

# STEEL BOILER

## Nº 516

(1. BOILER FOR EACH SHIP.)  
WORKING PRESSURE = 200 LBS/LLOYDS

SCALE 1/4" = 1 FOOT

### Plan of Shell Riveting

1 1/8" holes 8 1/2" pitch  
Percentage of Plate = 85.2%  
Rivets = 103.9% Lloyds 88.3%

### DIMENSIONS

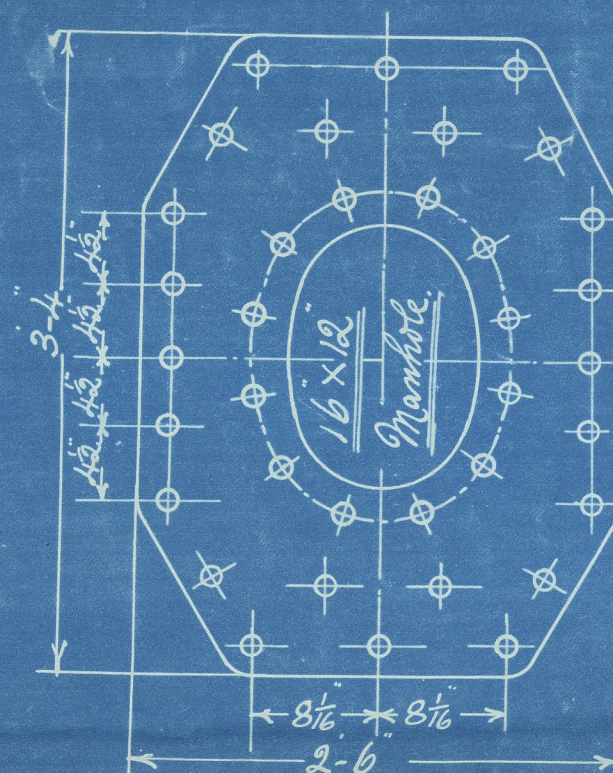
LENGTH OF FIRE BARS	5'-0"
AREA OF FIRE GRATE	43.6
DIAM OF TUBES OUTSIDE	3 1/2"
LENGTH OF TUBES over plates	6'-7"
Nº OF TUBES	175
AREA THROUGH TUBES	725.4
SURFACE OF TUBES	960.4
TOTAL HEATING SURFACE	1250.4
WORKING PRESSURE	200 LBS.

Note!  
All plates, stays, 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 1/8" & 1 1/2"  
effective diameter, screwed into both plates and nutted at each end  
screwed 10 threads per inch. The tubes are of iron the ordinary  
tubes are 3 1/2" ext. diam x Nº 8 L.S.G. thick. The stay tubes  
are 2 1/2" int. diam x 5/8" thick effective, screwed at ends to 3 1/2" & 3 1/4" diam  
A manhole in shell 16" x 12" with shorter axis longitudinally  
and a doubling plate 3'-4" x 2'-6" x 1 1/2" thick fitted round it.

All plates & stay bars made by

Doubling plate round manhole

1 1/2" thick



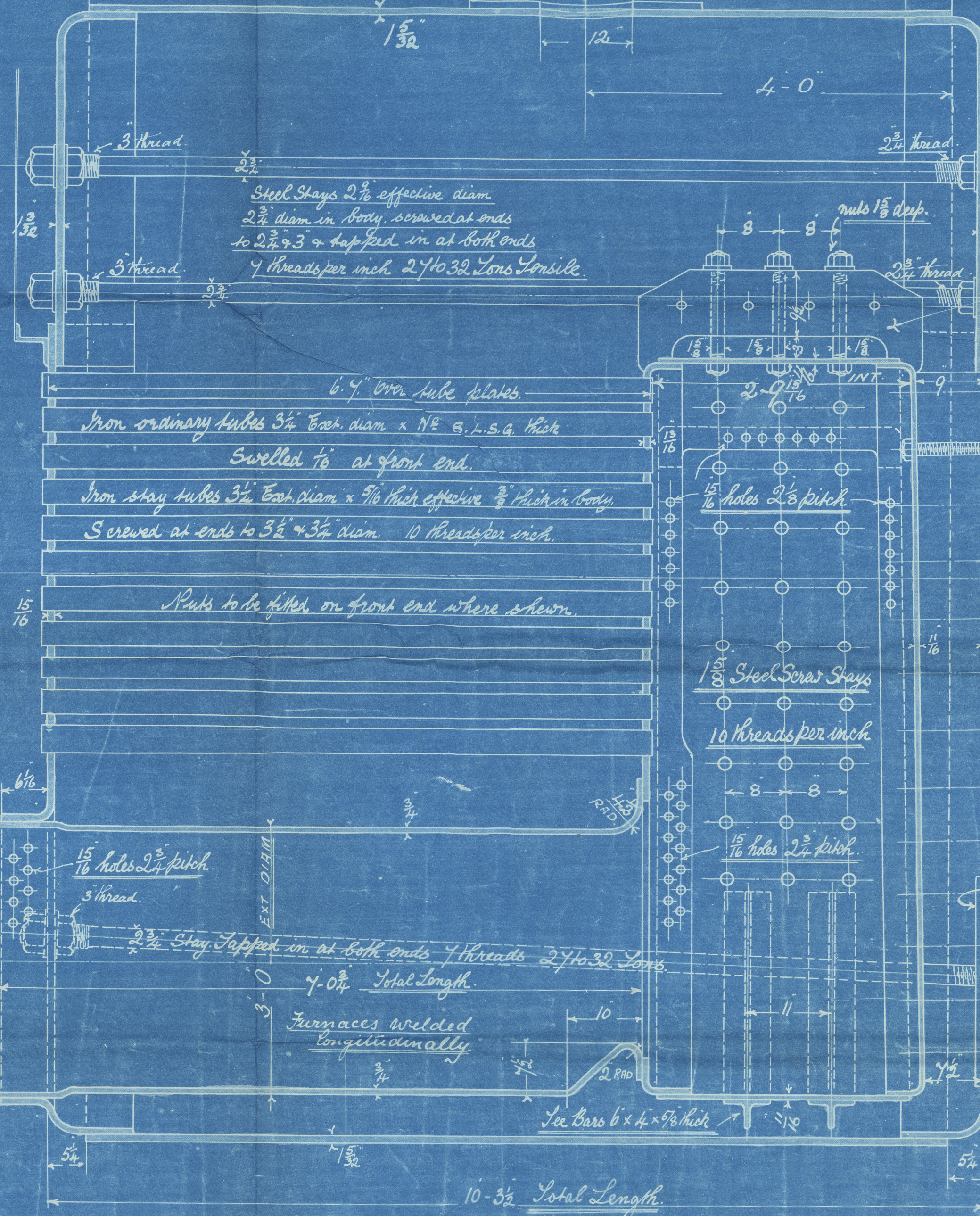
All 1 1/8" rivet holes  
inner rows countersunk  
& flush riveted.

1 1/4" holes  
3 1/2" pitch

1 1/2" holes  
3 1/2" pitch

Shell 1 1/2" thick.  
Butt Straps Inside 1 1/2" x 1 3/4"  
outside 1 1/2" x 1 1/2"

Tensile strength 28 to 32 tons  
per square inch



Double Steel Bars  
7/8" x 1/2"  
riveted together.

All 1 1/4" Steel Screw  
Stay except those  
which are shown  
in section which  
are 1 1/8" diam.  
10 threads per inch.  
Inside doubling plate

3/4" thick  
riveted on with  
1 rivets  
1 1/8" rivet holes.

J.B.M.  
5/9/05  
JAMES BARCLAY & CO. ENGINEERS  
11, THE B. FOUNDATION  
DATE 2.1.05  
HULL TRADING

James Barclay  
4.9.05

## Nº 516

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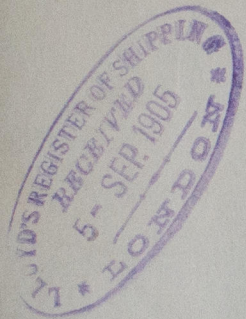
W1099-0132



Charles S. B. Ls.

Boules 2° 516.

Wkg. press. 200 lbs



sp Whitefriars  
Hull Report No. 17573

3 1/2 yds

9-9-00

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