

S.S. "HOPESTAR" ORDER NO 415B.

CENTRE BOILER.

To Be Constructed To Pass LLOYDS REQUIREMENTS, TEST & SURVEY.

ONE OFF.

SCALE 1" = 1 FOOT & AS MARKED.

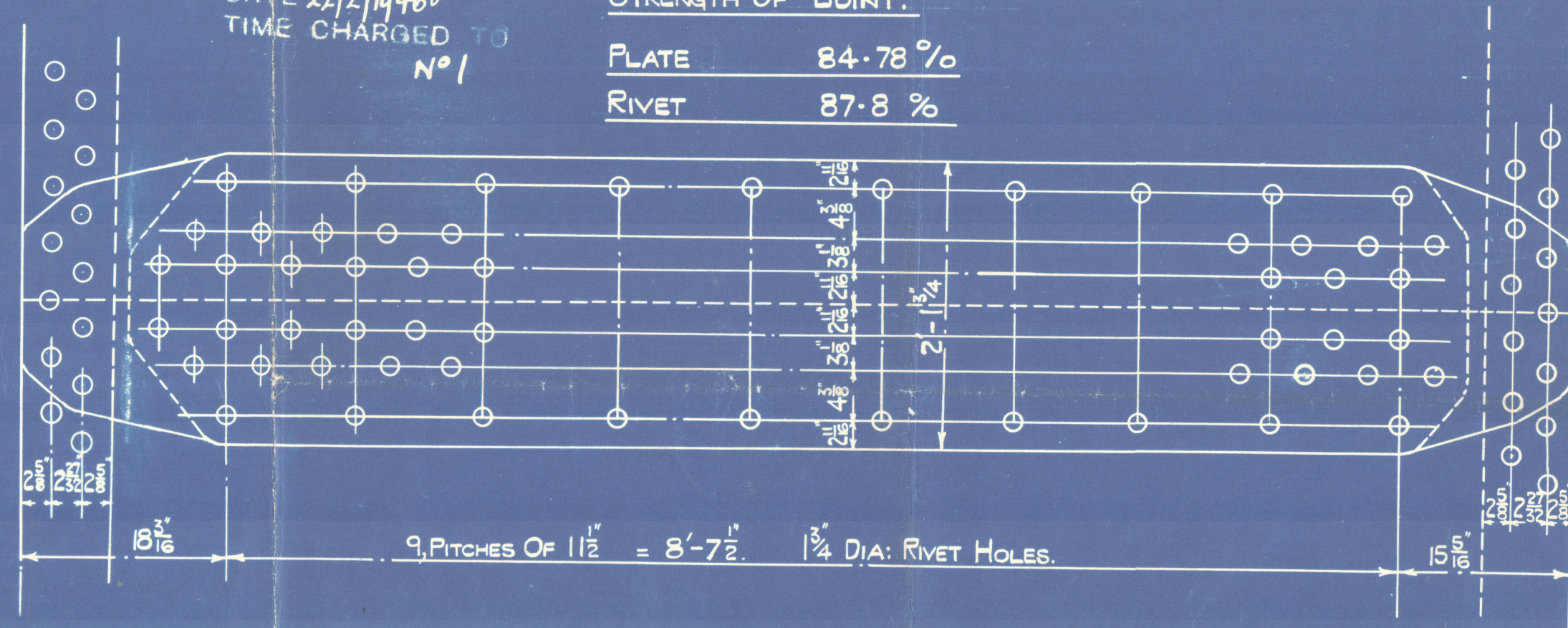
PLAN NO 11.

CHECKED BY *1/6*
DATE 22/2/1946
TIME CHARGED TO
NO 1

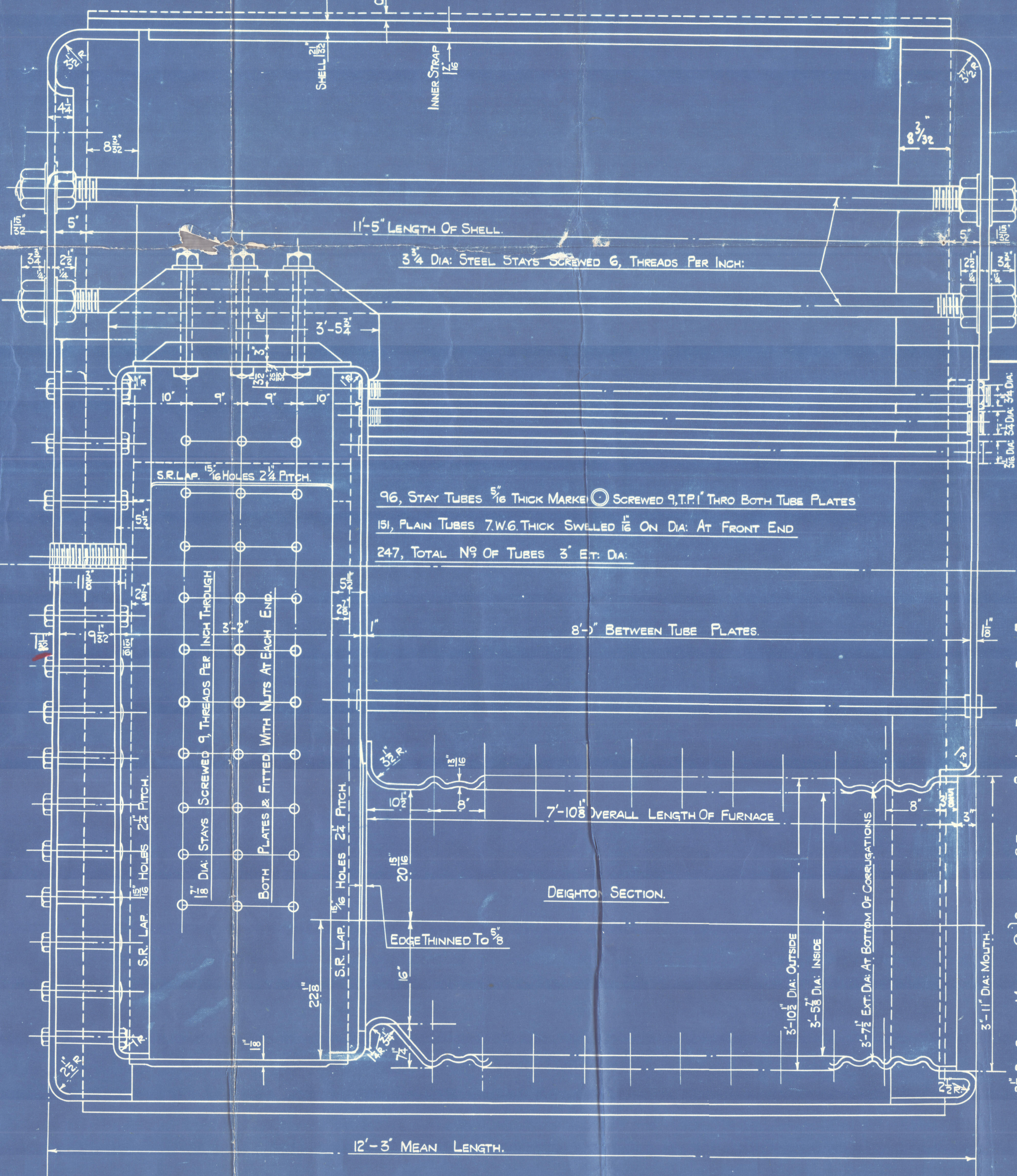
STRENGTH OF JOINT.

PLATE 84.78 %

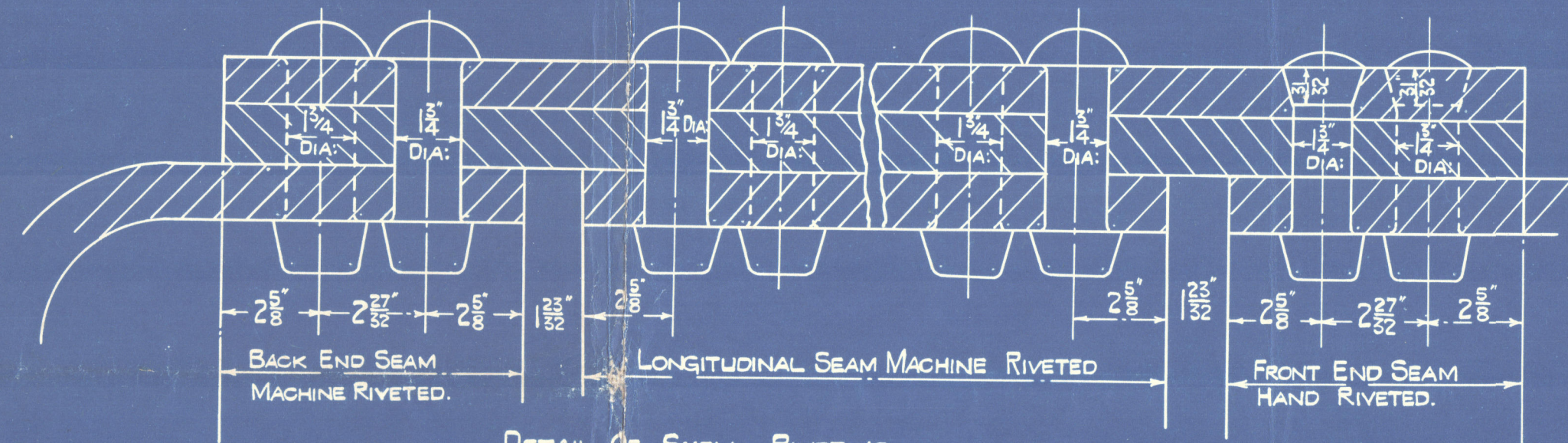
RIVET 87.8 %



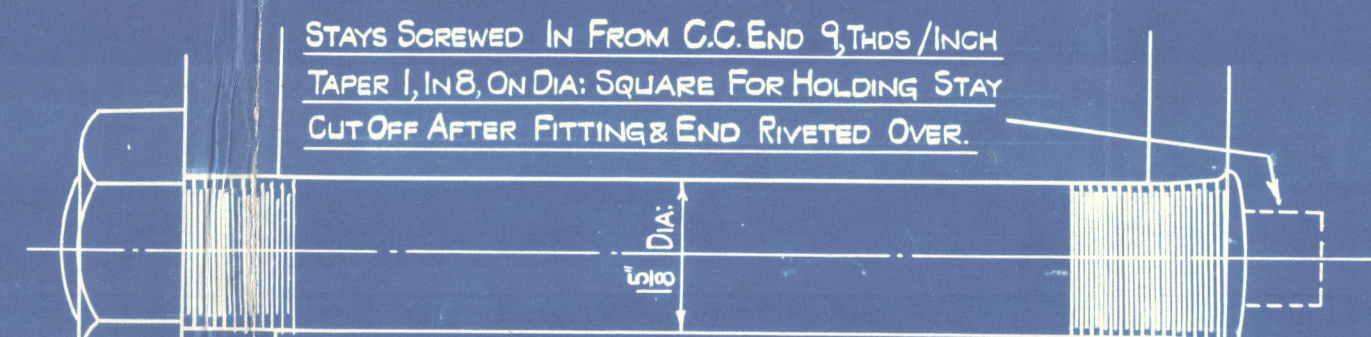
SHELL HYDRAULIC RIVETED WHEREVER POSSIBLE. ALL HOLES DRILLED IN SHELL AFTER BENDING.
CIRCUMFERENTIAL SEAMS DOUBLE RIVETED 1 3/4 DIA. RIVET HOLES. 108, PITCHES OF 5-0 1/2"
MEASURED ON MEAN CIRCUMFERENCE OF SHELL.



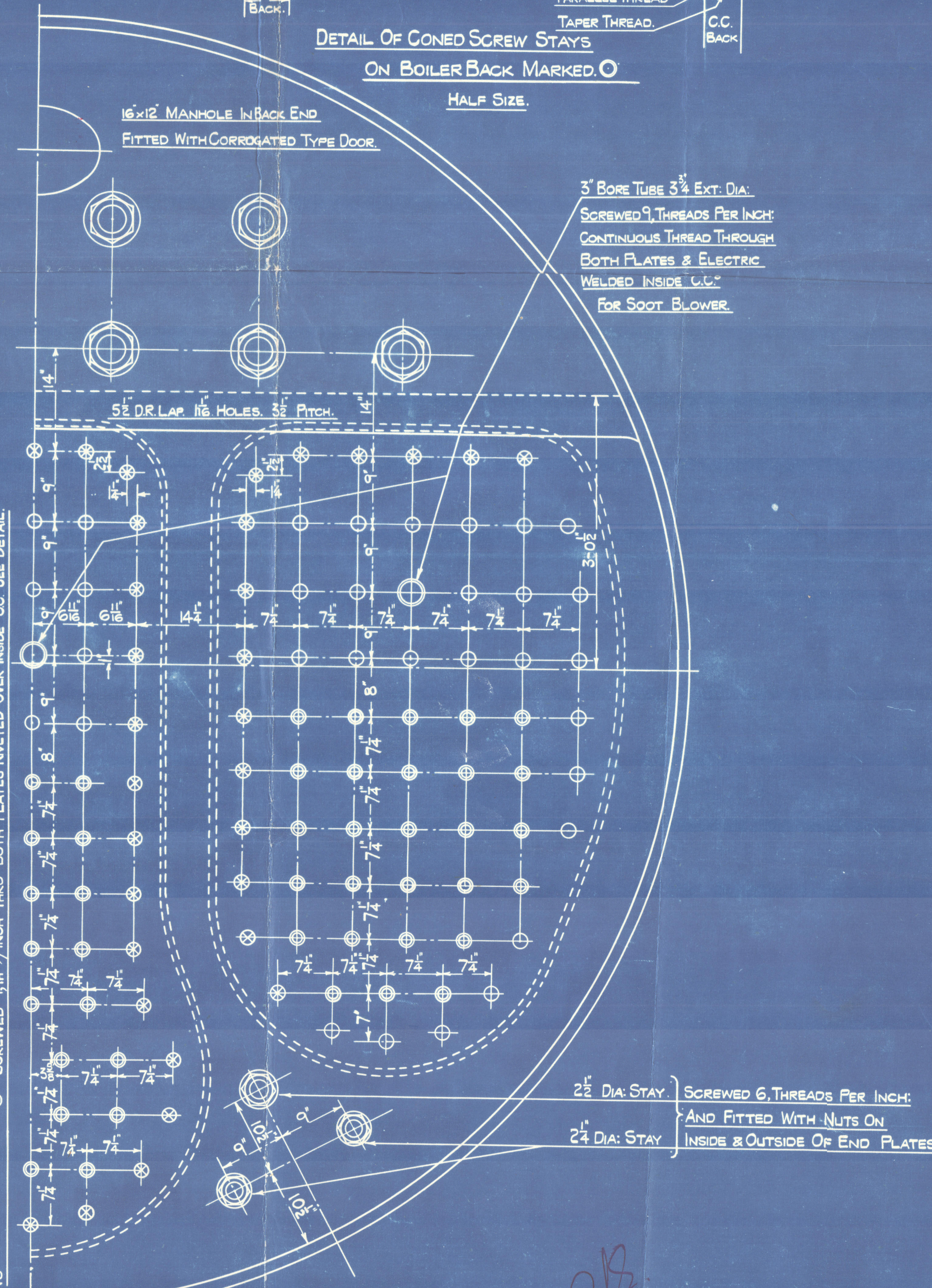
LIST OF MATERIALS.		
PURPOSE.	MATERIAL.	TENSILE STRENGTH.
SHELL PLATES & BUTT STRAPS.	STEEL	31-35 TONS D'
C.C. GIRDER PLATES.	"	29-35
WRAPPER & FLANGED PLATES.	"	26-30
FURNACES.	"	27-30
LONGITUDINAL STAYS.	"	28-32
C.C. SCREWED STAYS.	"	26-30
RIVET BARS.	"	26-30
TUBES.	HOT ROLLED STEEL	28 TONS D' MAX.



DETAIL OF SHELL RIVETING.
SCALE 3" = 1 FOOT.



DETAIL OF CONED SCREW STAYS
ON BOILER BACK MARKED O
HALF SIZE



HEATING SURFACE	
TUBES	1552 SQ. FEET
FURNACES	169 " "
COMBUSTION CHAMBERS	235 " "
BACK TUBE PLATES.	42 " "
FRONT TUBE PLATE	32 " "
TOTAL ONE BOILER	2030 " "

WORKING PRESSURE 285 LBS/SQ. IN.

TEST PRESSURE 478 LBS/SQ. IN.

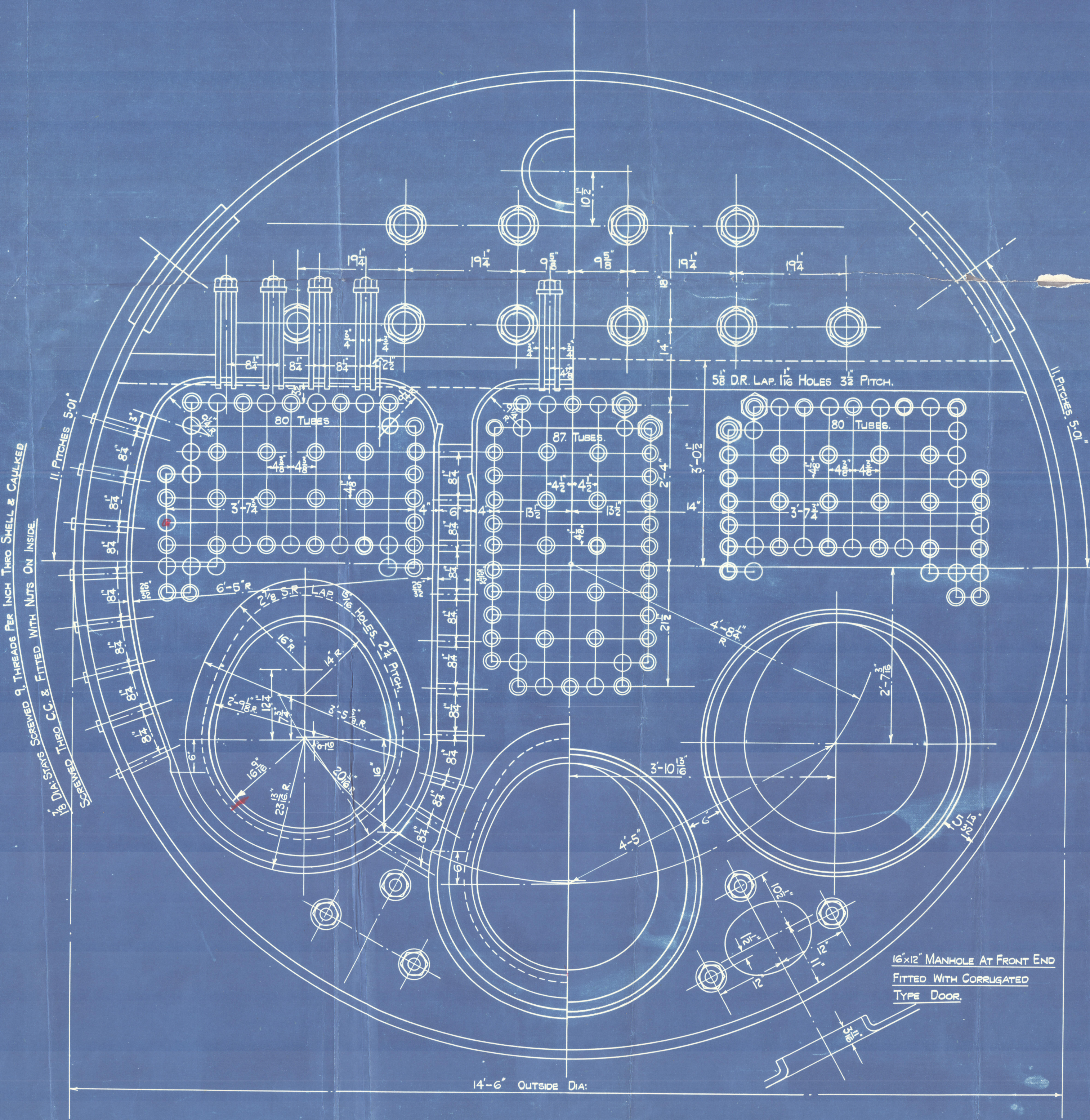
GRATE SURFACE 4'-10" BARS 52 #

BOILERS TO BURN COAL ONLY UNDER HOWDENS FORCED DRAUGHT.

BOILERS FITTED WITH AN IMPROVED HIGH LIFT SAFETY VALVE 1 1/2" BORE DOUBLE

ALSO SUPERHEATERS OF SMOKE TUBE TYPE. RETARDERS FITTED IN ALL

BOILER TUBES NOT FITTED WITH SUPERHEATER ELEMENTS.



W1013 - 0203

SS. 'HOPESTAR'
NEWCASTLE ON TYNE
Report No. 104536

WALLSEND SLIPWAY & ENG. CO. LTD.,

ORDER N° 415B

NEW CENTRE BOILER

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Foundation