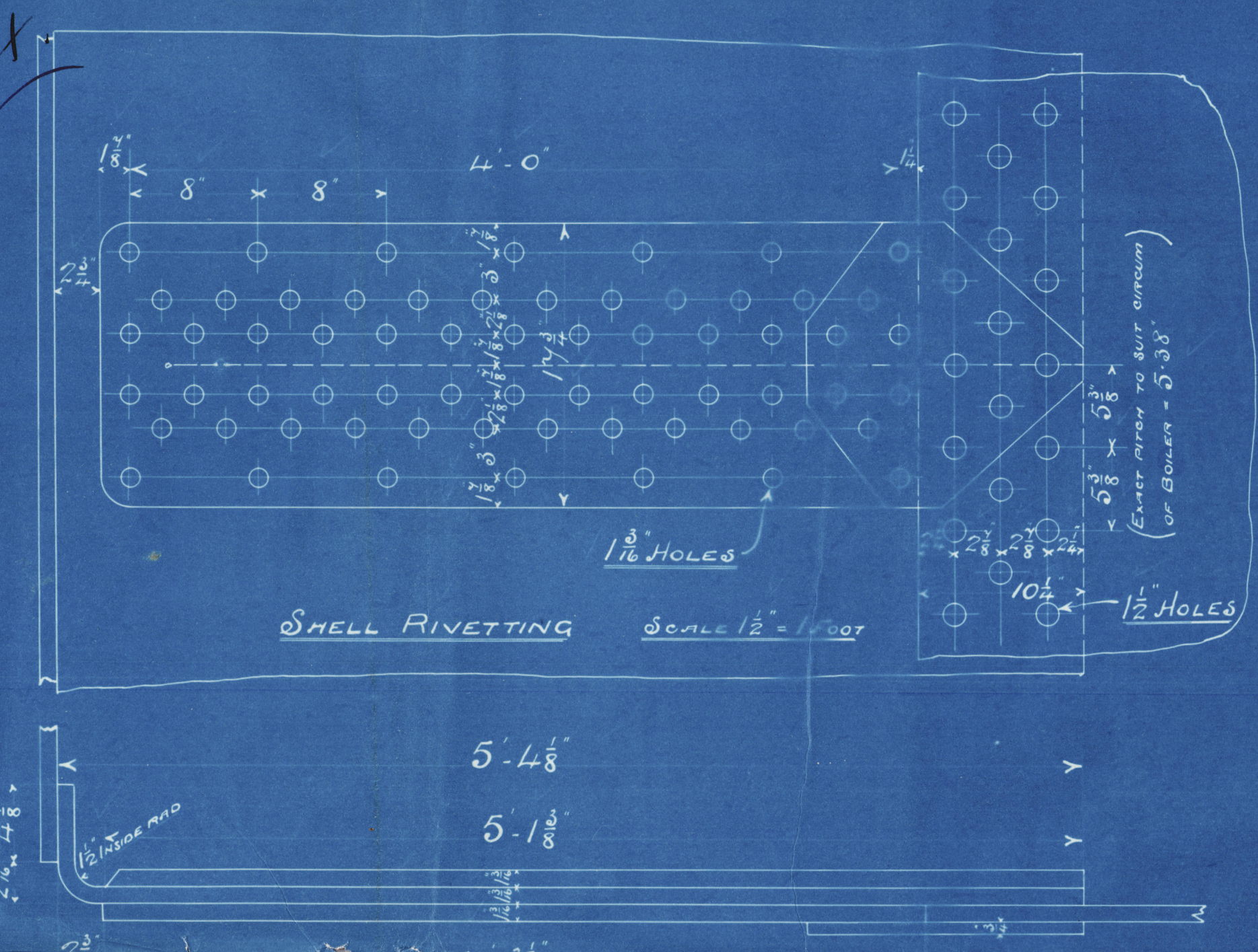


Rev. 2:33 177



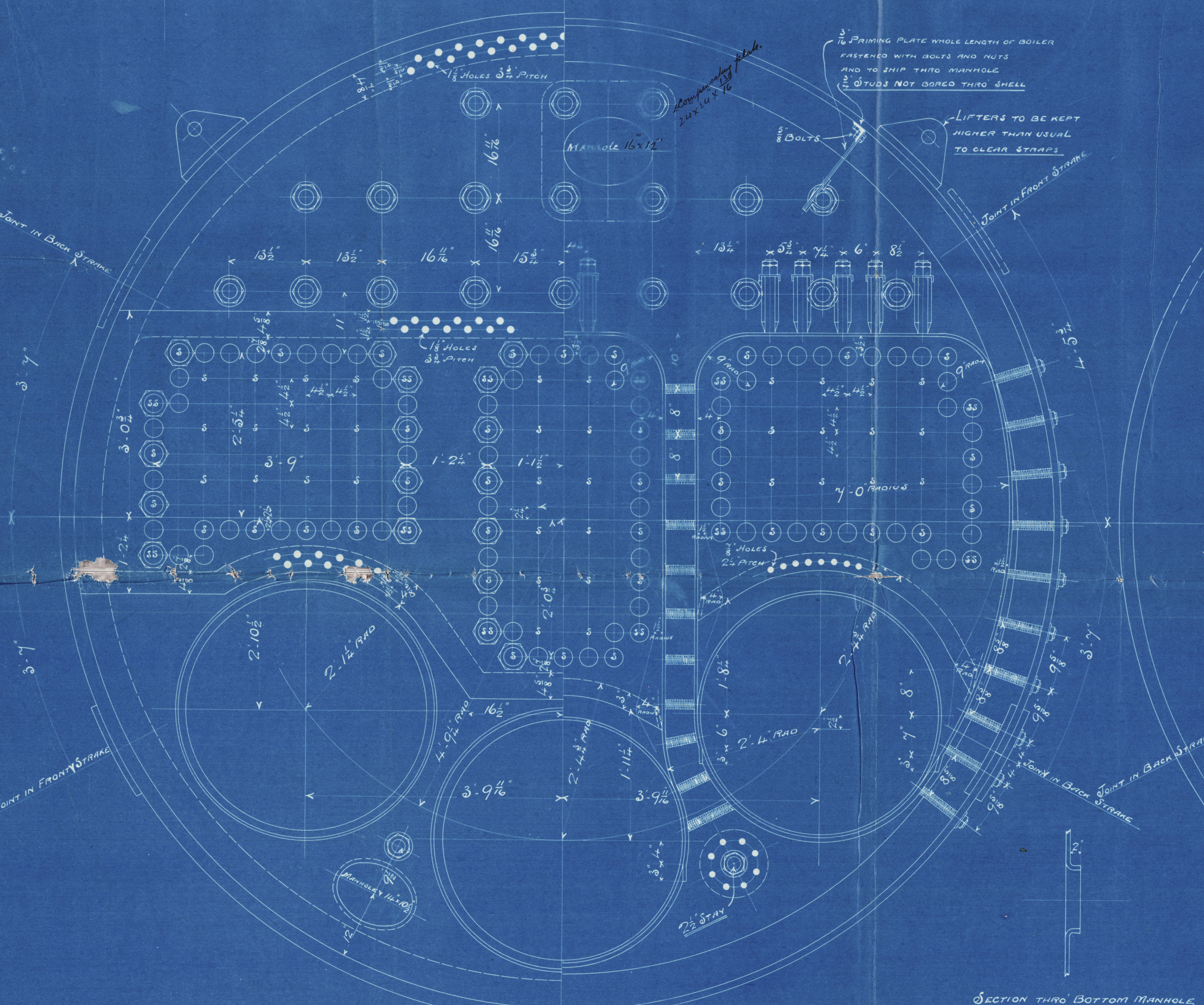
177. STEEL BOILERS N^o 177

WORKING PRESSURE 160 LBS TO LLOYDS

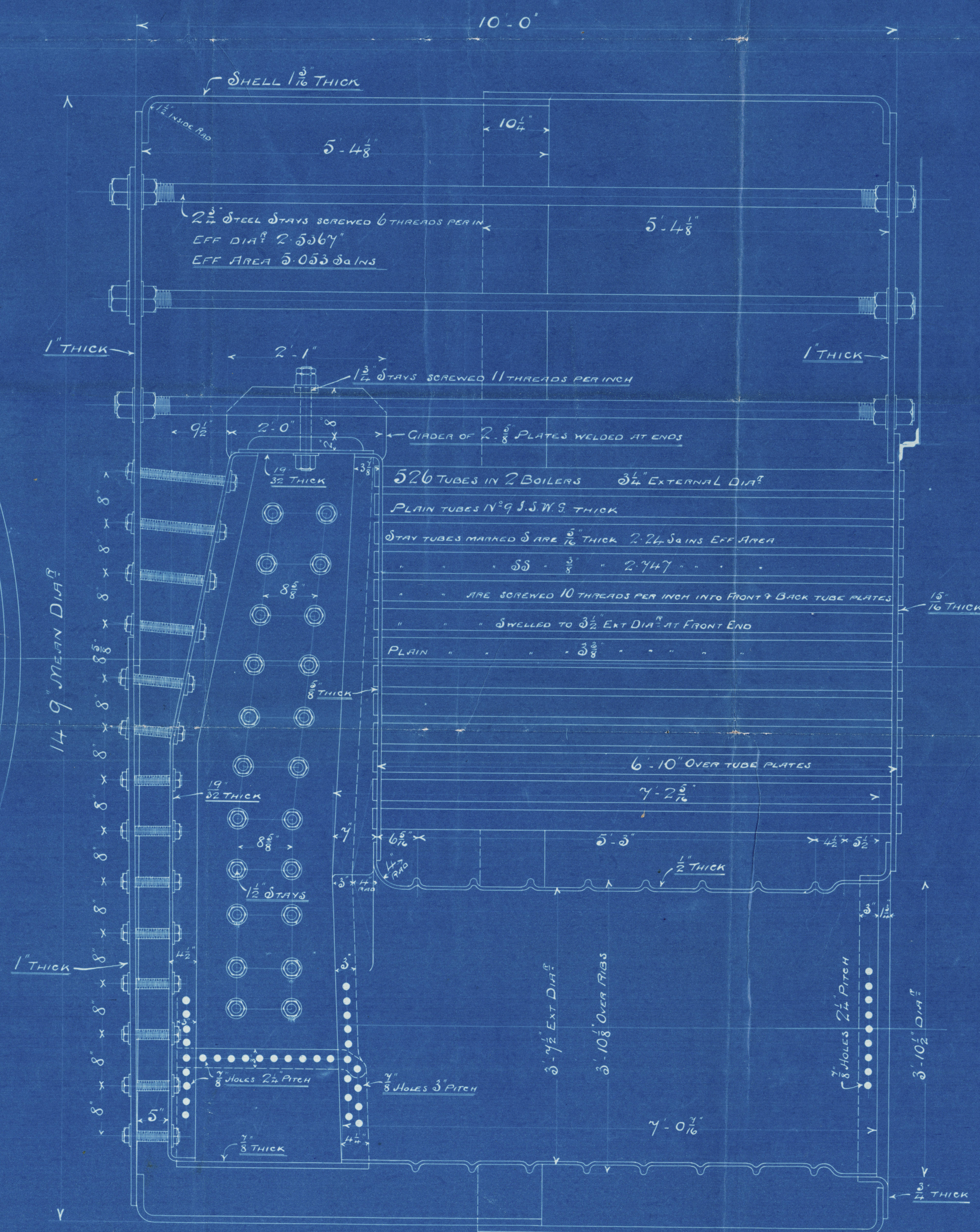
SCALE 1" = 1 FOOT

Steel Boilers 16" 177 fitted to M^{rs} W. Gray & Co. Ltd. S.S. 16" 481.

Plate	$\frac{F-d}{P}$	$\frac{8-1.1875}{8}$	$\frac{7}{85.156}$	Back	$\frac{C \times t^2}{P^2}$	$\frac{135 \times 16^2}{14^2}$	$\frac{113}{176.3}$
Rivets	$\frac{a \times 10 \times 1.75 \times 85}{P \times F}$	$\frac{1.1875 \times 5 \times 1.75 \times 85}{8 \times 1.1875}$	$\frac{7}{86.6}$	Girders	$\frac{C \times d^2 \times t}{(L-P) \times \text{dist.}^2}$	$\frac{6600 \times 8^2 \times 1.25}{(24-7) \times 24 \times 8.5}$	$\frac{112}{172.8}$
Shell	$\frac{C \times (t-2) \times 10}{D}$	$\frac{20 \times (19-2) \times 85.156}{177}$	$\frac{118}{163.5}$	Rivets	$\frac{C \times (t-2)}{D}$	$\frac{1160 \times (8-2)}{43.5}$	$\frac{118}{160.4}$
F & B Taps	$\frac{C \times t^2}{P^2}$	$\frac{175 \times 16^2}{16.6875^2}$	$\frac{161.6}{163.5}$	Main Stays	$\frac{C \times a}{\text{Surf. Sup.}}$	$\frac{9000 \times 5.053}{16.6875^2}$	$\frac{118}{164.4}$
F. Tube Plate	"	$\frac{150 \times 15^2}{14.25^2}$	$\frac{166.2}{163.5}$	Screw Stays	"	$\frac{9000 \times 2.076}{12.5 \times 8.625}$	$\frac{118}{174.7}$
B. Tube Plate	"	$\frac{140 \times 10^2}{9^2}$	$\frac{172.8}{163.5}$	"	"	$\frac{8000 \times 1.5}{8.625^2}$	$\frac{118}{161.3}$
Do 1/2 comp. hull	$\frac{C \times (D-d) \times t}{W \times D}$	$\frac{1600 \times (4.5-2.962) \times 10}{33.5 \times 4.5}$	$\frac{163.2}{163.5}$	Stay Subcs	"	$\frac{7500 \times 1.24}{9 \times 9}$	$\frac{118}{207.4}$
Com. Cham.	$\frac{C \times t^2}{P^2}$	$\frac{135 \times 9.5^2}{8.625^2}$	$\frac{163.78}{163.5}$	Heating Surface in 2 Boilers		3750×5.4	



SECTION THRU BOTTOM MANHOLE



STEEL STAYS MARKED 5/16" DIA SCREWED 11 THREADS PER INCH EFF. DIA. 1.6337 INS EFF. AREA 2.096 SQ INS



N. 16
29-1-94

2 Main Boilers
for E. Gray H^{os} 481
Central Marine

No. 177
S.S. Wemoe, W. H. Pl. Report No. 94410

Also
2 Main Boilers
R 200 for
E. Gray H^{os} 488

No. 488
S.S. "Leserale"
W. H. Pl. Report No. 9576

L. L. No. 481

2 H 23
Lloyd's test
320 lb
P. H.
3. H. 9 H

HPL374-0058



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Foundation