

HEATING SURFACE IN TUBES	539 sq ft.
TOTAL HEATING SURFACE	706 sq ft.
FIRE BAR SURFACE	4' 6" bars 25 sq ft.
DIA. OF SAFETY VALVES	2"
CUBIC FEET OF STEAM SPACE	6" above C. C.
WORKING PRESSURE	LLOYDS

6.0" between plates

5 1/2" AREA THRU TUBES

539 Sept

TOTAL HEATING SURFACE 706 sq ft

FIRE BAR SURFACE 4'6" bars 25 sq ft

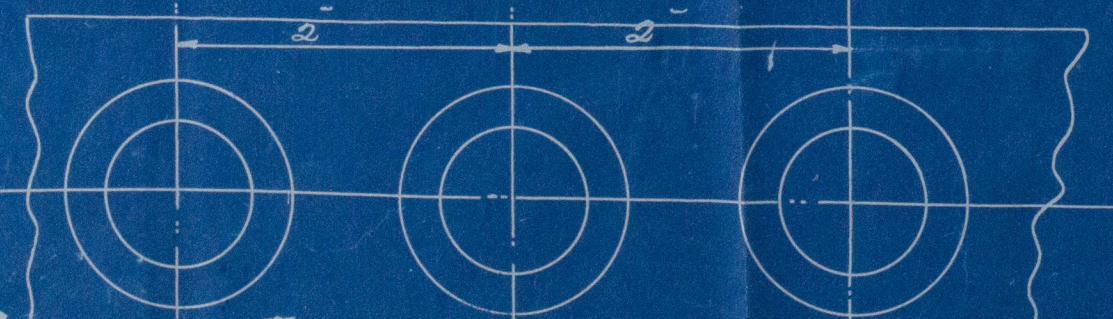
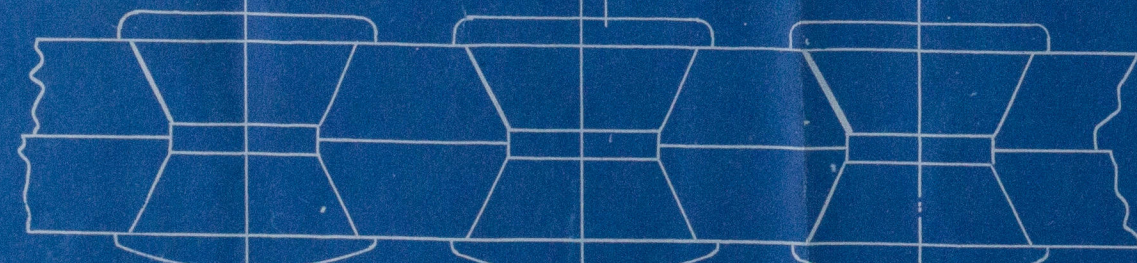
DIAPHRAGM SAFETY VALVES

CUBIC FEET OF STEAM SPACE *6" above c. c. 129 Cub. feet*

WORKING PRESSURE LLOYDS 140 lbs sq in

Circumferential Seams.
1" rivets 1 1/2" holes 5" pitch
% plate 65.6
% rivet 54.

Longitudinal Seams
1 rivets 1 1/2" holes 6.43 pairs
90 plate. 83.9
90 rivet. 114.



Full size detail C.C. riveting
1/8 rivets 2 patch 2 1/2" landing

AMOS & SMITH,
ENGINEERS
ALBERT DOCK WORKS
HULL.

Steel Stays 2 1/2" dia. in body Swelled at front end to 2 3/4" dia.
Screwed into both plates 6 threads per inch.

2 3/4 dia. top	2.534 dia bottom	5.055 sq in area bottom of thread
2 1/2 " " "	2.284 " " "	4.108 " " " "

6" o' between plates 1 1/2" rad.
 8 stay tubes 3 1/2" dia. 1/2" thick effective top row
 6 " " 3 1/2" - 3/8" - " next centre
 16 " " 3 1/2" - 3/8" - " in rest
 68 ord. tubes 3 1/2" dia No 8 Std. g. thick
 swelled at front end to 3 7/8" dia.

6'0" between plates.

46"

Steel 2" dia. on body	Spelled at front end to 2 1/4"
curved only bottom	5' 1/2" dia. 1/2" thick
to 10' 2" dia. at top	to bottom 4 3/4" dia. in lower body
1.84	2.64

$\frac{3}{4}$ " landing. Rivets $2\frac{1}{8}$ " pitch

Steel angle $5 \times 4 \times \frac{3}{8}$
 $\frac{1}{8}$ rivets, 3 ftal

9.0 mean length

Outside butt

S. L. L.

Full size section showing method of fitting butt straps

End plate

inside butt.

STEEL BOILER

TITLE *Steel bridges*
FOR WHOM *Messrs Cochrane & Cooper.*
DATE *May 2nd 1894*
ORDER ☒ IN *S10*
IF MADE
SCALE *1" = 1 foot.*

The plates rivets & stays of Steel by the
Sommers Martin process.
All rivet holes drilled throughout the
boiler those in shell after bending.
The shell in two plates circumferentially
all flanged plates to be annealed after
bending. Steel stays not to be
welded. Tubes of iron.
A manhole 16" x 12" to be fitted in
shell with shorter axis longitudinally.
Doubling plate 2' 6" x 2' 3" x $\frac{1}{8}$ ".

Grinder plates $\frac{3}{4}$ " thick
6 rivets with females between plates
1 1/2" steel stays.

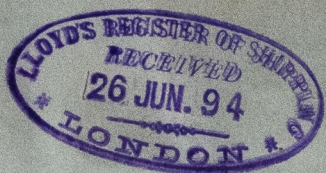
All $1\frac{1}{2}$ " screw stays except centre & top
rows which are $1\frac{3}{4}$ "

All screw stays screwed into both plates
& fitted with nut & washer at each end

* $\frac{1}{2}$ doubling

1 1/2" stars	10 threads	1.342	off dia	1.48	spin area
1 3/4 "	10	1.622		2.066	

1636



HVL409-0265

Amos L 10

*s/s Achmed
Full Report no 9291*



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Lloyd's Register
Foundation