

MARINE BOILER 13.0 DIAM. 10.6 LONG.

WORKING PRESSURE 180 LBS. PER SQ. IN.

TO LLOYDS REQUIREMENTS.

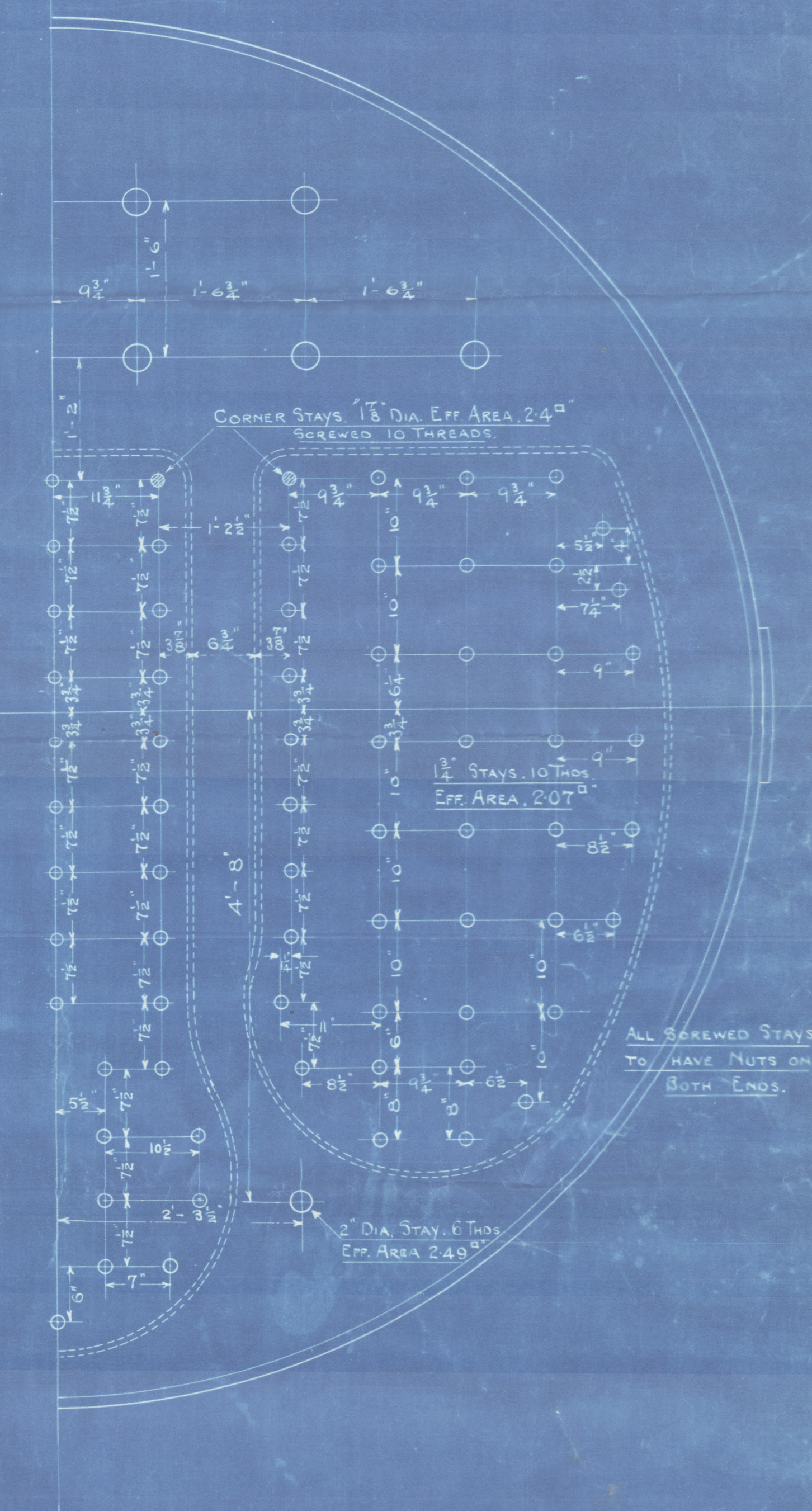
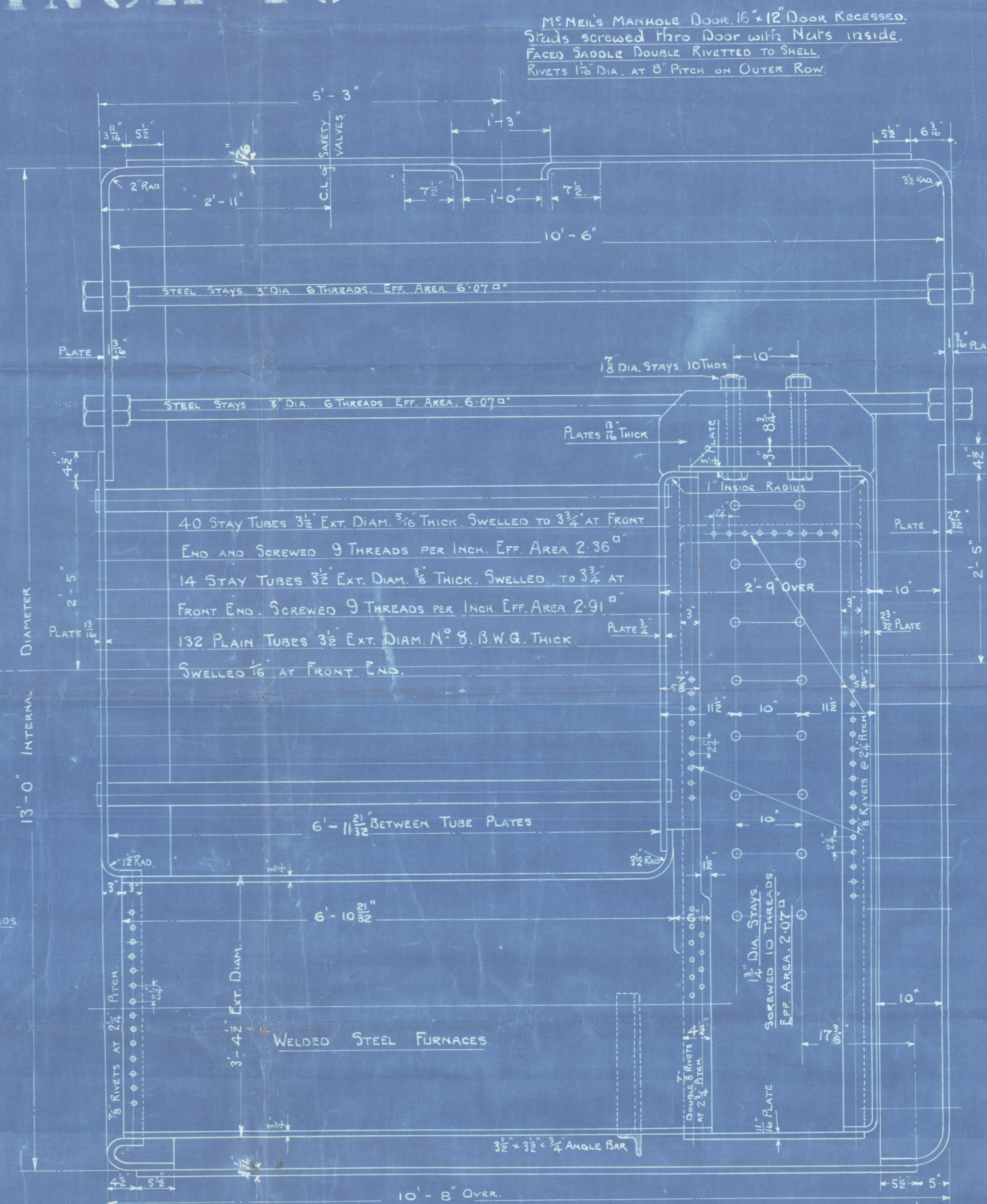
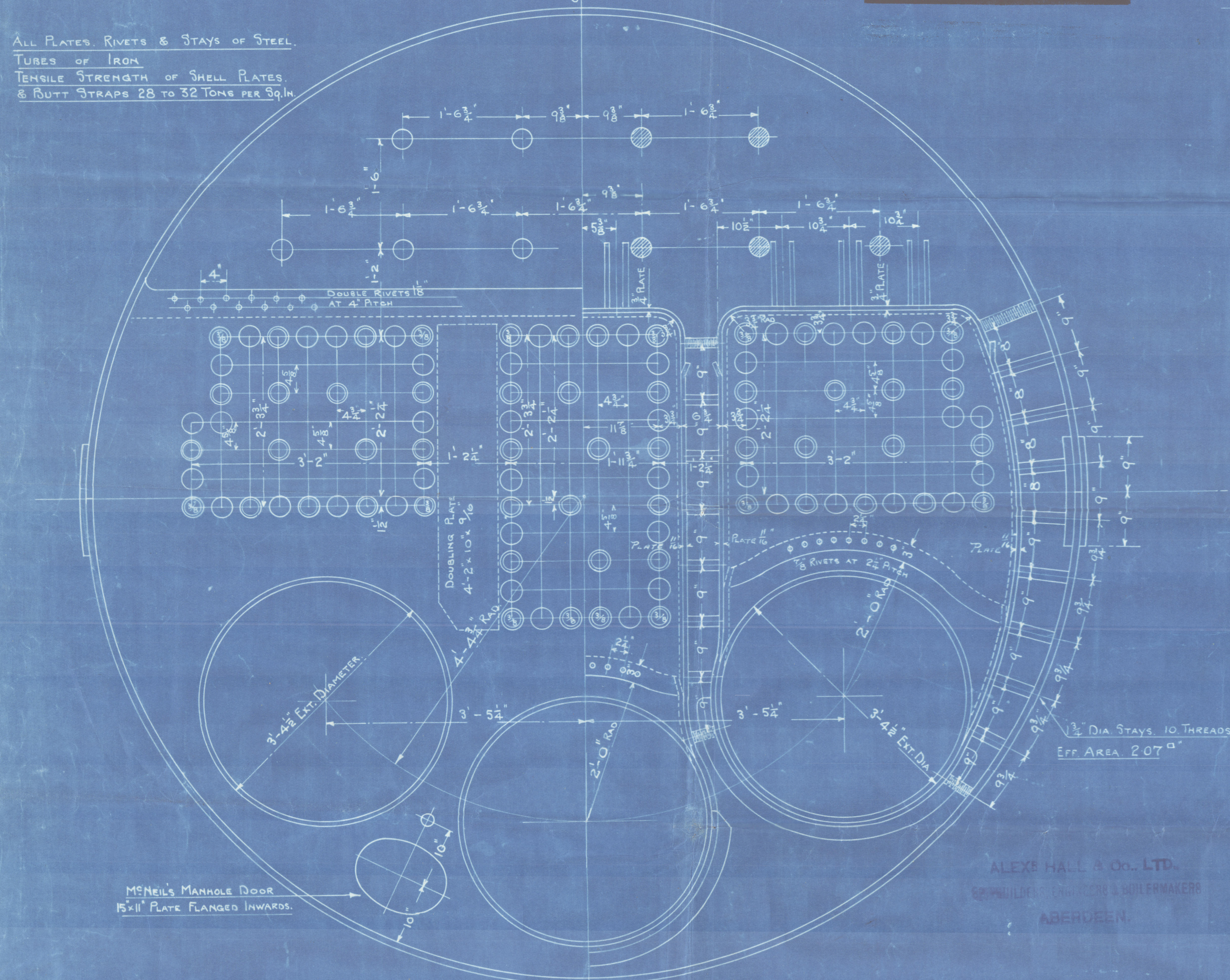
SCALE 1. INCH TO A FOOT.

17/7/19

ALL PLATES, RIVETS & STAYS OF STEEL.
TUBES OF IRON
TENSILE STRENGTH OF SHELL PLATES
& BUTT STRAPS 28 TO 32 TONS PER SQ. IN.

CL. OF MANHOLE & SAFETY VALVES.

McNEIL'S MANHOLE DOOR 16" x 12" DOOR RECESSED.
GRADE SCREWED THRO DOOR WITH NUTS INSIDE.
FACED SADDLE DOUBLE RIVETTED TO SHELL.
RIVETS 1 1/2" DIA. AT 8" PITCH ON OUTER ROW.



LONGITUDINAL SEAM.	PLATE $P-D \times 100 = \frac{8.625 - 1187}{8.625} \times \frac{100}{1} = 86.2\%$	
	RIVETS $N \times 1.75 \times A \times 85 = \frac{5 \times 1.75 \times 1107 \times 85}{8.625 \times 1.0625} = 89.6\%$	
SHELL 13.0 INT. DIA. 1 1/16" THICK	$C \times (T-2) \times B = \frac{5 \times 1.75 \times 1107 \times 85}{8.625 \times 1.0625} = 182.3 \text{ lbs}$	
END PLATES IN STEAM SPACE. STAYS 18 3/4 x 18 PLATES 1 1/2 THICK	$C \times T^2 = \frac{175 \times 361}{337.78} = 187 \text{ lbs}$	
MAIN STAYS 3" DIA. EFF. AREA 6.07	$PITCH \frac{18 3/4 \times 18}{18.75 \times 18} = 186 \text{ lbs}$	
WIDE SPACE BETWEEN NESTS OF TUBES 1 1/2 PLATES 1 1/2 CENTRES OF TUBES DOUBLER 1 1/2	$C \times (T+2) \times B = \frac{135 \times 182 \times 25}{14.25 \times 7.5} = 211 \text{ lbs}$	
WIDE SPACE BETWEEN C.O. BACKS. PLATE 3/32 STAYS 1-2 1/2 x 7 1/2	$\frac{135 \times 182 \times 25}{14.25 \times 7.5} = 184 \text{ lbs}$	
C.O. BACKS 3/32 PLATE STAYS 10 x 9 3/4	$C \times T^2 = \frac{135 \times 132 \times 25}{97.531} = 183 \text{ lbs}$	
C.O. TOPS 3/32 PLATE STAYS 10 3/4 x 10	$\frac{135 \times 132 \times 25}{107.78} = 180 \text{ lbs}$	
C.O. SIDES 1 1/2 PLATE STAYS 10 x 9	$\frac{135 \times 121}{102 \times 9} = 130.5 \text{ lbs}$	
FURNACES 3/4 THICK 3-4 1/2 EXT. DIA.	$\frac{50(300 \times 75 - 775)}{40.5} = 182 \text{ lbs}$	
GIRDERS 1 1/2 THICK 2 PLATES STAYS 10 3/4 x 10	$\frac{10660 \times 8.75 \times 1625}{(345 - 10) \times 10.75 \times 31.5} = 182 \text{ lbs}$	
C.O. SIDE STAYS 1 1/2 DIA. EFF. AREA 2.07	$\frac{9000 \times 2.07}{10 \times 9} = 207 \text{ lbs}$	
C.O. TOP STAYS 1 1/2 DIA. EFF. AREA 2.4	$\frac{9000 \times 2.4}{10.75 \times 10} = 209 \text{ lbs}$	
C.O. BACK STAYS 1 1/2 DIA. EFF. AREA 2.07	$\frac{9000 \times 2.07}{10 \times 9} = 191.2 \text{ lbs}$	
CENTRE C.O. BACK PLATE STAYS 11 3/4 x 7 1/2	$\frac{135 \times 132 \times 25}{97.15} = 183.7 \text{ lbs}$	

JOB NO^s 266, 267, 268.

ALEX HALL & CO. LTD.
ENGINEERS, ENGINEERS & BOILERMAKERS
ABERDEEN.

HEATING SURFACE IN FURNACES.	116 $\frac{1}{2}$
" " " CHAMBERS.	215 $\frac{1}{2}$
" " " TUBES.	1179 $\frac{1}{2}$
TOTAL HEATING SURFACE.	1510 $\frac{1}{2}$
GRATE SURFACE - 4'-9" BARS.	46 $\frac{1}{2}$
RATIO OF GRATE TO HEATING SURFACE	1:32.8

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SHIPBUILDERS, ENGINEERS & BOILERMAKERS
ABERDEEN.

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A. Hall & Co.

Boiler No 266. Abn. F. & C. Rept. No. 12499.

S.S. No 583. S.S. "Scotstoun Head"

Boiler No 267

S.S. No 584 "Braconlea". F.E. Rept. No. 12562.

Boiler No 268 Abn. F. & C. Rept. No. 12819.

S.S. No 585. S.S. "Hoss Head".

Similar to boiler No 235 & Co.

S.S. No 585

Rept. No. 12819

No. 585



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