

# THE NORTH EASTERN MARINE ENGINEERING CO. LTD.

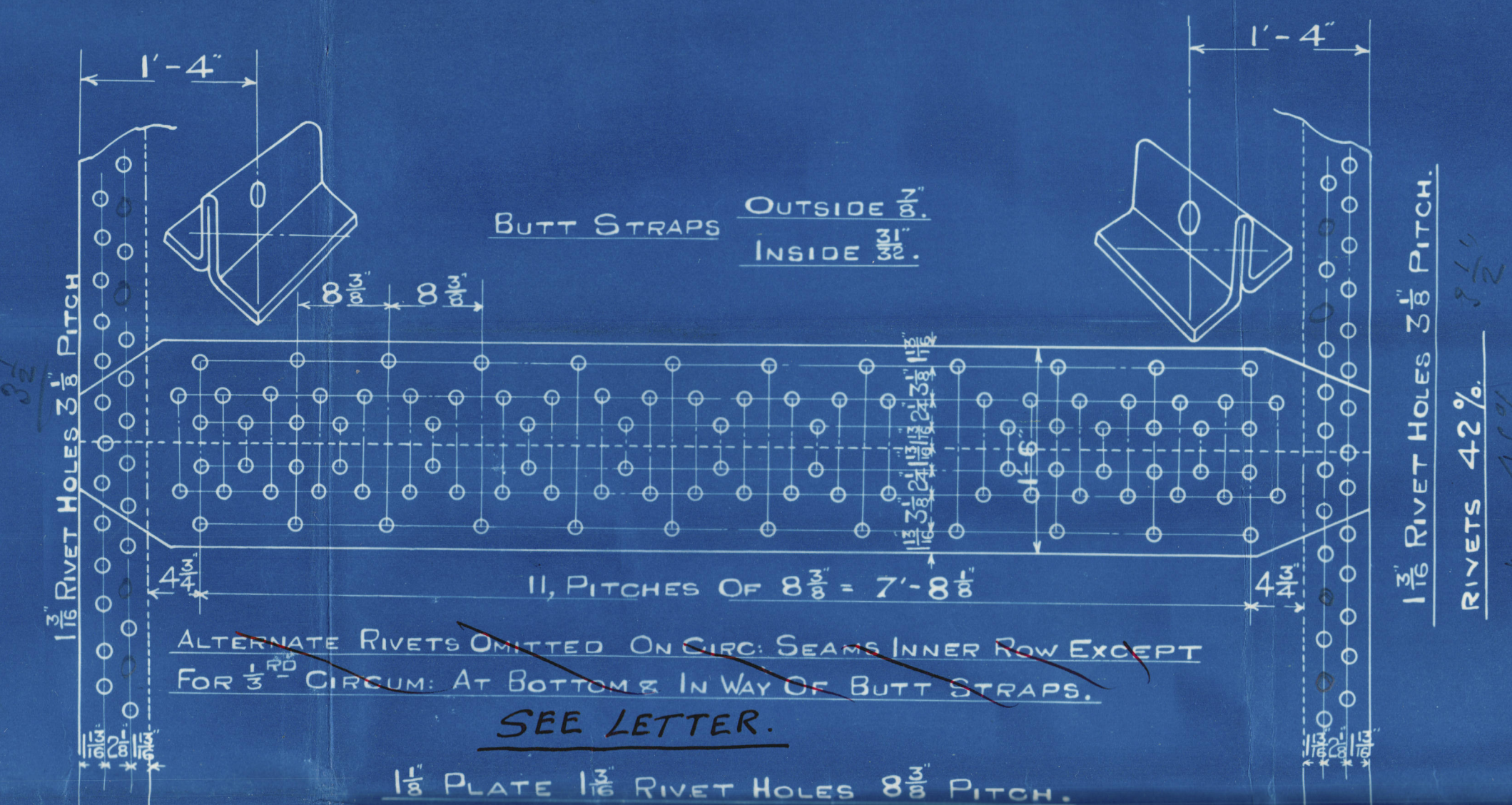
## WALLSEND-ON-TYNE.

### STEAM BOILER.

SCALE:- 1 INCH = 1 FOOT.

STRENGTH OF PLATE = 85.82%  
" " RIVETS = 90.4%

$$\text{SHELL} = \frac{28 \times (36.2) \times 85.82}{2.75 \times 162.75} = 182 \text{ LBS}$$



SURVEY TO LLOYD'S & OWNERS APPROVAL

HEATING SURFACE OVER TUBE PLATES = 1410, Sq. Ft.

" " ELSEWHERE = 390, " "

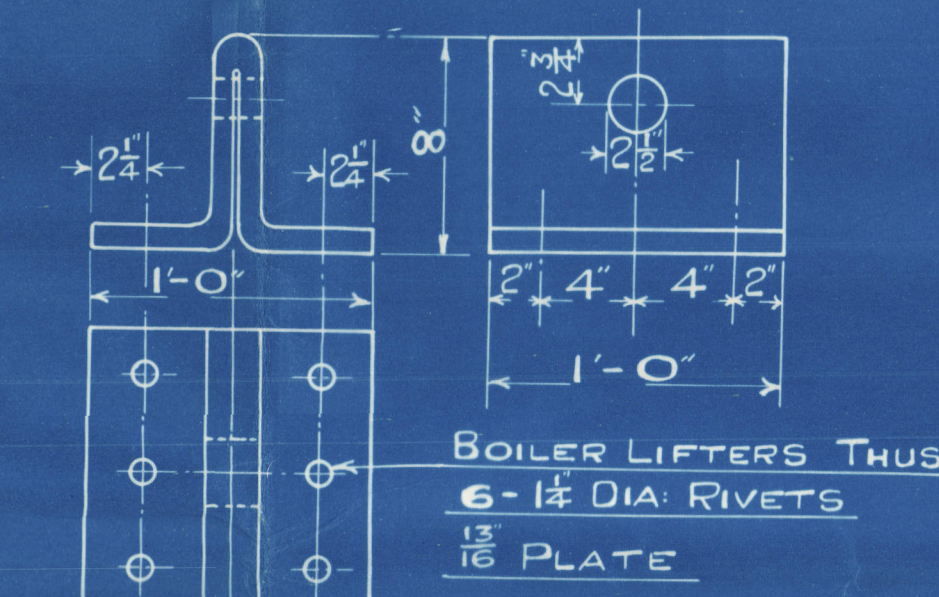
TOTAL = 1800, Sq. Ft. PER BOILER.

STEAM SPACE = 335 CUB. FT.

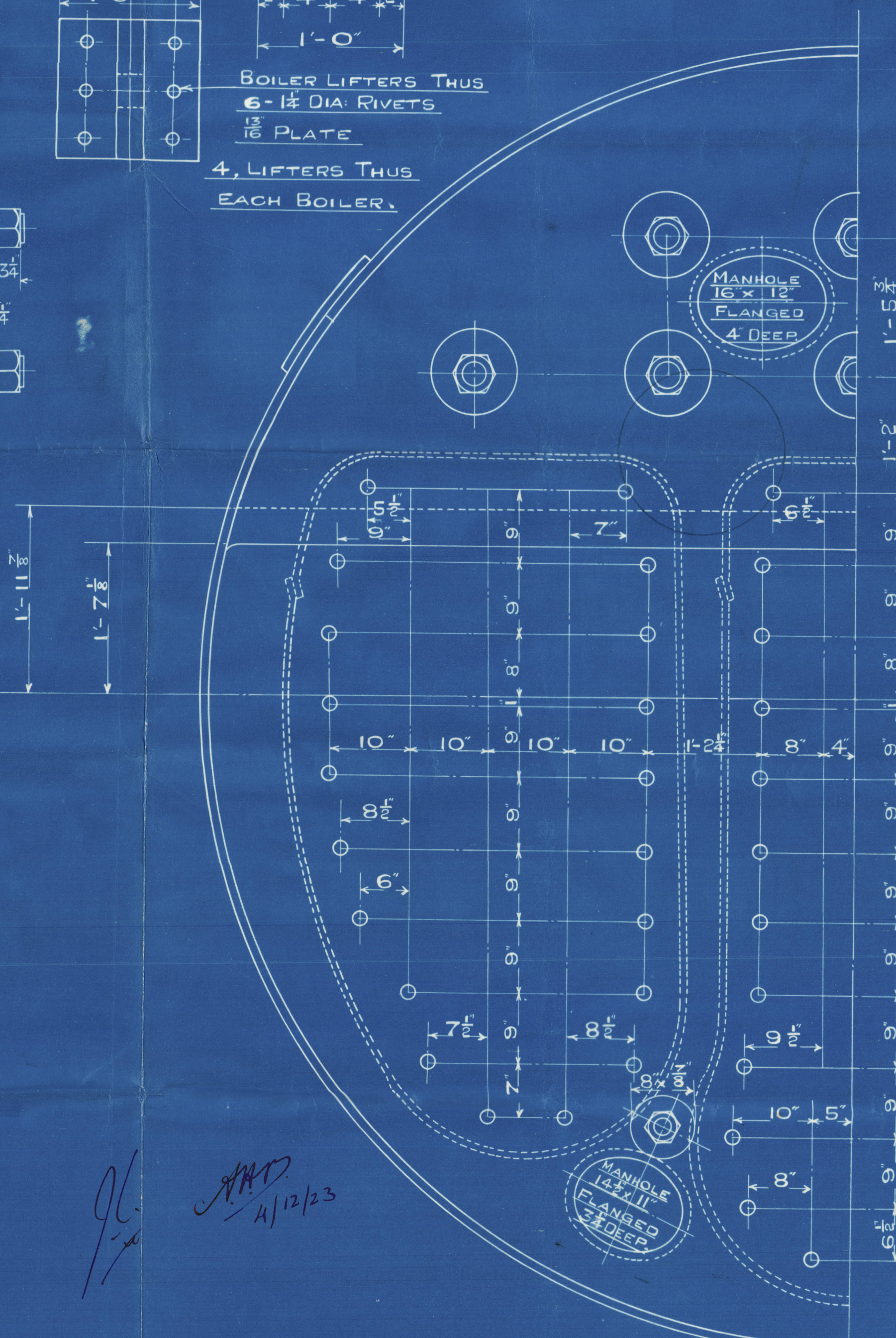
WORKING PRESS. = 180, LBS.

TEST PRESSURE = 320, LBS.

ALL PLATES STAYS ETC TO BE OF STEEL, SMOKE TUBES IRON.  
TENSILE STRENGTH OF SHELL PLATING TO BE BETWEEN 28 & 32, TONS. " "  
" " " GIRDER PLATES " " " 28 & 32, " "  
" " " OTHER " " " 26 & 30, " "  
ALL HOLES DRILLED IN PLATES AFTER BENDING.



4, LIFTERS THUS EACH BOILER.



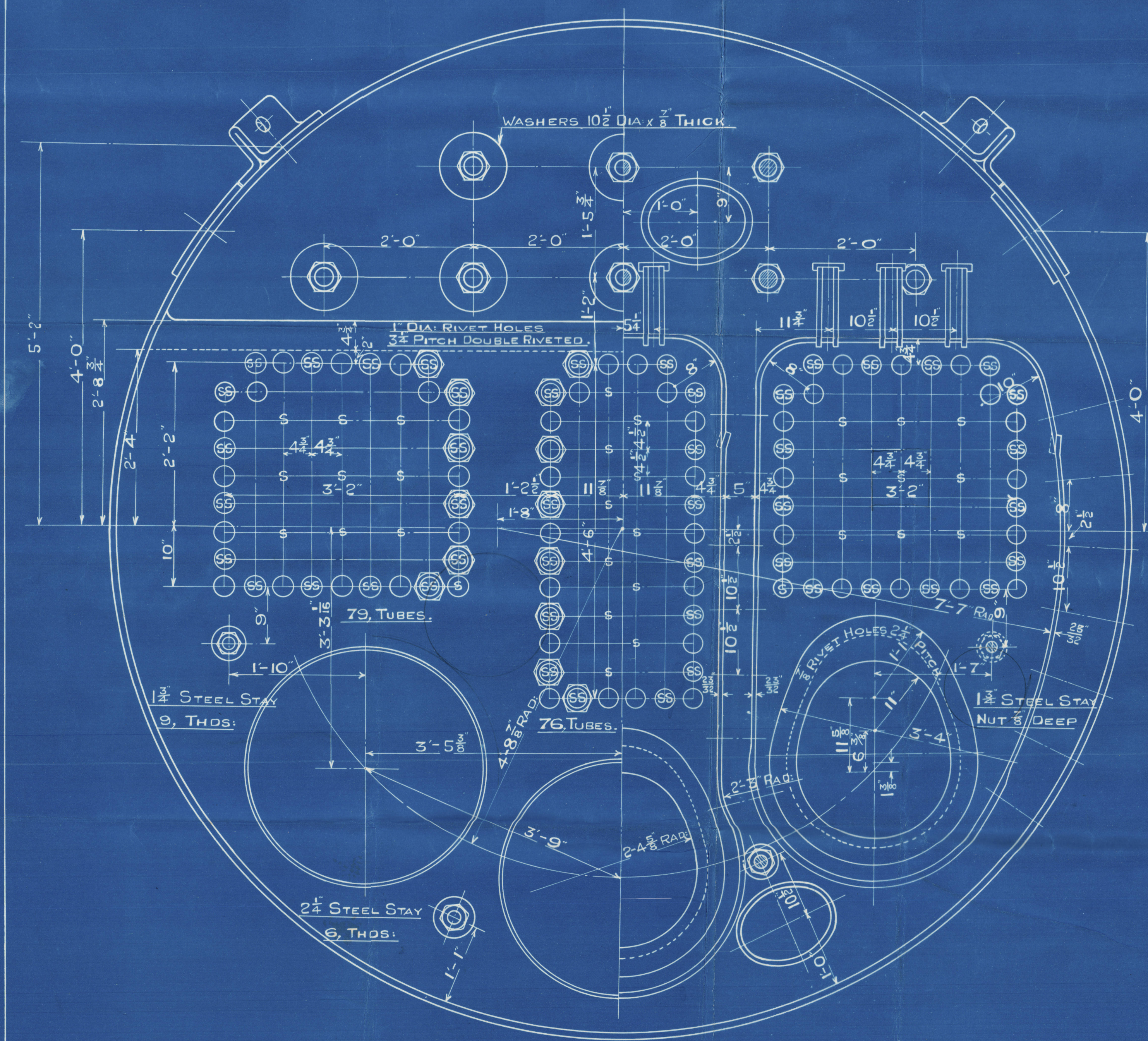
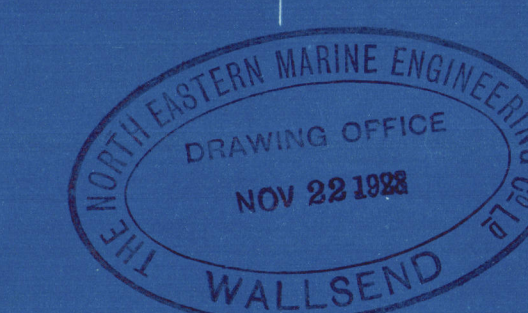
STAYS MARKED THUS O 1 1/2 DIA: 9, THREADS. NUTS 1" DEEP  
ALL OTHER 1 1/2 DIA: 9, THREADS. NUTS 3/4" DEEP.  
ALL SCREWED STAYS FITTED WITH NUTS.

Handwritten signature and date: 11/12/23

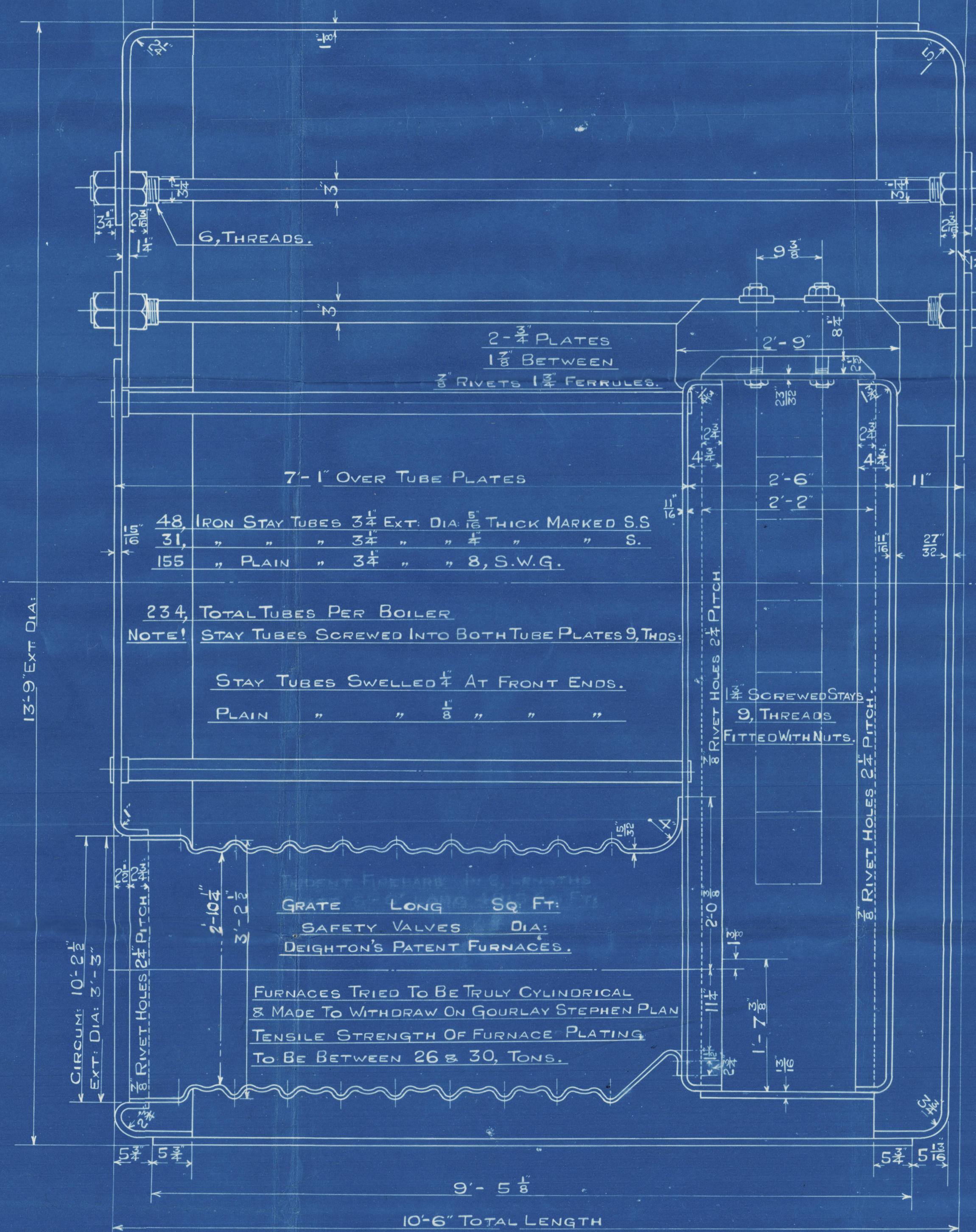
I, THUS PORT.

OPPOSITE HAND STARBOARD.

TRACING NO 670.  
CONTRACT 2566.



1 1/2" STAYS, OUTER NUTS 1 1/2" DEEP. INNER NUTS 1 1/2" DEEP.  
2 1/2" " " " 2 1/2" " " 1 1/2" "



48 IRON STAY TUBES 3/4" EXT. DIA. 1/8" THICK MARKED S.S.  
31, " " " 3/4" " " " " " S.  
155 " PLAIN " 3/4" " " 8, S.W.G.

234 TOTAL TUBES PER BOILER  
NOTE! STAY TUBES SCREWED INTO BOTH TUBE PLATES 9, THOS.

STAY TUBES SWELLED 1/4" AT FRONT ENDS.  
PLAIN " " 1/4" " " "

GRATE LONG 13 Sq. Ft.  
SAFETY VALVES 1 1/2" DIA:  
DEIGHTON'S PATENT FURNACES.

FURNACES TRIED TO BE TRULY CYLINDRICAL  
& MADE TO WITHDRAW ON GOURLAY STEPHEN PLAN  
TENSILE STRENGTH OF FURNACE PLATING  
TO BE BETWEEN 26 & 30, TONS.



North Eastern Marine  
Engineering Co Ltd  
Contract No 2566

Steel Main Boiler

Clean 46%

RETAIN

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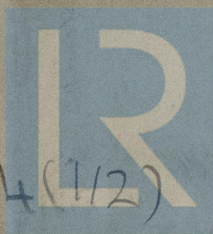
S. S. Byrille Danells

NEWCASTLE ON TYNE.

Report No. 48211

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W472-0134(1/2)



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Foundation