

# SUNDERLAND ENGINE WORKS

TRACING 2682. BOILER SCALE - 1 INCH TO A FOOT SCHEDULE L.

WRITTEN DIMENSIONS ONLY TO BE TAKEN



RIVET HOLES,  $\frac{1}{32}$  DIA.

PLATE  $\frac{7}{16}$  THICK  
RIVET HOLES,  $\frac{1}{32}$  DIA.  
PITCH =  $8\frac{5}{16}$

PLATE SECTION =  $85\frac{3}{4}$   
RIVET =  $85\frac{3}{4}$

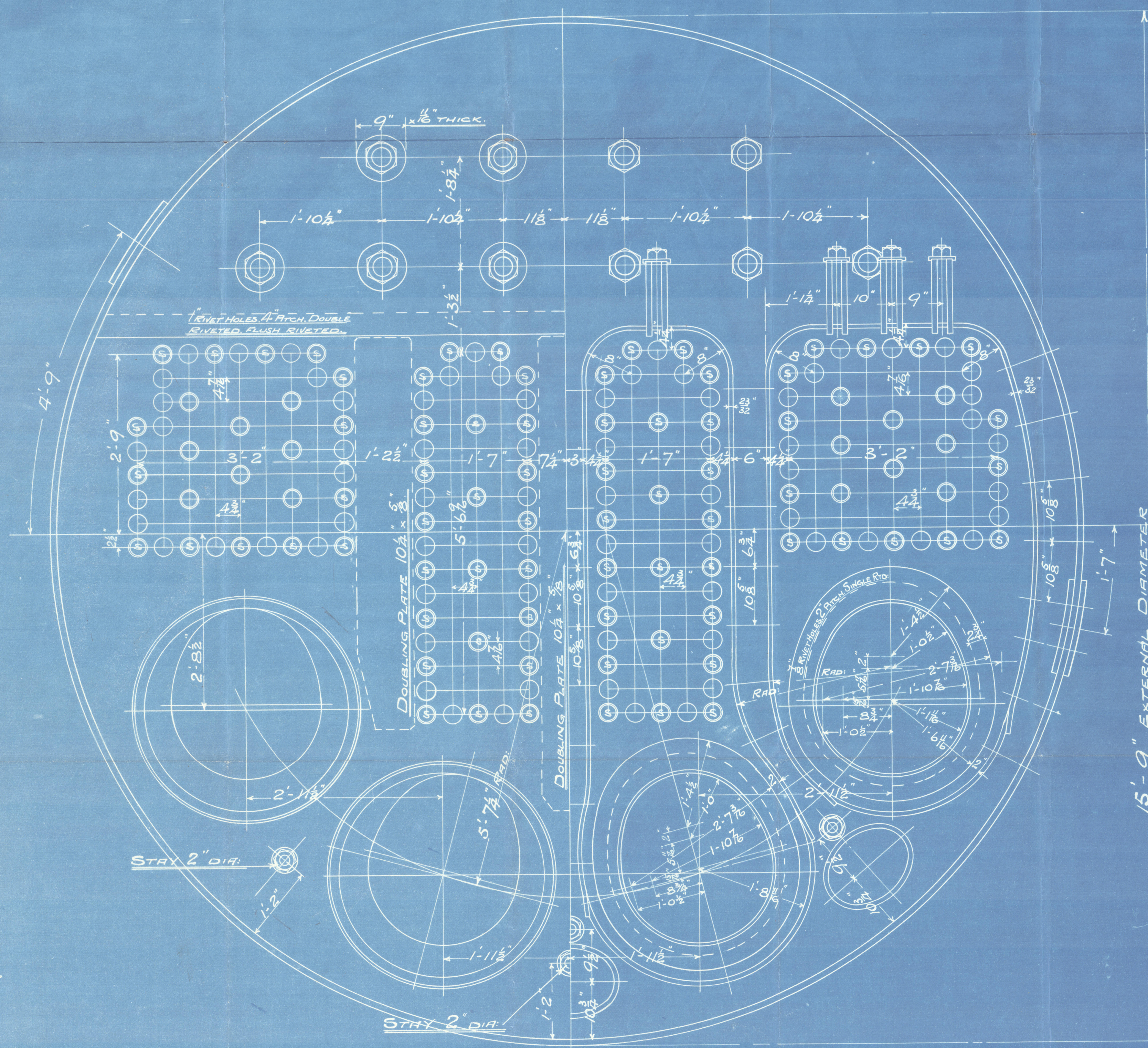
RIVET HOLES,  $\frac{1}{32}$  DIA.

BUTT STRAPS (INSIDE  $\frac{1}{8}$ "  
OUTSIDE  $\frac{1}{8}$ "

ALL RIVETS TO BE PUT  
IN FRONT END OF BOILER

EVERY ALTERNATE RIVET TO BE LEFT OUT OF INSIDE  
ROW FOR  $\frac{1}{3}$  CIRCUMFERENCE TOP OF BOILER, ALL RIVETS  
TO BE PUT IN FOR  $\frac{1}{3}$  CIRCUMFERENCE - BOTTOM  
- AT BACK END OF BOILER.

TO PASS "LLOYD'S" & "BELGIUM LAW."	
SHELL = $22\frac{1}{2}$ (195-2) 25.3	= 180.6 LBS. PER " "
WORKING PRESSURE = 180	" "
TEST " = 360	" "
HEATING SURFACE ON TUBES	193.4 SQ. FT.
" " OTHER PARTS	670 " "
" " TOTAL	260.4 " "
EX. FRONT TUBE PLATE	245.4 " "
EFFECTIVE AREA OF STAYS	
$3\frac{1}{2}$ " STAY TUBES, $\frac{5}{16}$ " TH. 9 THREDS PER IN.	2.17 SQ. IN.
$3\frac{1}{2}$ " " " 4 " " " "	1.64 " "
$3\frac{1}{2}$ " MAIN STAYS 6 " " " "	8.48 " "
2 " " 6 " " " "	2.51 " "
$2\frac{1}{2}$ " SCREWED " 11 " " " "	3.17 " "
$1\frac{1}{2}$ " " 11 " " " "	2.43 " "
$1\frac{1}{2}$ " " 11 " " " "	2.1 " "
ALL PLATES, RIVETS, & STAYS - STEEL -	
TUBES - WROUGHT IRON -	
HOLES TO BE DRILLED IN PLACE AFTER BENDING.	
TENSILE STRENGTH OF SHELL PLATES, NOT LESS THAN 28,000 LBS.	
" " " MAIN STAYS " " 28 "	
" " " GIRDER PLATES " " 28 "	



15'-9" EXTERNAL DIAMETER

220 SMOKE TUBES  $3\frac{1}{2}$ " EXT. DIA. NO. 8, B.W.G. THICK.  
74 STAY "  $3\frac{1}{2}$ " "  $\frac{5}{16}$ " TH. MARKED "S."  
16 " "  $3\frac{1}{2}$ " "  $\frac{1}{4}$ " THICK.  
310 TUBES TOTAL.

7'-4" OVER TUBE PLATES

7'-1 $\frac{1}{16}$ "

11'-0"

1 $\frac{1}{2}$ " SCREWED STAYS WITH NUTS

PLATES  $\frac{1}{16}$  THICK

1 $\frac{1}{2}$ " SCREWED STAYS WITH NUTS

PLATES  $\frac{1}{16}$  THICK

1 $\frac{1}{2}$ " SCREWED STAYS WITH NUTS

PLATES  $\frac{1}{16}$  THICK

1 $\frac{1}{2}$ " SCREWED STAYS WITH NUTS

PLATES  $\frac{1}{16}$  THICK

MANHOLE 1'-4" x 1'-0"  
FLANGED



CONTRACT 1845.1 OFF.

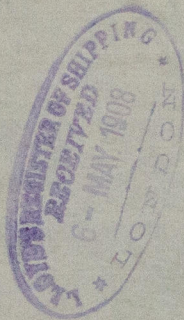
DRAWN BY J.A.S.  
CHECKED BY J.A.S.  
TRACED BY J.A.S.  
TRACING No. 2682



Master J. Crown + Sons 128  
N.E. N. E. 1845

s/s "Clara."

Sld rpt No. 73853



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Foundation  
W1642-0288