

THE NORTH EASTERN MARINE ENGINEERING CO. LTD.

SUNDERLAND

(AMENDED) BOILER.

SCALE = 1 INCH TO A FOOT.

SCHEDULE "L."

WRITTEN DIMENSIONS ONLY TO BE TAKEN.



RIVET HOLES $1\frac{1}{4}$ " DIA.

PLATE $1\frac{3}{4}$ " THICK.
RIVET HOLES $1\frac{1}{4}$ " DIA.
PITCH = $8\frac{1}{16}$ "

PLATE SECTION = 85.8%
RIVET " = 89 %
COMBINED PLATE & RIVET SECTION = 89.4%

RIVET HOLES $1\frac{1}{4}$ " DIA.

BUTT STRAPS. INSIDE $1\frac{1}{16}$ " TH.
OUTSIDE $1\frac{1}{16}$ " TH.

ALL RIVETS TO BE PUT IN BOTH ENDS OF BOILER.

10' 8 $\frac{1}{4}$ "

$3\frac{1}{8}$ " STAYS. $3\frac{1}{2}$ " SCREWS.

$1\frac{1}{8}$ " SCREWED STAYS WITH NUTS.

PLATES $1\frac{1}{2}$ " THICK.

188 SMOKE TUBES $3\frac{1}{4}$ " EXT. DIA. NO. 8. B.W.G. THICK.
52 STAY " $3\frac{1}{4}$ " " " $1\frac{1}{2}$ " THICK MARKED "S".
28 " $3\frac{1}{4}$ " " " $1\frac{1}{4}$ " THICK.
267 TUBES TOTAL.

8' 0 $\frac{1}{2}$ " OVER TUBE PLATES.

FURNACE OF DEIGHTON SECTION.

FIRE-BARS
GRATE AREA.
SAFETY VALVES.

11' 8 $\frac{3}{32}$ "

MANHOLE 16" x 12"
FLANGED IN END PLATE.

RIVET HOLES. 4 PITCH DOUBLE R.T.D.

STAYS SHOWN WITH NUTS 2" DIA. WITH NUTS ON BOTH ENDS.

OTHER STAYS $1\frac{1}{8}$ " DIA. WITH NUTS ON BOTH ENDS.

MANHOLE 16" x 12"

14/5/24

TO PASS THE SURVEY OF LLOYD'S.	
SHELL = 28 x (38.5-2) 85.8	= 180-1 LBS PER " "
WORKING PRESSURE	180 " " "
TEST	320 " " "
HEATING SURFACE ON TUBES.	1828 " " "
" " OTHER PARTS.	472 " " "
TOTAL.	2300 " " "
EX. FRONT TUBE PLATE.	2258 " " "
EFFECTIVE AREA OF STAYS.	
$3\frac{1}{4}$ " STAY TUBES 16 TH. 9 THREADS PER INCH.	217 SQ. INCHES.
$3\frac{1}{4}$ " " " $1\frac{1}{4}$ " 9 " " " 1.64 " " "	
$3\frac{1}{8}$ " MAIN STAYS 6 " " " 7.66 " " "	
$2\frac{1}{2}$ " " " 6 " " " 4.11 " " "	
2" SCREWED " 9 " " " 2.71 " " "	
$1\frac{1}{8}$ " " " 9 " " " 2.36 " " "	
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 TO 32 " " "
" " MAIN STAYS	28 TO 32 " " "

13/5/24.

CONTRACT NO 2589. 3, OFF.

DRAWING NO 7732.

SUNDERLAND

N.E. MARINE ENGG: L^d

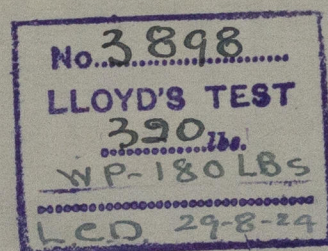
(3) BOILERS N^o 2529

WP-180 LBS

(AMENDED PLAN)

SHORT BROS L^{td}

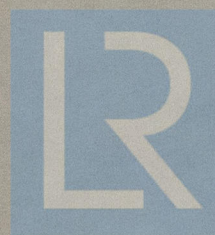
S/S N^o 418



SUNDERLAND RPT. NO. 28942

RETAIN

W404-0052



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