

1:1.07

HEATING SURFACE	SQ. FT.	Sp. METERS
TUBES	2159	200.54
FURNACES	180	16.72
COMBUSTION CHAMBERS	216	20.06
TUBE PLATES	80	7.43
ONE BOILER	2635	244.991
TOTAL THREE BOILERS	7905	734.37

WORKING PRESSURE = 180 LBS. PER SQ. IN.
TEST = 360

BOILER, CONTRACT No 639

MESSRS SWAN HUNTER & WIGHAM RICHARDSON LTD S.S. No 489

TO BE CONSTRUCTED TO PASS BOARD OF TRADE, LLOYDS, & HAMBURG LAW REQUIREMENTS.

SCALE 1" = 1 FOOT

MATERIAL MANUFACTURED BY

PLATES STEEL
RIVETS " "
STAYS " "
TUBES IRON

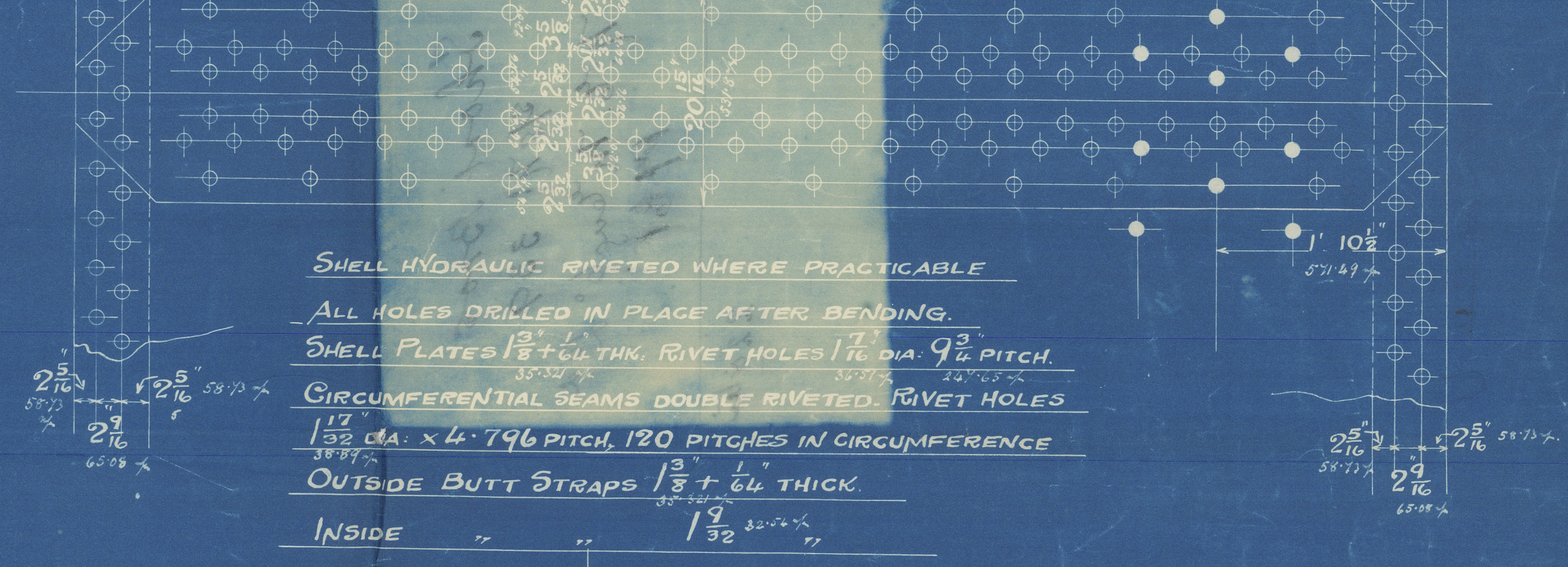


PLAN OF SHELL RIVETING.

STRENGTH OF JOINT.

PLATE	85.25%
RIVET B. OF T.	85.9%
LLOYDS	88.9%
HAMBURG LAW	104%

TENSILE STRENGTH OF SHELL PLATES & BUTT STRAPS 28 TO 32 TONS
INTERNAL & END PLATES 26 TO 29 TONS



SHELL HYDRAULIC RIVETED WHERE PRACTICABLE

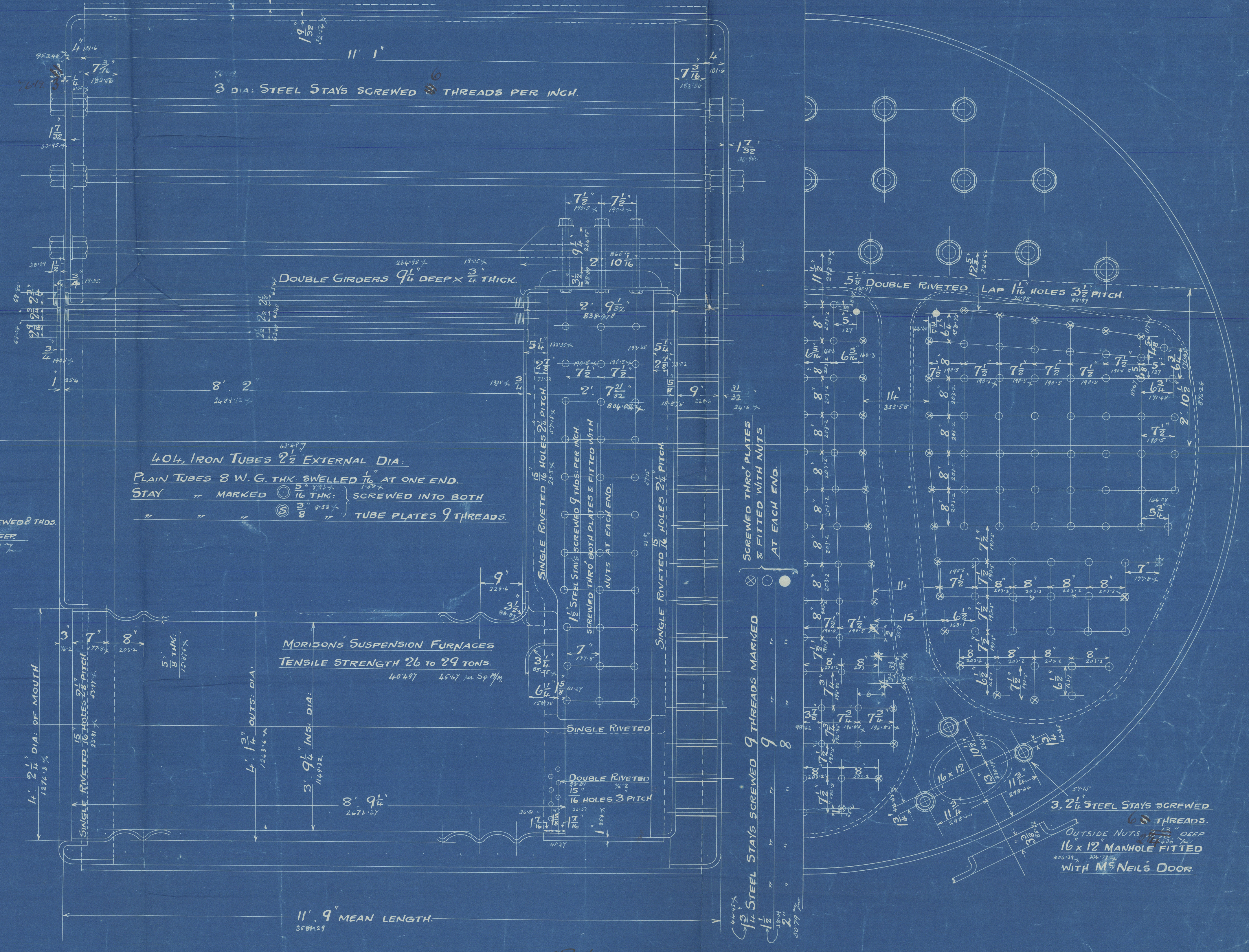
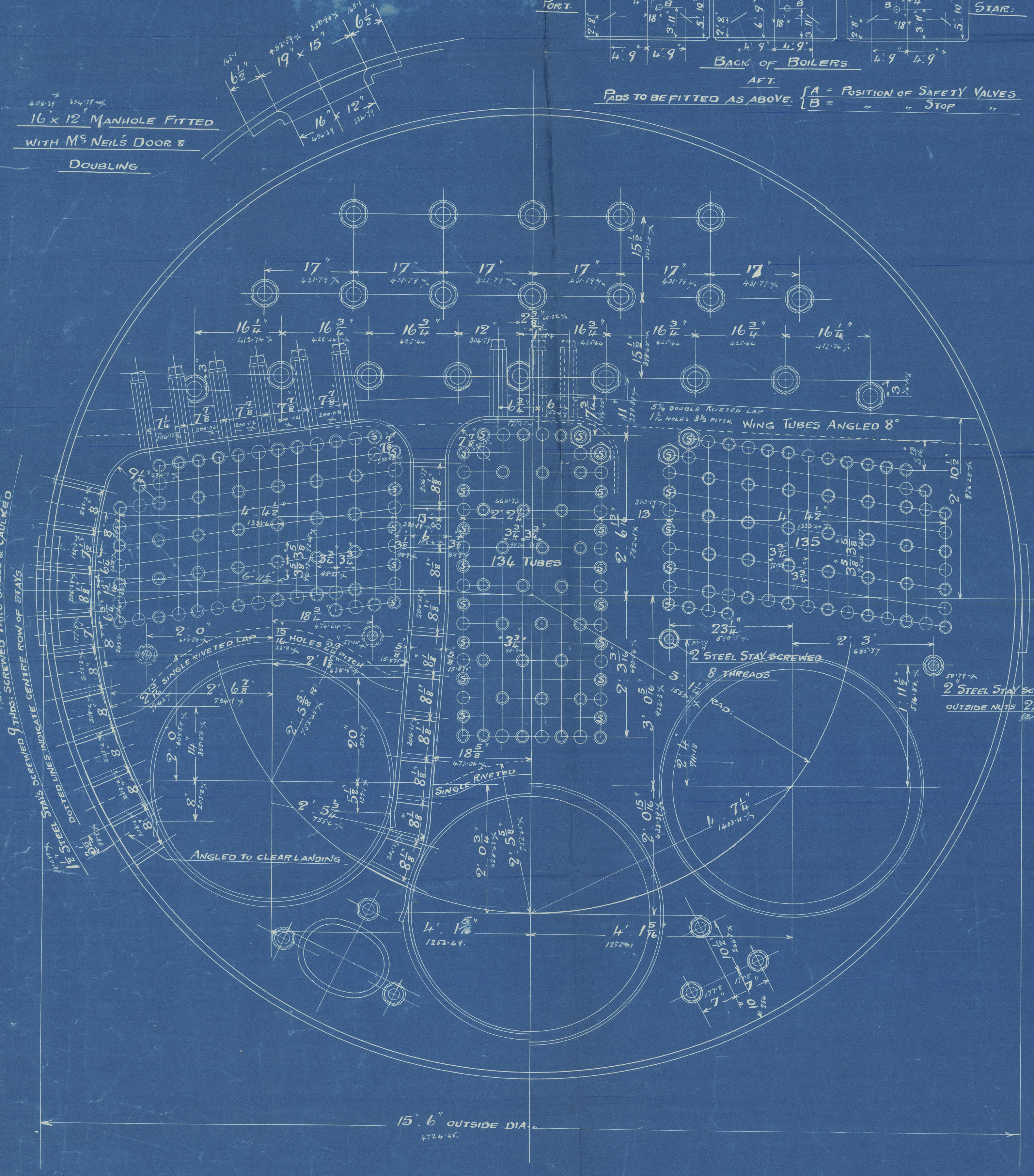
ALL HOLES DRILLED IN PLACE AFTER BENDING.

SHELL PLATES 1 1/2" THK. RIVET HOLES 1 1/8" DIA. 9 1/2" PITCH.

CIRCUMFERENTIAL SEAMS DOUBLE RIVETED. RIVET HOLES 1 1/8" DIA. X 4 1/2" PITCH, 120 PITCHES IN CIRCUMFERENCE

OUTSIDE BUTT STRAPS 3/8" + 6 1/4" THICK.

INSIDE " 1 1/2" " "



40 1/2" IRON TUBES 2 1/2" EXTERNAL DIA.
PLAIN TUBES 8 W.G. THK. SWELLED 1 1/8" AT ONE END.
STAY " MARKED " 16 THK. " SCREWED INTO BOTH
" " " 8 " " TUBE PLATES 9 THREADS

MORISON'S SUSPENSION FURNACES
TENSILE STRENGTH 26 TO 29 TONS

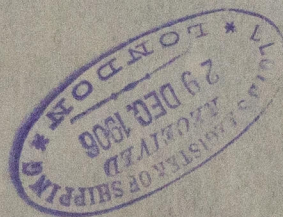
3 1/2" STEEL STAYS SCREWED 6.8 THREADS.
OUTSIDE NUTS 2 1/2" DEEP
16 X 12" MANHOLE FITTED
WITH M'S NEIL'S DOOR

Messrs. The Wallsend Slipway & Eng. Co. Ltd.
Main Boiler

Contract No. 639

For Messrs. Swan Hunter & Wigham Ritchie's
No 189 ship.

RETAILED 180 lbs.



S.S. "BENGUELA"

NEWCASTLE - ON - TYNE

REPORT NO 60884



W 580-0182 Register
Foundation