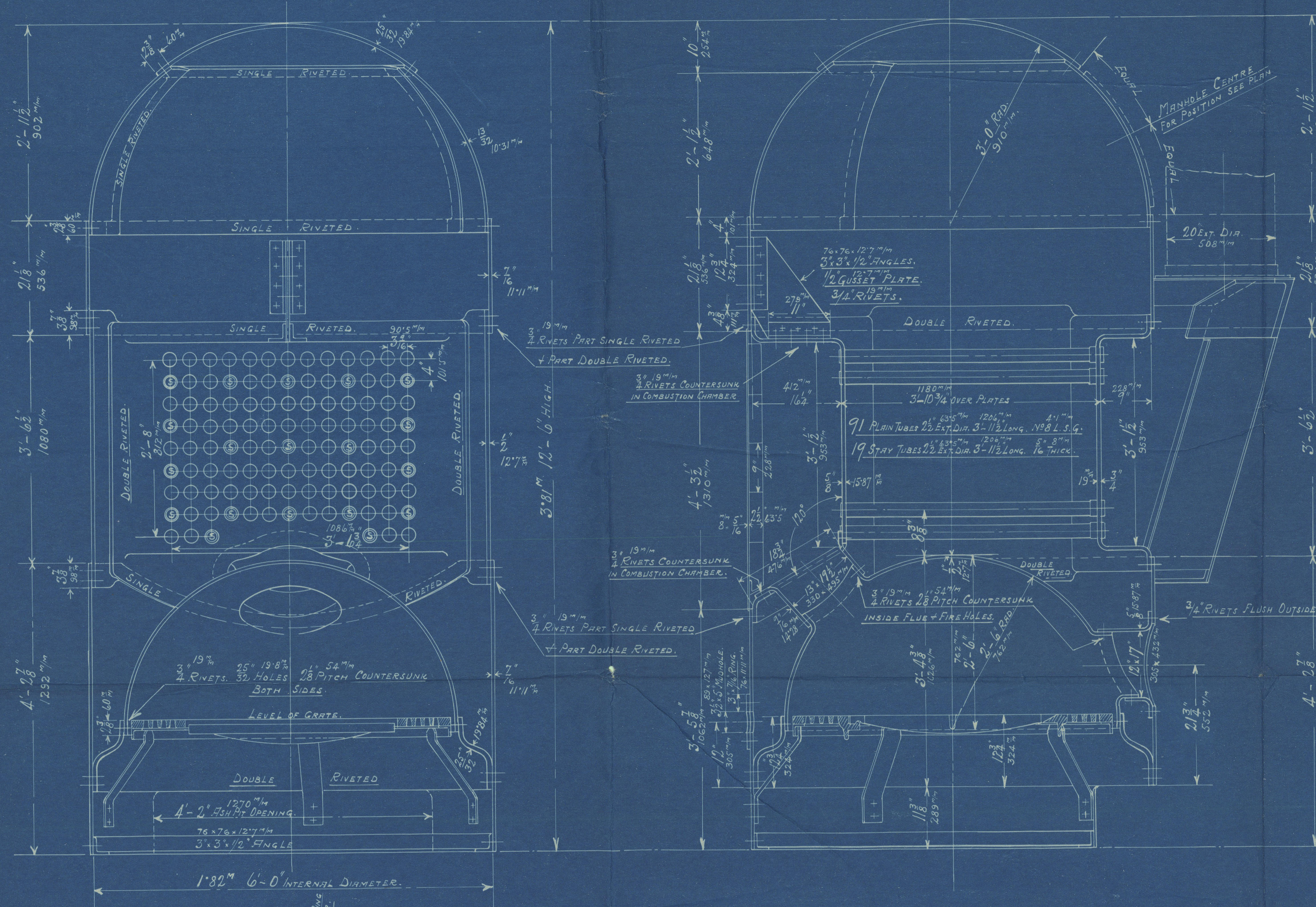


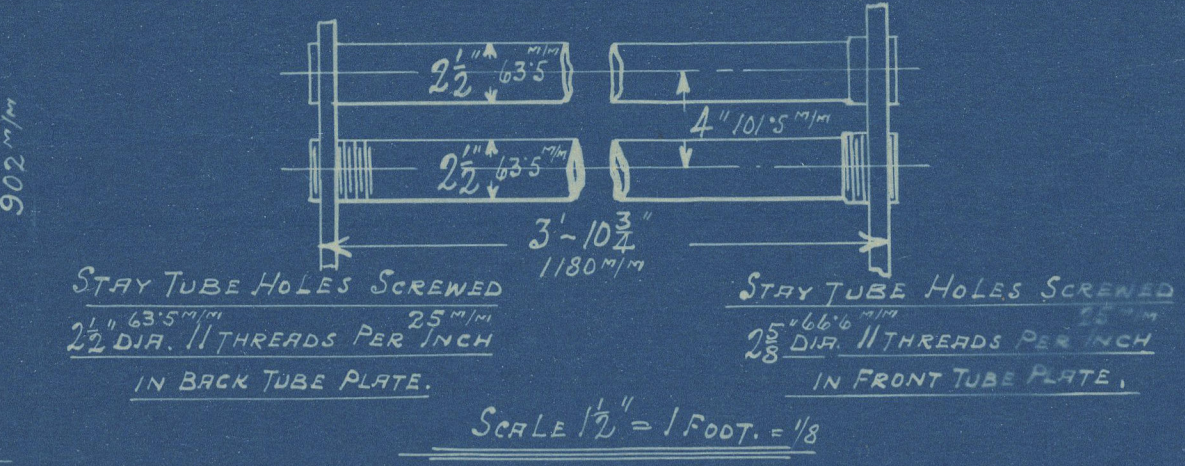
COCHRAN PATENT VERTICAL MULTITUBULAR BOILER

HORIZONTAL FLUE TUBES



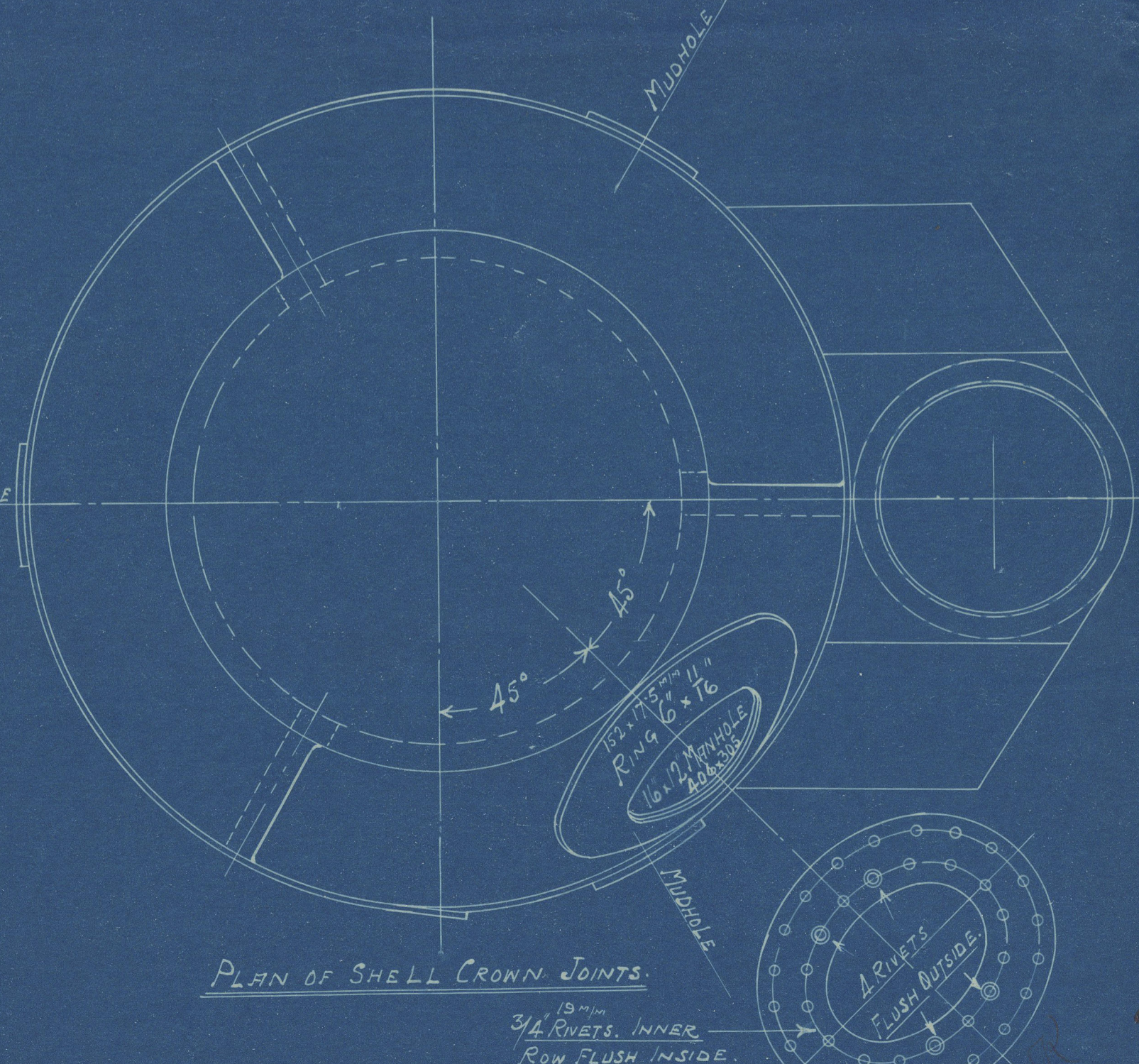
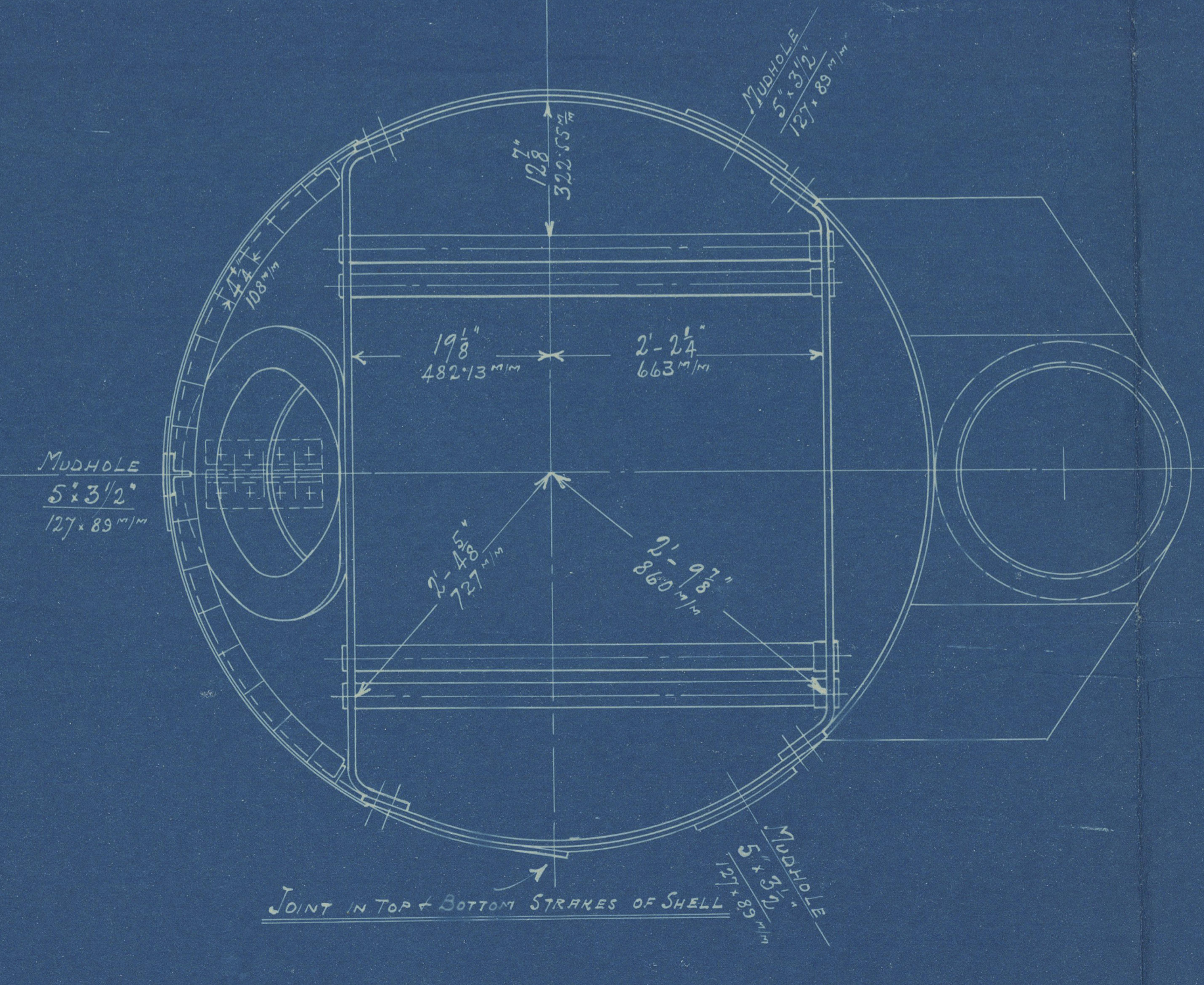
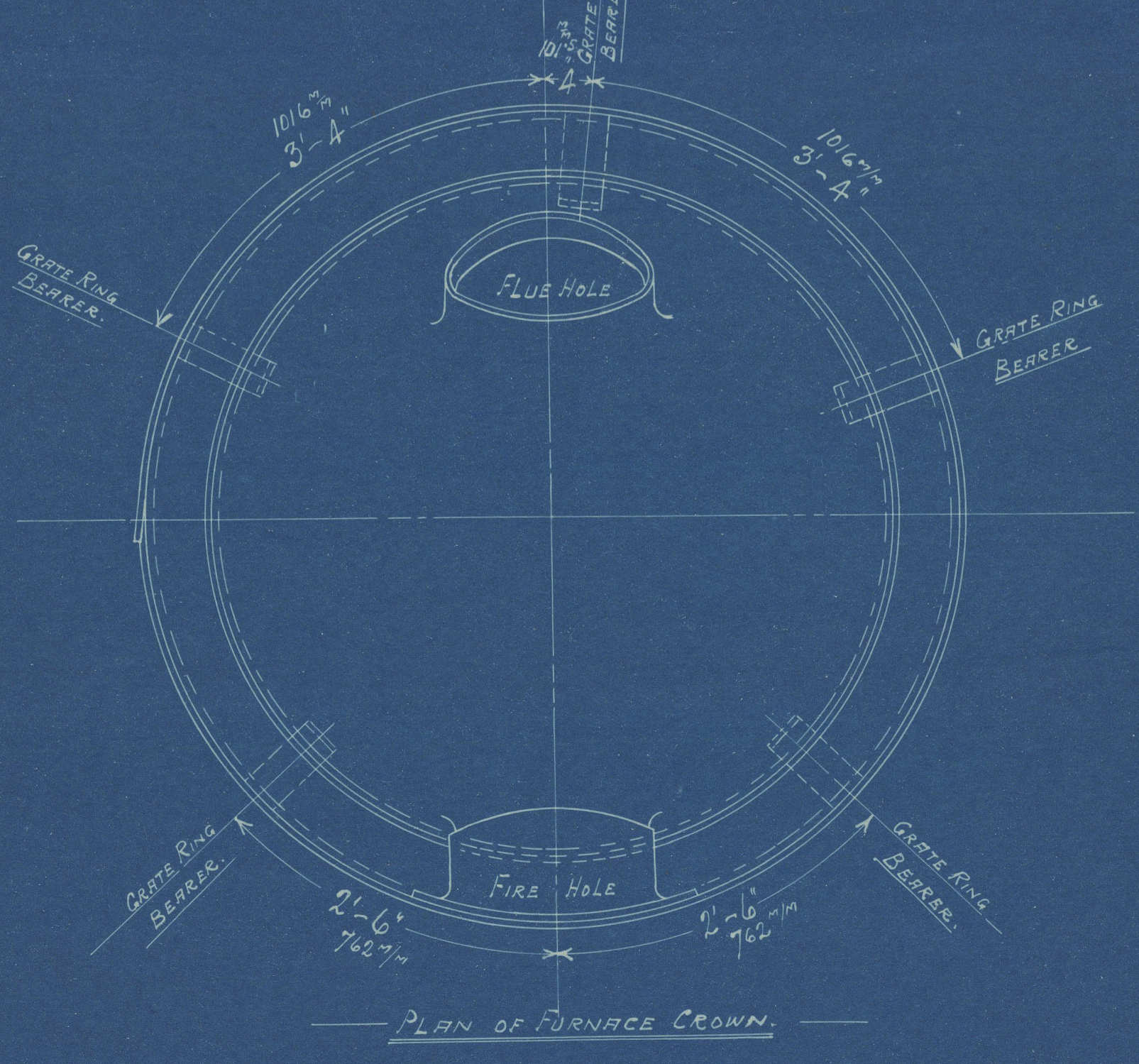
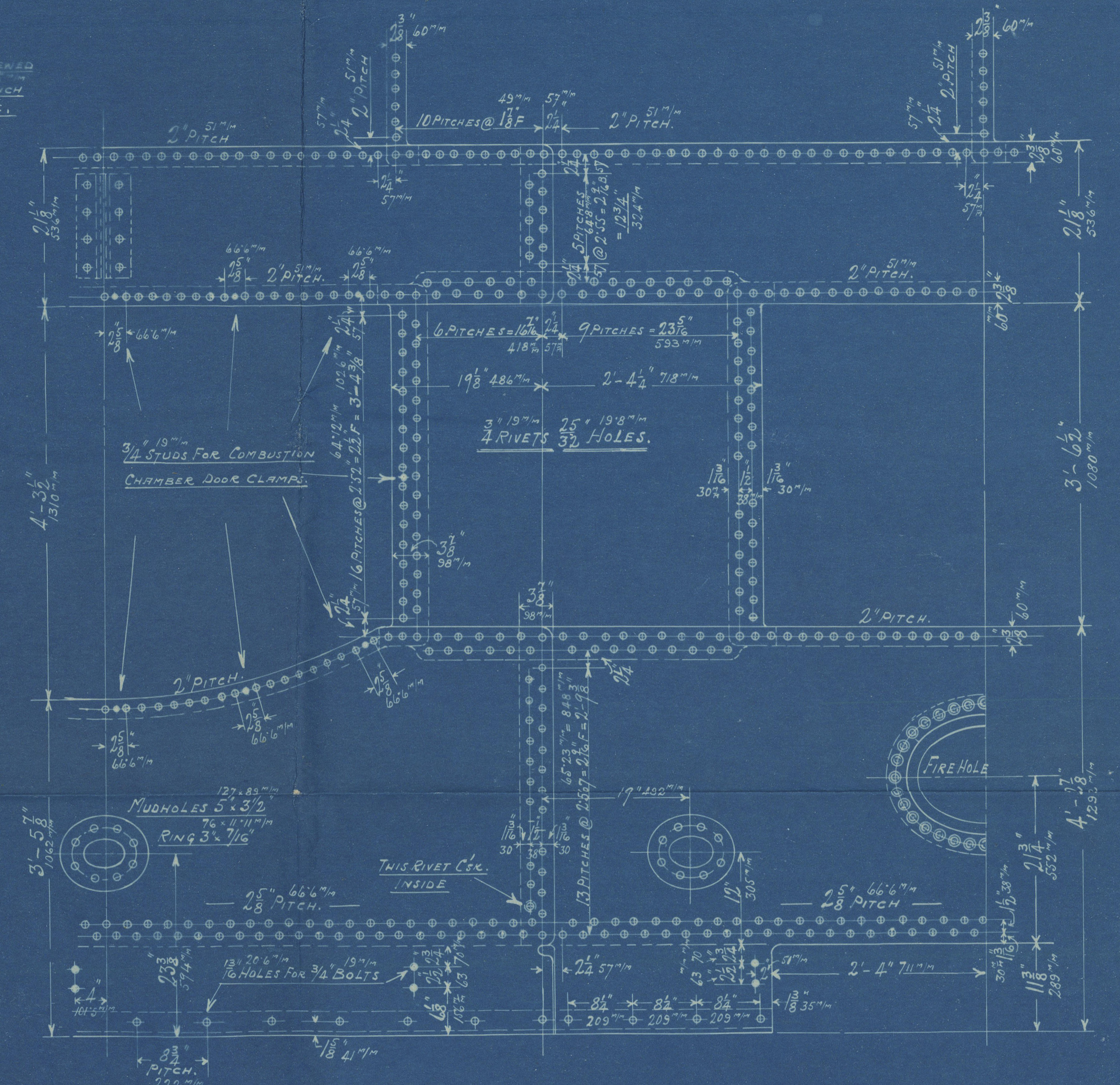
PLAIN TUBE HOLES 2 1/4" DIA. IN BACK TUBE PLATE.

PLAIN TUBE HOLES 2 1/4" DIA. IN FRONT TUBE PLATE.



HEATING SURFACE.	
TUBES.	273.54 sq. ft. 25.35 m ²
PLATE.	77.77 sq. ft. 7.15 m ²
TOTAL.	351.31 sq. ft. 32.50 m ²
GRATE AREA.	18.77 sq. ft. 1.73 m ²

LLOYD'S FORMULAE.	
PLATE	$\frac{255 \times 78.25}{2.55} \times 100 = 69\%$
RIVETS	$\frac{2 \times 4793 \times 85}{4375 \times 2.55} = 72\%$
FRONT TUBE PLATE	$\frac{4 - 2.5 \times 100}{4} = 35.1\%$
BACK " "	$\frac{20.5(17.2) 69}{72} = 98 \text{ lbs.}$
SHELL	$\frac{20.5(17.2) 35.1}{67.75} \times \frac{26}{28} = 99 \text{ lbs.}$
FRONT TUBE PLATE	$\frac{20.5(17.2) 37.5}{67.75} \times \frac{26}{28} = 99 \text{ lbs.}$
BACK " "	$\frac{20.5(17.2) 37.5}{67.75} \times \frac{26}{28} = 99 \text{ lbs.}$
FURNACE	$\frac{1250(18-2)}{60} = 125 \text{ lbs.}$
Working Pressure	$\frac{516 \times 10.5}{72 \times (71-4)} = 13 \text{ lbs.}$



STEEL PLATES & RIVETS ALL HOLES DRILLED IN PLACE
ALL HYDRAULIC RIVETED EXCEPT FLUE PIPE, FIRE HOLE PIPE & GUSSET.

To approval
PATENT BOILER N° 6284.
6'-0" DIA. x 12'-6" HIGH x 350 lb x 90 LBS.

SCALE 1 INCH TO 1 FOOT
SIEMENS MARTIN MILD STEEL PLATES
TENSILE TESTS.
PLATES NOT EXPOSED TO FLAME OR FLANGED 4410 TO 5040 KILOGS CM²
PLATES EXPOSED TO FLAME OR FLANGED EXCEPT FURNACE CROWN 4094 TO 4724 KILOGS CM²
FURNACE CROWN 4094 TO 4566 KILOGS CM²

COCHRAN & CO ANNAN LTD.
ENGINEERS & BOILERMAKERS
ANNAN, SCOTLAND

W156-0121 2/2

COCHRAN & Co., ANNAN, Ltd.

Enclosure.

FOR

Messrs

Lloyd's Register

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Foundation

W156-0121

9857

COCHRAN & CO., ANNAN, LD.

Boiler No. 6284

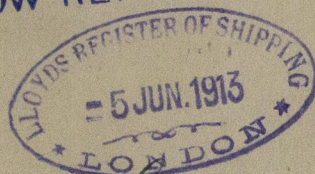
Drawing No. 9857

These Ross & Duncan Engine 954

Dublin Dockyard 8.0 8 3.

Ross & Duncan Boiler 7.0 14 4 2 and 3.

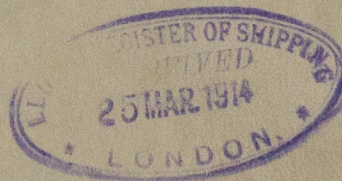
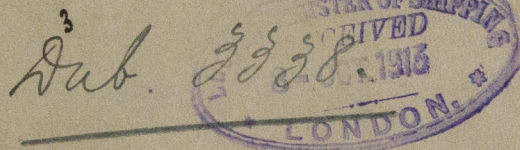
GLASGOW REPORT No. 33204



Charlwood ex

Streatham.

GLASGOW REPORT No. 33776.



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