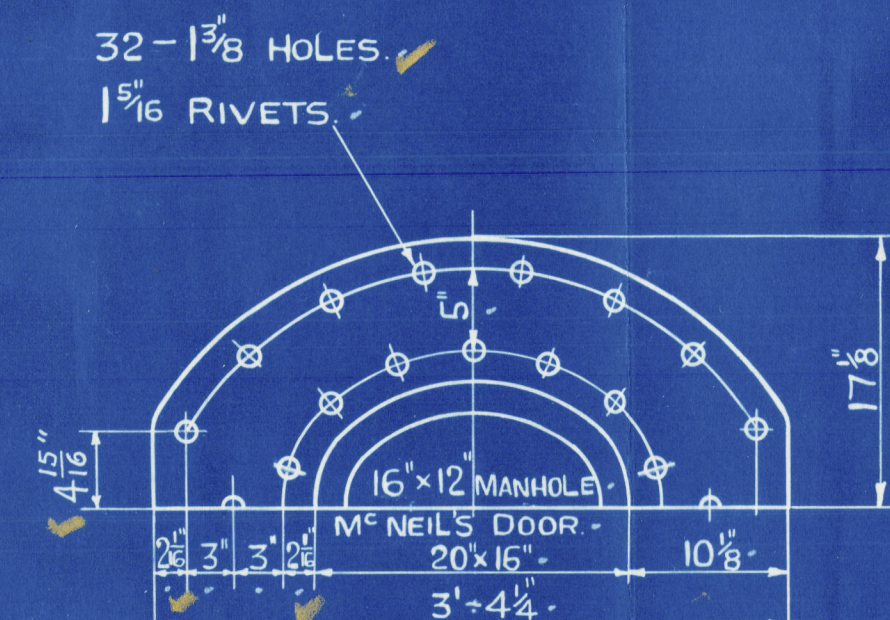


# TENSILE STRENGTH OF MATERIALS.

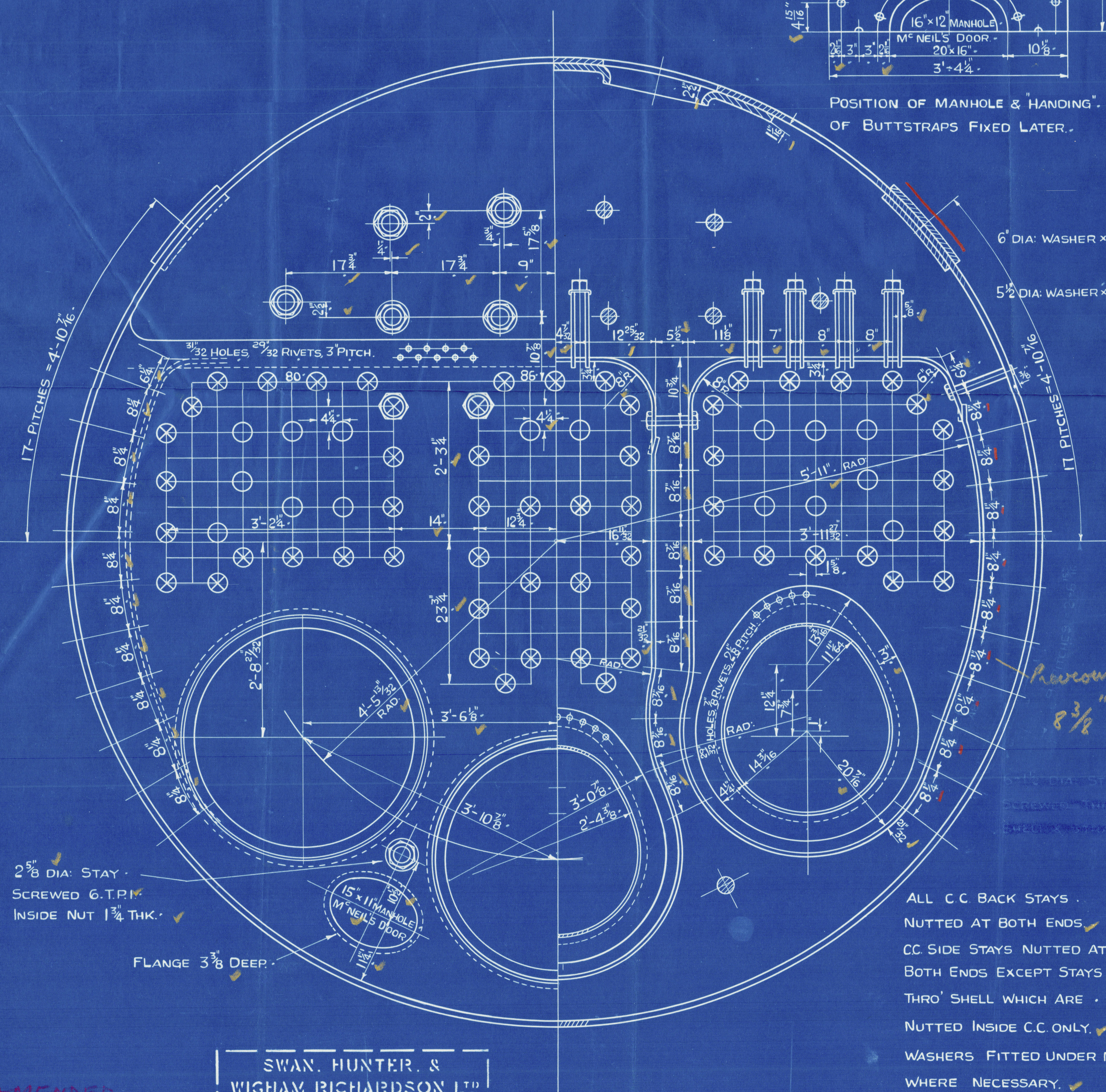
CYL <sup>r</sup> SHELL PLATES & BUTTSTRAPS	= 29	TO	33 TONS / D'.
GIRDER PLATES	= 28	TO	32 TONS / D'.
ALL OTHER PLATES & FURNACES	= 26	TO	30 TONS / D'.
LONGITUDINAL STAYS	= 28	TO	32 TONS / D'.
SCREW STAYS & RIVET BARS	= 26	TO	30 TONS / D'.

ALL PLATES OF STEEL ✓  
ALL STAYS OF STEEL ✓  
ALL RIVETS OF STEEL ✓  
ALL TUBES OF WROT IRON ✓

WORKING PRESSURE = 180 LBS / D' ✓  
TEST PRESSURE = 320 LBS / D' ✓



POSITION OF MANHOLE & HANDING.  
OF BUTTSTRAPS FIXED LATER.



2 5/8 DIA. STAY  
SCREWED 9.T.P.I.  
INSIDE NUT 1 3/4 THK.

FLANGE 3 3/8 DEEP.

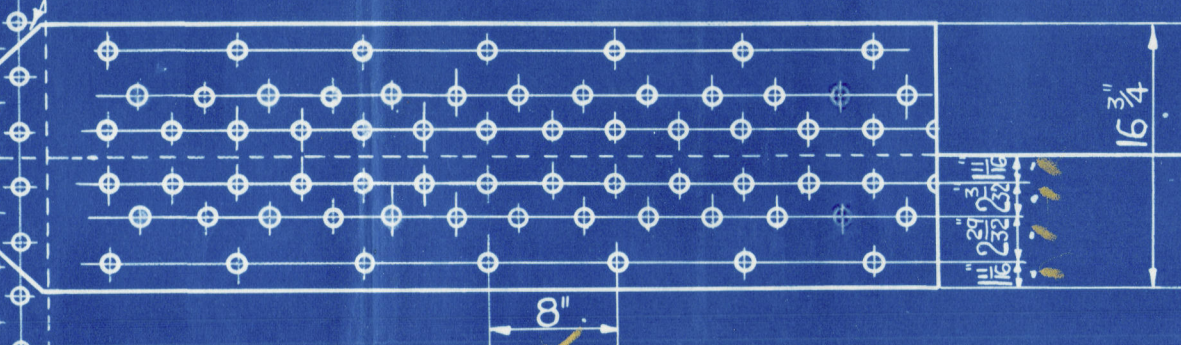
SWAN. HUNTER. &  
WIGHAM RICHARDSON LTD  
ENGINEERING DEPARTMENT.  
NEPTUNE WORKS.  
NEWCASTLE-ON-TYNE.  
DATE. |

J.H.  
H.W.B.  
G.L.E.

MACHINE RIVETED.  
CIRC<sup>r</sup> JOINT 1 1/8 HOLES, 1 1/16 RIVETS, 3-4 3/8 PITCH  
148 PITCHES, PLATE = 67.27% RIVET = 43.16%

INSIDE BUTTSTRAP SCARFED TO  
CL OF INNER ROW OF RIVETS.

OUTER BUTTSTRAP 1 3/16 THICK.  
INNER BUTTSTRAP 1 5/16 THICK.



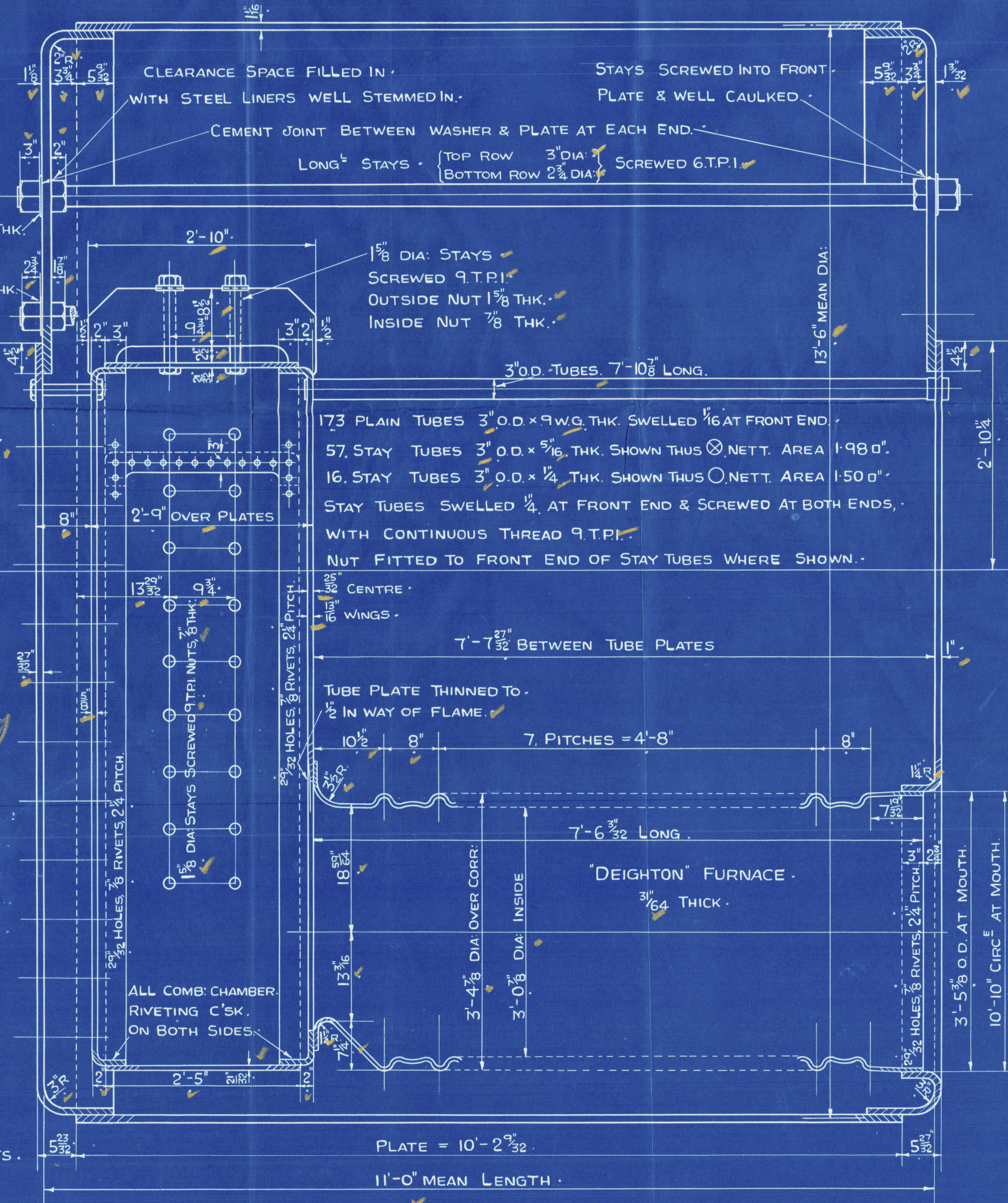
LONG<sup>r</sup> JOINT 1 1/8 HOLES, 1 1/16 RIVETS, 8 PITCH.  
HYDRAULIC MACHINE RIVETED.  
ALL HOLES DRILLED IN POSITION.

PLATE = 85.937%  
RIVET = 86.94%  
COMBINED = 89.26%

CIRC<sup>r</sup> JOINT 1 1/8 HOLES, 1 1/16 RIVETS, 3-4 3/8 PITCH.  
148 PITCHES, PLATE = 67.27% RIVET = 43.16%  
HAND RIVETED.

TOTAL HEATING SURFACE WINGS (2 BOILERS) = 2630 sq ft  
TOTAL HEATING SURFACE CENTRE (2 BOILERS) = 1400 sq ft

TO LLOYD'S SURVEY.



CLEARANCE SPACE FILLED IN  
WITH STEEL LINERS WELL STEMMED IN.

CEMENT JOINT BETWEEN WASHER & PLATE AT EACH END.

LONG<sup>r</sup> STAYS - (TOP ROW 3 DIA. SCREWED 6.T.P.I.)  
(BOTTOM ROW 2 1/2 DIA.)

6 DIA. WASHER x 1/2 THK.  
5 1/2 DIA. WASHER x 1/2 THK.  
1 5/8 DIA. STAYS  
SCREWED 9.T.P.I.  
OUTSIDE NUT 1 5/8 THK.  
INSIDE NUT 7/8 THK.

3 O.D. TUBES, 7'-10 3/8" LONG.

173 PLAIN TUBES 3" O.D. x 9 W.G. THK. SWELLED 1/16" AT FRONT END.  
57 STAY TUBES 3" O.D. x 5 1/16 THK. SHOWN THUS ⊗ NETT. AREA 1.98 D.  
16 STAY TUBES 3" O.D. x 1/2 THK. SHOWN THUS ○ NETT. AREA 1.50 D.  
STAY TUBES SWELLED 1/4" AT FRONT END & SCREWED AT BOTH ENDS.  
WITH CONTINUOUS THREAD 9.T.P.I.  
NUT FITTED TO FRONT END OF STAY TUBES WHERE SHOWN.

CENTRE  
WINGS.

7'-7 3/32" BETWEEN TUBE PLATES

TUBE PLATE THINNED TO  
1/2" IN WAY OF FLAME.

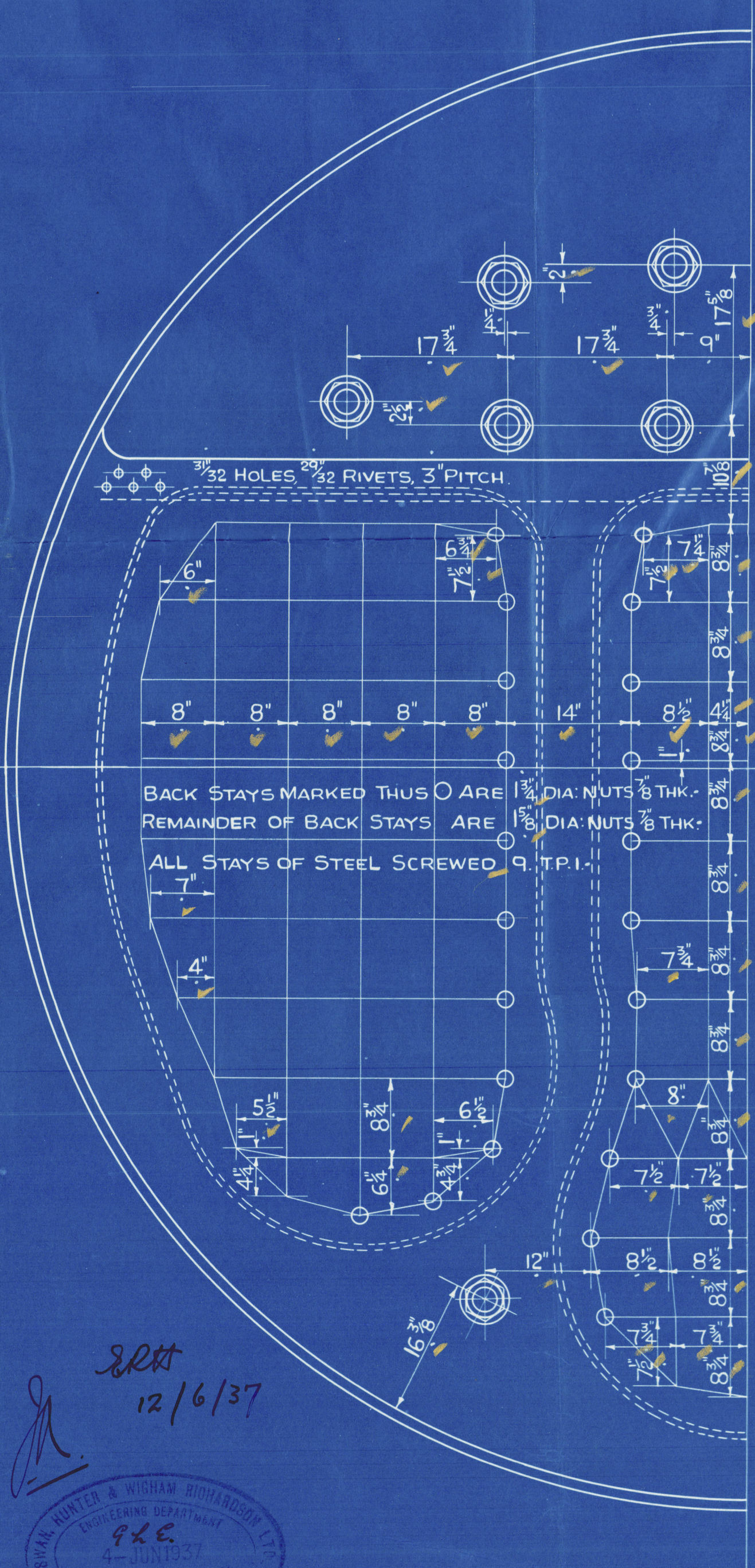
7 PITCHES = 4'-8"

7'-6 3/32" LONG.  
'DEIGHTON' FURNACE.  
3 1/64 THICK.

ALL COMB. CHAMBER  
RIVETING C'SK.  
ON BOTH SIDES.

ALL C.C. BACK STAYS  
NUTTED AT BOTH ENDS.  
CC SIDE STAYS NUTTED AT  
BOTH ENDS EXCEPT STAYS  
THRO' SHELL WHICH ARE  
NUTTED INSIDE C.C. ONLY.  
WASHERS FITTED UNDER NUTS.  
WHERE NECESSARY.

PLATE = 10'-2 3/32"  
11'-0" MEAN LENGTH.



BACK STAYS MARKED THUS ⊗ ARE 1 1/8 DIA. NUTS 8 THK.  
REMAINDER OF BACK STAYS ARE 1 1/8 DIA. NUTS 7 THK.  
ALL STAYS OF STEEL SCREWED 9.T.P.I.

SRH  
12/6/37

SWAN HUNTER & WIGHAM RICHARDSON LTD  
ENGINEERING DEPARTMENT  
4-JUNE-37  
NEPTUNE WORKS  
WALKER  
NEWCASTLE-ON-TYNE

No. 1562  
DATE 24.5.37

WASTE HEAT & OIL FIRED BOILER.

SCALE: 1" = 1 FOOT.

LLOYDS

Lloyd's Register  
Foundation  
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GEN BOX NO 555

SWAN, HUNTER, & WIGHAM  
RICHARDSON LTD.

SHIP No. 1545

23

ENGINE No. 1562

"Regent Tiger"

Waste Heat/oil fired

Donkey Boiler

Amended Drawing N° B810

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