

# THE NORTH EASTERN MARINE ENGINEERING CO. LTD.

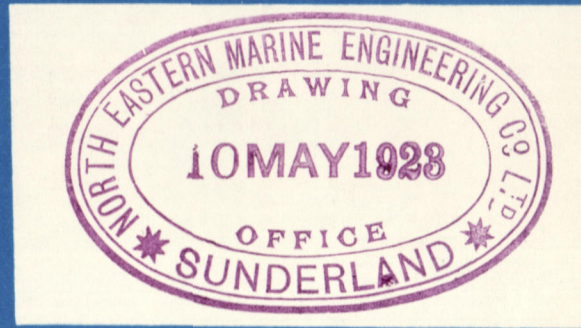
SUNDERLAND.

BOILER.

SCALE = 1 INCH TO A FOOT.

SCHEDULE "L".

WRITTEN DIMENSIONS ONLY TO BE TAKEN.



BUTT STRAPS.

INSIDE 1 1/8"  
OUTSIDE 1"

RIVET HOLES 1 3/8" DIA.

PLATE 1 1/4" THICK.  
RIVET HOLES 1 3/8"  
PITCH 9 9/16"

PLATE SECTION = 85.72 %  
RIVET SECTION = 90 %  
COMBINED SECTION = 89.2 %

RIVET HOLES 1 3/8" DIA.

ALL RIVETS TO BE PUT IN  
BOTH ENDS OF BOILER.

10' 0"

3 3/8" STAYS, 3 3/4" SCREWS.

PLATES 1" THICK.

240 SMOKE TUBES, 3 3/4" EXT. DIA. N° 8 B.W.G. TK.  
66 STAY " 3 3/4" " 5/16" TK. MARKED "S".  
34 " " 3 3/4" " 1/4" THICK.  
340 TUBES TOTAL.

7' 2 1/2" OVER TUBE PLATES.

FURNACES OF THE  
"DEIGHTON" SECTION.

FIRE-BARS.  
GRATE AREA.  
SAFETY VALVES.

11' 0"

To PASS LLOYD'S SURVEY.	
SHELL = $(42.5 - 2) 28 \times 85.72$ 2.75 x 195.3475	= 180.9 LBS. PER " "
WORKING PRESSURE .	= 180 " " "
TEST " "	= 320 " " "
HEATING SURFACE ON TUBES	2084 SQ. FEET.
" " OTHER PARTS	604 " " "
" " TOTAL	2688 " " "
Ex: FRONT TUBE PLATE .	2638 " " "
EFFECTIVE AREA OF STAYS .	
3 3/4" STAY TUBES 5/16" TK. 9 THREADS PER INCH	2.17 SQ. INCHES.
3 3/4" " " 1/4" " 9. " " "	1.64 " " "
3 3/8" MAIN STAYS 6. " " "	8.94 " " "
2 1/2" " " 6. " " "	3.26 " " "
2" SCREWED " 9. " " "	2.71 " " "
1 1/2" " " 9. " " "	2.36 " " "
1 1/4" " " 9. " " "	2.03 " " "
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 " " "	
" " OTHER PARTS 26 " 30 " " "	
" " MAIN STAYS 28 " 32 " " "	
" " SCREWED " 26 " 30 " " "	

MANHOLE 1' 4" x 1' 0"  
FLANGED IN END PLATE.

1" RIVET HOLES, 4" PITCH, DOUBLE RIVETED.

STAYS SHOWN WITH NUTS 2" DIA.  
WITH NUTS ON BOTH ENDS.  
OTHER STAYS 1 1/2" DIA. WITH  
NUTS ON BOTH ENDS.

MANHOLE 16" x 12"

LOOSE WASHERS

C. 71 #1.  
16-5-23



W403-0006

DRAWING N° 7398.

CONTRACT 2540. 2. OFF.

DRAWN BY... J.A.S.  
TRACED BY... J.W.A.  
CHECKED BY... J.A.S.



SUNDERLAND

N.E. MARINE ENG CO LD

(2) BOILERS N<sup>o</sup> 2540

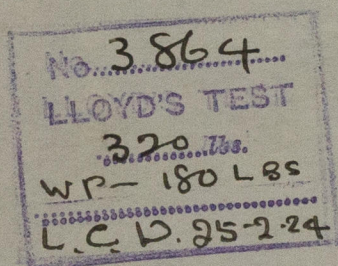
W P - 180 LBS

DUPLICATE OF N<sup>o</sup> 2516

(S/S "SCORESBY" - SLO RPT N<sup>o</sup> 28513)

ROBERT THOMPSON & SONS

S/S N<sup>o</sup> 320



RETAIN

SUNDERLAND RPT. N<sup>o</sup> 28482

S/S "Goathland"

W403 - 0006



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Foundation