

SUNDERLAND.

## BOILER.

SCALE = 1 INCH TO A FOOT

SCHEDULE "L"

WRITTEN DIMENSIONS ONLY TO BE TAKEN.



## BUTT STRAPS

INSIDE  $1\frac{1}{8}$ " Tk:  
OUTSIDE  $1\frac{1}{8}$ " Tk:

PLATE  $1\frac{5}{64}$ " THICK.  
RIVET HOLES  $1\frac{3}{8}$ " DIA:  
PITCH =  $10\frac{1}{8}$ "

PLATE SECTION = 86.4 %  
RIVET " = 88 %

9 PITCHES @  $10\frac{1}{8}" = 7'-7\frac{1}{8}"$

EVERY ALTERNATE RIVET TO BE LEFT OUT OF  
INSIDE ROW FOR  $\frac{2}{3}$  CIRC. TOP OF BOILER.  
AND ALL RIVETS TO BE PUT IN FOR  $\frac{1}{3}$   
CIRCUMFERENCE AT BOTTOM.  
AT BACK END OF BOILER.

TO PASS LLOYD'S SURVEY & FRENCH GOV'T REQUIREMENTS.			
SHELL	=	22 (19.75 - 21.86) 4 177 - 53125	= 190 LBS PER SQ. IN.
WORKING PRESSURE			= 190 " " " "
TEST			= 380 " " " "
HEATING SURFACE ON TUBES			1703 SQ. FEET
" " OTHER PARTS			451 " " "
" " TOTAL			2154 " " "
EX. FRONT TUBE PLATE			2112 " " "
EFFECTIVE AREA OF STAYS.			
3 1/4 STAY TUBES	5/16 T.K.	9 THREADS PER IN.	2.17 SQ. IN.
3 1/2 " " "	3/4 " "	9 " " "	1.64 " " "
3 1/2 MAIN STAYS		6 " " "	7.66 " " "
2 1/2 " "		6 " " "	3.26 " " "
2 1/2 SCREWED " "		9 " " "	2.71 " " "
1 3/4 " " "		9 " " "	2.36 " " "
1 3/4 " " "		9 " " "	2.03 " " "
ALL PLATES, RIVETS, & STAYS - STEEL -			
TUBES - WROT IRON -			
HOLES TO BE DRILLED IN PLACE AFTER BENDING.			
TENSILE STRENGTH OF SHELL PLATES 28 TO 32 TONS □ "			
" " "	OF BUTT STRAPS & GIRDERS	28 TO 32	" " "
" " "	OF MAIN STAYS	28 TO 32	" " "

DRAWN BY.....  
TRACED BY.....J.W.  
CHECKED BY.....

DRAWING N° 6821.

~~CONTRACT 2389. 2.0FF.~~  
~~CONTRACT 2451. 2.0FF.~~



SUNDERLAND

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NE. MARINE ENG CO LD

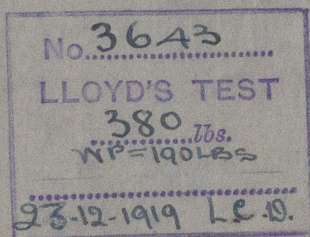
(2) BOILERS NO 2451

WP = 190 LBS

DUPLICATE OF NO 2389

BLYTH S.B.CO S/SN 214

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SUNDERLAND RPT. NO. 27859.

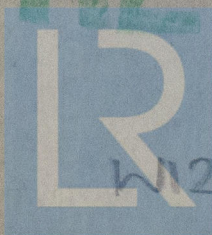
S.S. NIOBE.

NEWCASTLE ON TYNE.

Report No. 73454.

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