

316/09

# STEEL BOILER N°539 & 40

WORKING PRESSURE = 200 LBS. LLOYDS

1 Boiler for each Ship

SCALE 1 INCH = 1 FOOT

## DIMENSIONS

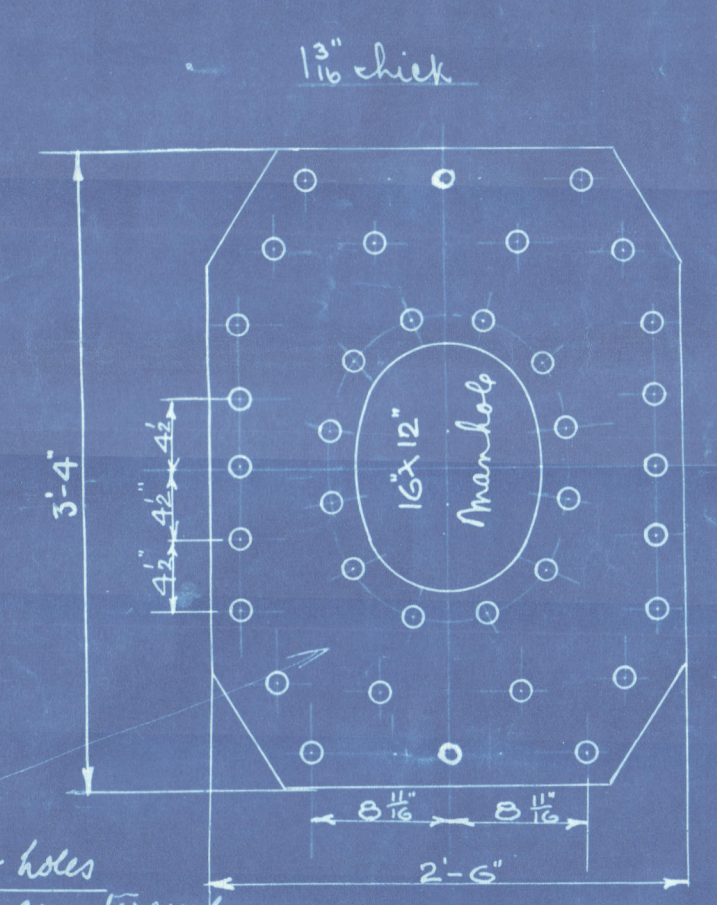
|                             |            |
|-----------------------------|------------|
| LENGTH OF FIRE BARS         | 4'-6"      |
| AREA OF FIRE GRATE          | 41 sq ft   |
| DIAM OF TUBES OUTSIDE       | 3 1/4"     |
| LENGTH OF TUBES over plates | 6'-7"      |
| N° OF TUBES                 | 212        |
| AREA THROUGH TUBES          | 8-8 sq ft  |
| SURFACE OF TUBES            | 1161 sq ft |
| TOTAL HEATING SURFACE       | 1463 sq ft |
| WORKING PRESSURE            | 200 LBS.   |

Note

All plates stay bars and rivets to be of Siemens Martin Steel  
All rivet holes throughout the boiler to be drilled in place after  
the plates are bent. The screw stays are 1 1/4", 1 3/8", & 1 1/2" effective dia  
screwed into both plates and nutted at each end screwed  
10 threads per inch. The tubes are of iron. The ordinary tubes  
are 3 1/4" ext diam x No 8 L.S.G. thick. The stay tubes are  
2 1/2" int diam x 5/16" thick effective screwed at ends to 3 1/2" and  
3 1/4" diam.

A manhole in shell 16" x 12" with shorter axis longitudinally  
and a doubling plate 3'-4" x 2'-6" 1 1/2" thick fitted round it.

DOUBLING PLATE ROUND MANHOLE

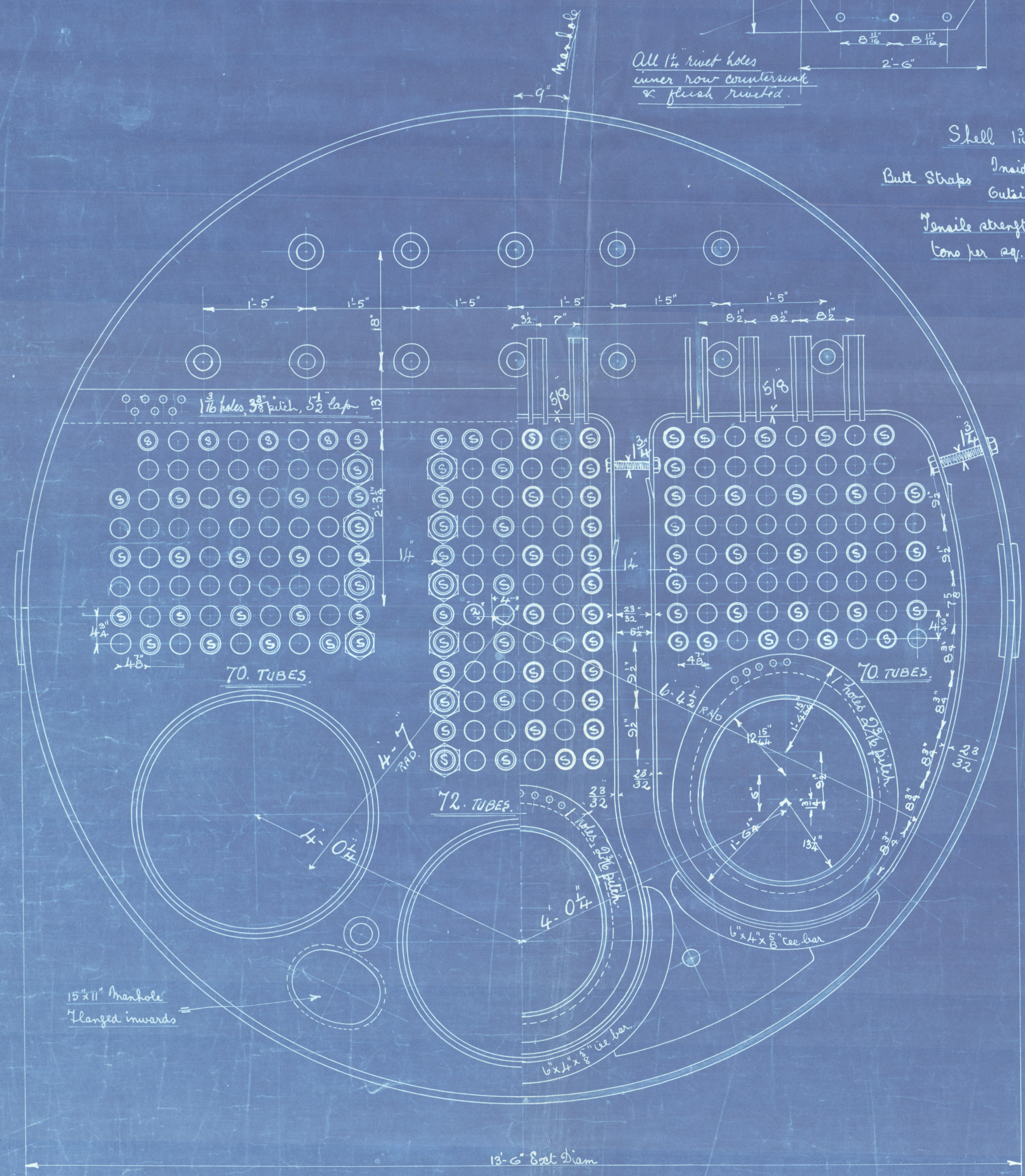


All 1/2 rivet holes  
inner row countersunk  
& flush riveted.

Shell 1 1/2" thick

Butt Straps Inside 18 x 1 3/16"  
Outside 18 x 1 5/16"

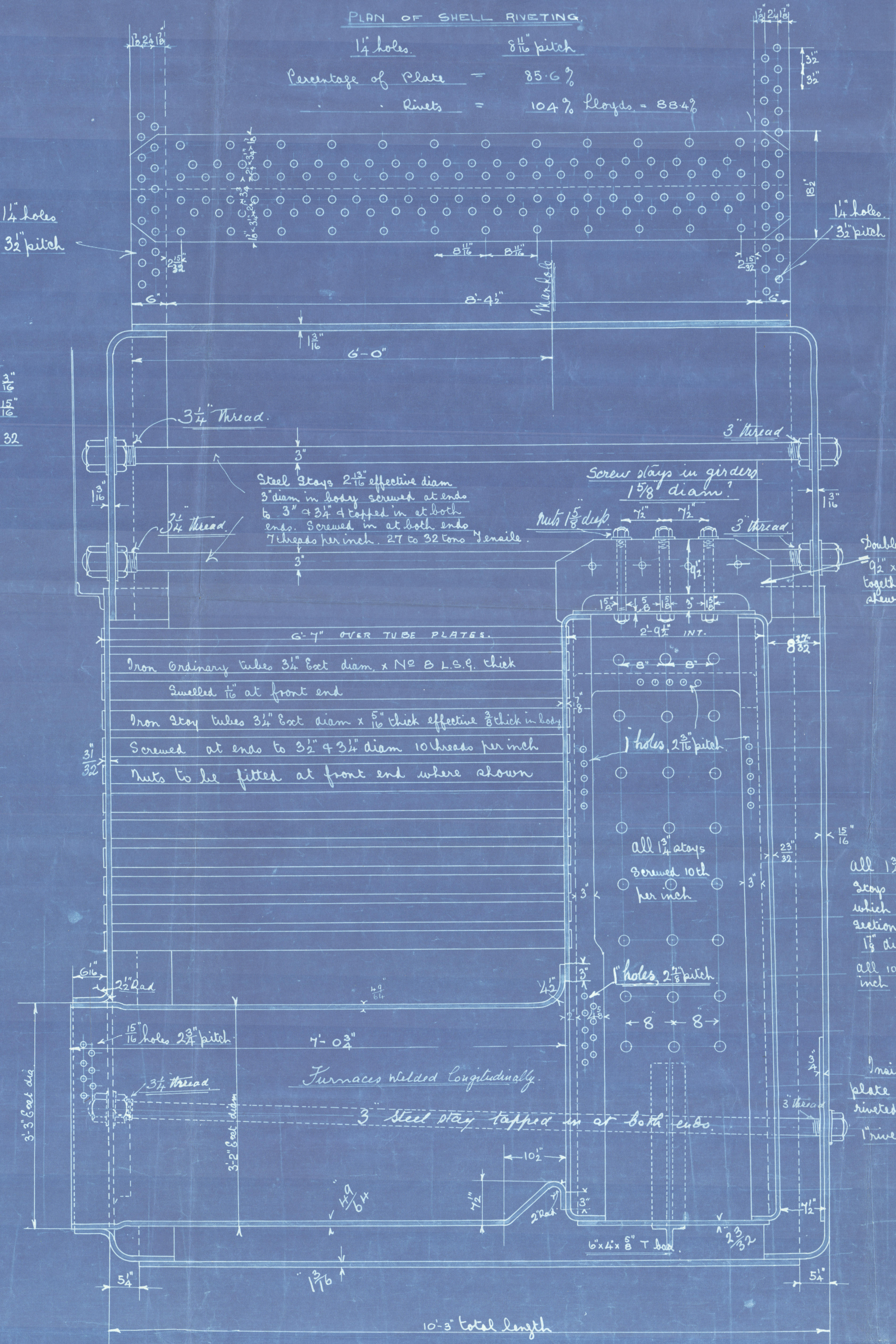
Inside strength 28 to 32  
tons per sq. inch



15" x 11" Manhole  
flanged inwards

PLAN OF SHELL RIVETING

1 1/4" holes 8 1/2" pitch  
Percentage of Plate = 85.6 %  
Rivets = 104 % Lloyds = 884 %



3 1/4" Thread

Steel stays 2 1/2" effective diam  
3" diam in body screwed at ends  
to 3" & 3 1/4" & tapped in at both  
ends. Screwed in at both ends  
7 threads per inch. 27 to 32 tons tensile.

Screw stays in girders  
1 5/8" diam

Nut 1 1/2" dup

3" Thread

Double steel bars  
9/2" x 7/8" riveted  
together where  
shown

6'-7" OVER TUBE PLATES

Iron Ordinary tubes 3 1/4" ext diam x No 8 L.S.G. thick

Swelled 1/16" at front end

Iron stay tubes 3 1/4" ext diam x 5/16" thick effective 3/4" thick in body

Screwed at ends to 3 1/2" & 3 1/4" diam 10 threads per inch

Nuts to be fitted at front end where shown

1" holes 2 1/2" pitch

All 1 1/4" stays  
screwed 10 th  
per inch

1" holes 2 1/2" pitch

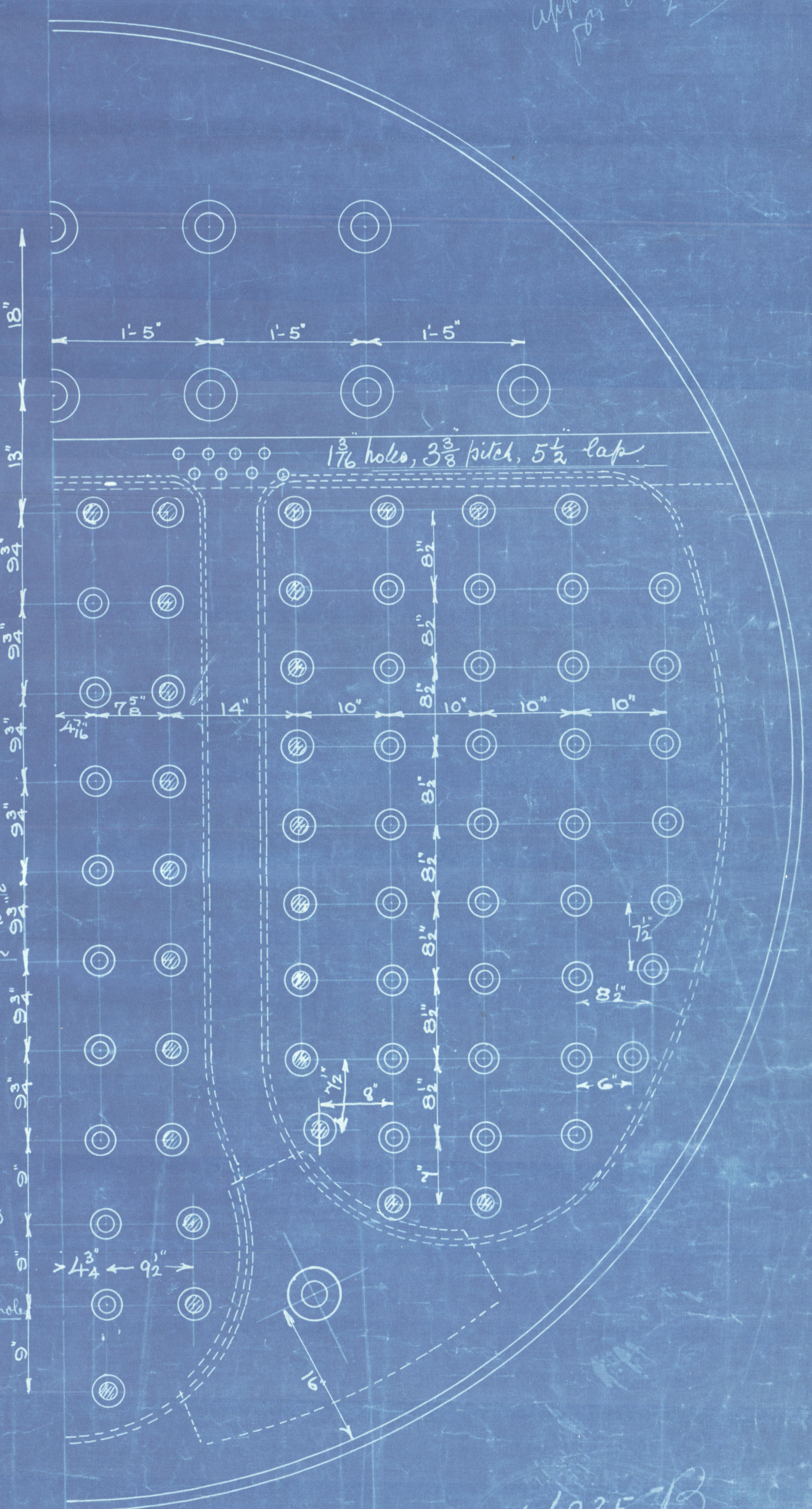
All 1 1/4" Steel screw  
stays except those  
which are shown in  
section which are  
1 1/2" diam  
all 10 threads per  
inch

Inside doubling  
plate 3/4" thick  
riveted on with  
1" rivets 1 1/2" rivet holes

Furnaces welded longitudinally

3" steel stay tapped in at both ends

6" x 4" x 8" T bar



Approved by Lloyd's  
21-2-07  
Approved by Mr. W. L. Lloyds  
for Owners by Mr. W. L. Lloyds  
22-2-07

BARLEY'S  
7118 E  
DATE 29.5.07  
HULL

Lloyds

N°539 & 40

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W949-0065



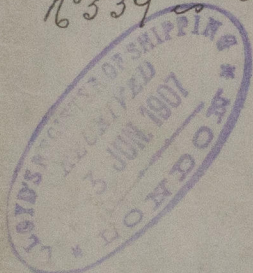
W949-0065

Messrs  
Eames & Co

Boilers 200 lbs

Nos 539. 540.

N<sup>o</sup> 539 is "Botanic"  
Hull Rpt No. 19630



No. 540 of "Coltman"  
Hull Rpt No. 19681



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