BACK TUBE PLATE.	20.5 (8.5 x 2) 37.5 x 26 = 103.8 LBS.
FURNACE.	1250 x 102.1 = 147. LBS.

BUREAU VERITAS.	
PLATE.	677 x 31000 (40025 - 04) = 129.7 LBS.
RIVETS.	24 x 2473 x 24 x 2240 = 131.6 LBS.
FRONT TUBE PLATE.	10400 x 5516 (4 - 2.53) = 127. LBS.
BACK TUBE PLATE.	10400 x 5516 (4 - 2.5) = 109.6 LBS.
FURNACE.	100 (8 - 2) 28.5 = 141. LBS.

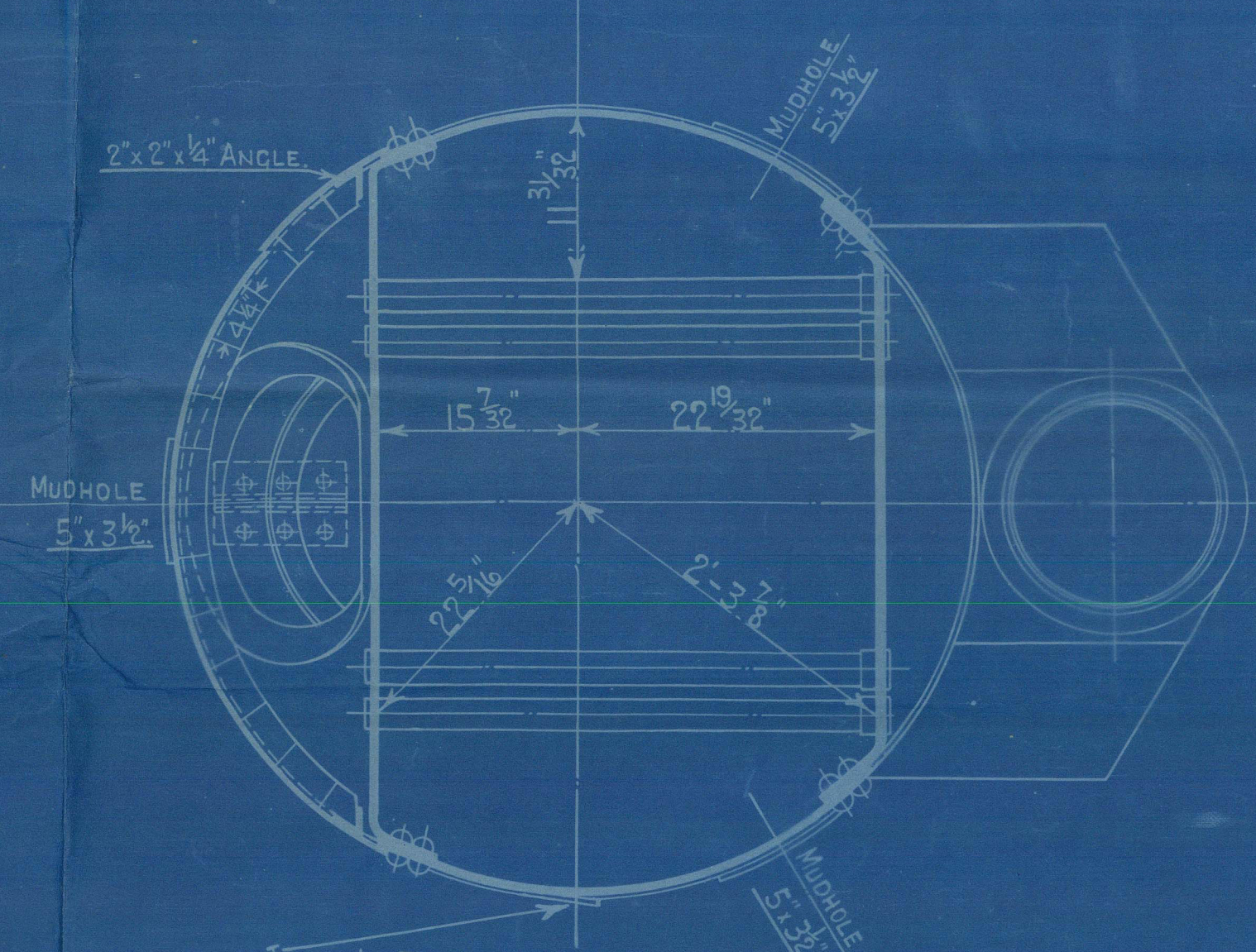
COCHRAN & CO ANNAN L^{TD}.
ENGINEERS & BOILERMAKERS.
ANNAN, SCOTLAND.



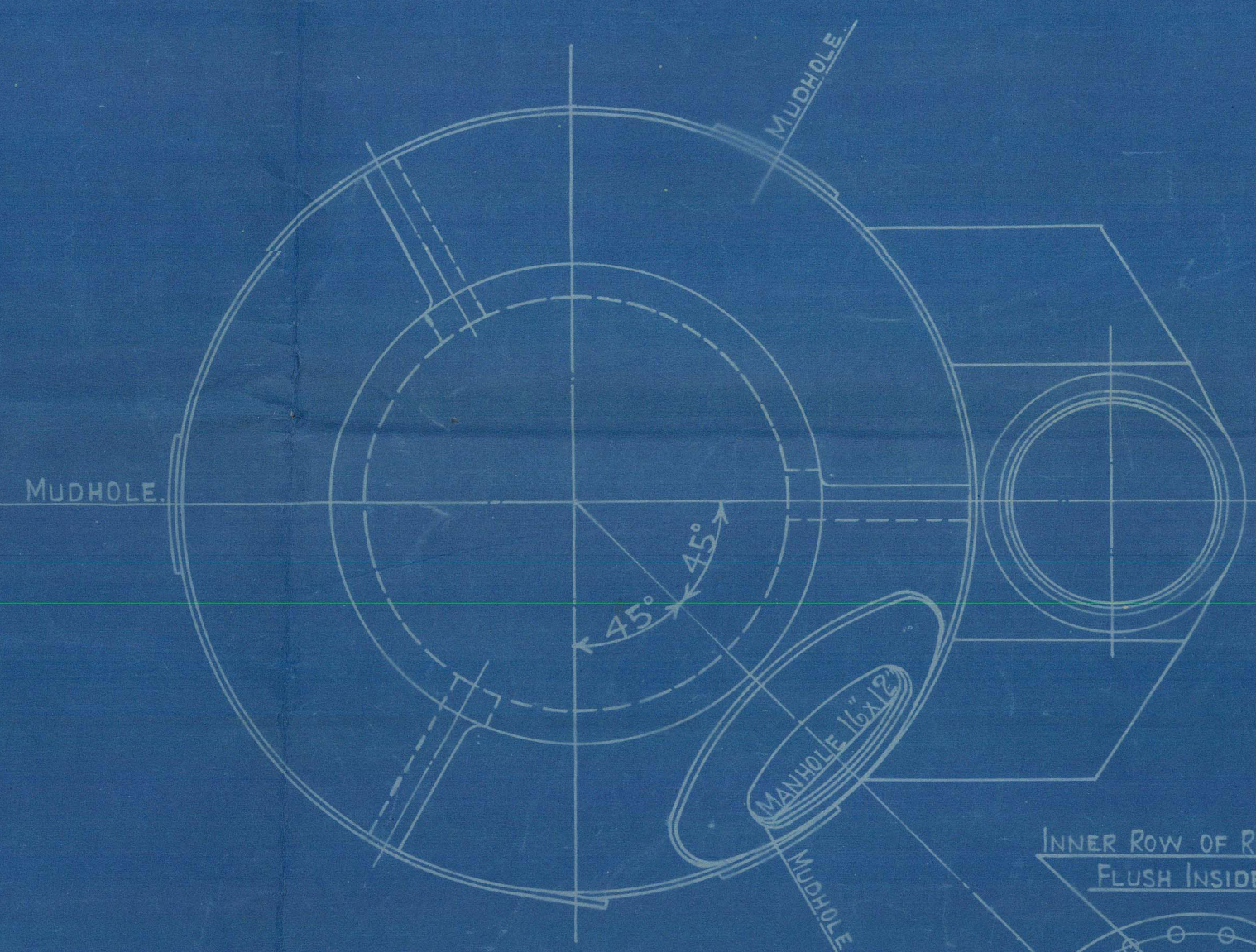
BOARD OF TRADE.	
PLATE.	2425 x 78125 x 100 = 67.7%
RIVETS.	24 x 2473 x 24 x 2240 = 131.6%
FRONT TUBE PLATE.	4 x 253375 x 100 = 35.1%
BACK TUBE PLATE.	4 x 253375 x 100 = 37.5%
SHELL.	20 x 2240 x 107.7 x 2 x 406 = 116. LBS.
FRONT TUBE PLATE.	20 x 2240 x 35.1 x 456 = 132. LBS.
BACK TUBE PLATE.	20 x 2240 x 37.5 x 531 = 169. LBS.
FURNACE.	1000 x 102.1 = 137. LBS.



PLAN OF FURNACE.



JOINT IN TOP & BOTTOM STRAKE OF SHELL.



PLAN OF SHELL CROWN JOINTS.

as per 5-2-12.
PATENT BOILER No 8106.

5'-0" x 11'-3" x 220" x 100 LBS.

SCALE 1 INCH TO 1 FOOT.

SIEMENS MARTIN MILD STEEL PLATES.

TENSILE TESTS:-	
PLATES NOT EXPOSED TO FLAME OR FLANGED.	28 TO 32 TONS.
PLATES EXPOSED TO FLAME OR FLANGED EXCEPT FIRE CROWN.	24 TO 30 TONS.
FURNACE CROWN.	26 TO 29 TONS.

STANDARD.
SURVEY-LLOYDS.

DRAWING No 8918.

COCHRAN & CO., ANMAN, L.D.

Pat. No. 8106

Drawing No. 8918

100 lbs per sq. inch.

mark on boiler:—

No 15093
Lloyds 2nd
200 lbs
H.P. 100 lbs
P.M.C. 10/20

GLASGOW REPORT No. 396 H.Y.

"Tidal"

SUNDERLAND RPT. No. 28075

Lon. F.E. 84049.



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Lloyd's Register

Foundation