

SUNDERLAND ENGINE WORKS.

BOILER.

SCALE - 1 INCH TO A FOOT.

SCHEDULE "L".

WRITTEN DIMENSIONS ONLY TO BE TAKEN.



RIVET HOLES $\frac{7}{16}$ " DIA.

PLATE $\frac{1}{2}$ " THICK.
RIVET HOLES $\frac{7}{16}$ " DIA.
PITCH = $9\frac{13}{16}$ "

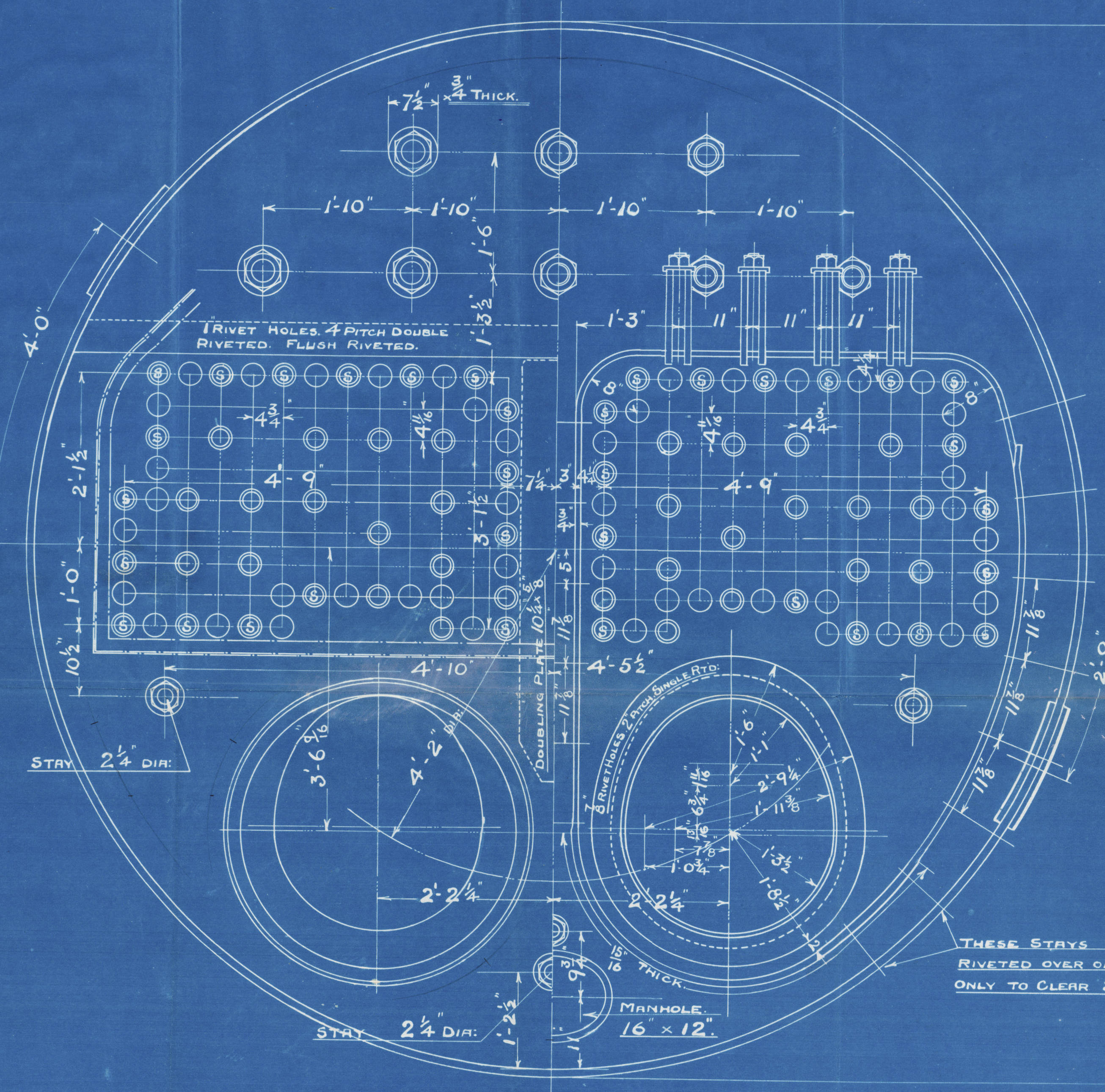
PLATE SECTION = 87.57%.
RIVET " " 85.69%.

RIVET HOLES $\frac{7}{16}$ " DIA.

BUTT STRAPS. { INSIDE 1" TH.
OUTSIDE 1" TH.

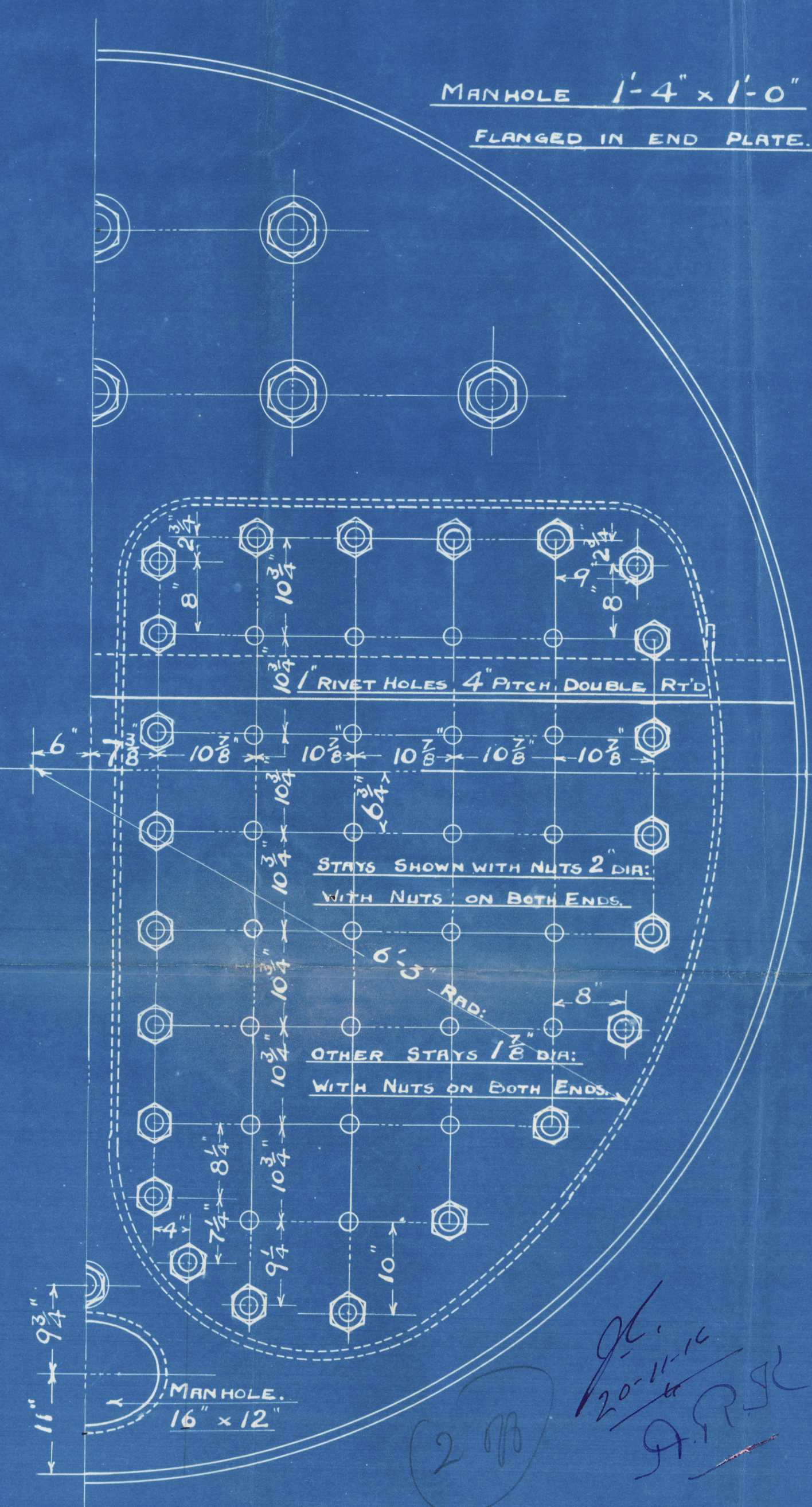
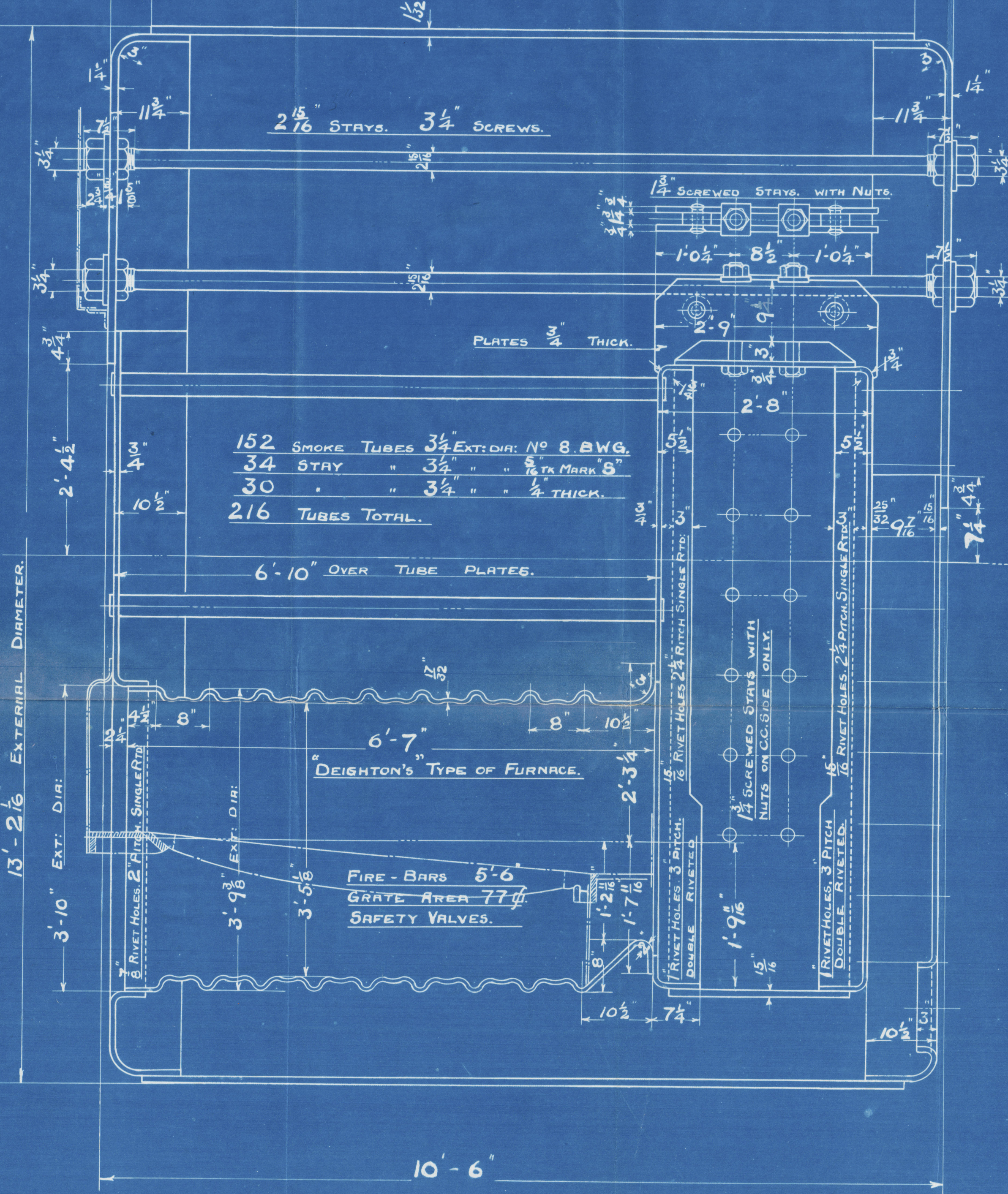
ALL RIVETS TO BE PUT EVERY ALTERNATE RIVET TO BE LEFT OUT
IN FRONT END OF BOILER. OF INSIDE ROW FOR 3" CIRC. TOP OF BOILER.
& ALL RIVETS TO BE PUT IN FOR 3" CIRC. AT
BOTTOM - AT BACK END OF BOILER.

To Pass LLOYD'S SURVEY.	
SHELL = $22 \times 28 \times 876 \times 0.68 = 2186.69$	180.5 LBS PER SQ.
WORKING PRESSURE	180 " " "
TEST	360 " " "
HEATING SURFACE ON TUBES.	1256 SQ. FT.
" " OTHER PARTS	322 " " "
" " TOTAL	1578 " " "
EX: FRONT TUBE PLATE	1546 " " "
EFFECTIVE AREA OF STAYS.	
34 STAY TUBES, 9 THRS PER IN	217 SQ. INS.
34 " " " " " " " " " " " "	1.64 " " "
276 MAIN STAYS.	6 " " " 6.8 " " "
24 " " " " " " " " " " " "	3.26 " " "
2 SCREWED " " " " " " " " " " " "	2.79 " " "
17 " " " " " " " " " " " "	2.43 " " "
14 " " " " " " " " " " " "	2.1 " " "
ALL PLATES RIVETS & STAYS - STEEL -	
TUBES - WROUGHT IRON -	
HOLES TO BE DRILLED IN PLACE AFTER BENDING.	
TENSILE STRENGTH OF SHELL PLATES	28 TO 32 TONS
" " " GIRDER	28 " 32 " "
" " " MAIN STAYS	28 " 32 " "



THESE STAYS TO BE RIVETED OVER OUTSIDE ONLY TO CLEAR SEATS.

DRAWN BY J.A.S.
TRACED BY
CHECKED BY J.A.S.
30/10/16



N.E. Marine
Boiler No 2294
for
Crowns S.S. No 161
Pressure 180 lbs
Sunderland 17/11/16



No. 3407.....
LLOYD'S TEST
360 lbs.
25-5-1917 C.C.

Sunniva

SUNDERLAND RPT. NO. 27130



Lloyd's Register
Foundation

W759 - 0080