

HEATING SURFACE Sq. Ft.

944 TUBES 8'-0" LONG x 2 1/2" EXT. DIA. .... 4943

8 FURNACES 7'-6 3/8" " x 42 1/2" MEAN " ..... 365

FIREBOX TOPS & SIDES ..... 280

BACK TUBE PLATES ..... 105

FRONT " ..... 91

TOTAL H.S. IN ONE D.E. BOILER ..... 5784

THREE D.E. BOILERS ..... 17352

GRATE SURFACE Sq. Ft.

8 FURNACES 40" INSIDE DIA. x 5'-6" BARS = 146.667

TOTAL G.S. IN 3 D.E. BOILERS = 440

H.S. = 39.4 T.S. 33.7

G.S. = 39.4 G.S. 33.7

STEAM SPACE FROM 9" ABOVE FIREBOX TOP = 840 CUB. FT.

WEIGHT OF WATER (FRESH) TO 9" " = 5 1/2 TONS. COLD, 45 TONS AT W.P.

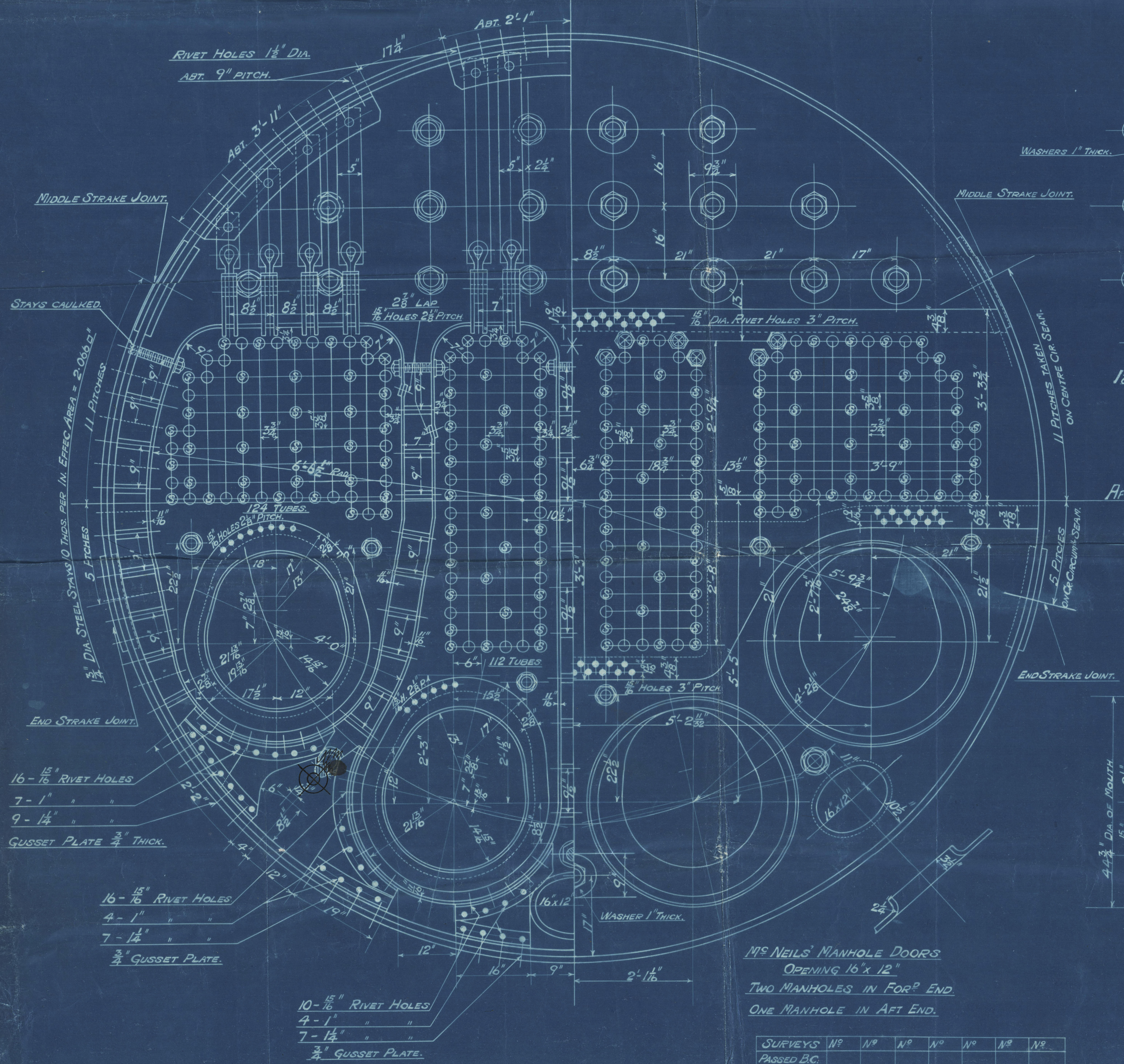
DRAUGHT AREA THRO' TUBES = 22.57 SQ. FT.

STEEL STEAM SPACE STAYS.

3" DIA. OF BODY 3 1/2" DIA. OF SCREWED ENDS 6 THDS. PER IN.

DEPTH OF OUTSIDE NUTS = 3 1/2"

" " INSIDE " = 1 1/2"



M/S NEILS' MANHOLE DOORS  
OPENING 16" x 12"

TWO MANHOLES IN FORW. END  
ONE MANHOLE IN AFT. END.

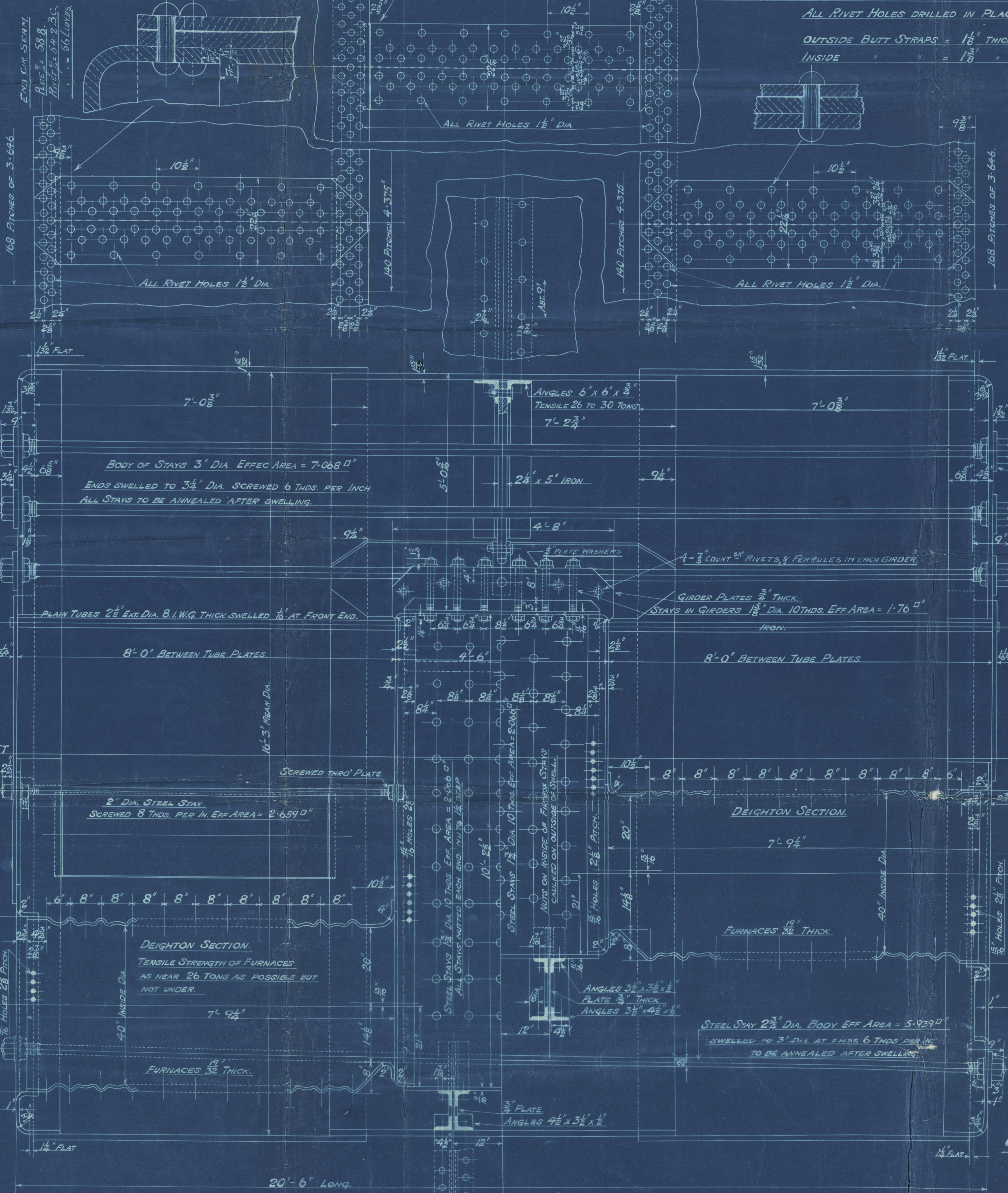
SURVEYS	Nº	Nº	Nº	Nº	Nº	Nº
PAID BY						
LLOYDS						
ONWARDS APPROVAL						

WORKMAN CLARK & CO LTD  
ENGINE BERT BELFAST

DRAWING NO. 21908 DATE 27-9-17

CHECKED BY H.G.S.

TRACING CHECKED BY



ALL MATERIAL STEEL EXCEPT TUBES & SLING  
STAYS WHICH ARE IRON.

THREE BOILERS OFF THUS FOR EACH SHIP.

BRITISH CORPORATION

PLATE % =  $\frac{10.5 - 1.8}{10.5} = 85.7\%$

RIVET % =  $\frac{5 \times 1.767 \times 23 \times 1.875}{10.5 \times 1.4687 \times 28} = 88.4\%$

WP =  $\frac{20.4 (23.5 - 1) 85.7}{195} = 202 \text{ LBS.}^2$

LLOYDS

PLATE % =  $\frac{10.5 - 1.8}{10.5} = 85.7\%$

RIVET % =  $\frac{5 \times 1.767 \times 23 \times 1.75}{10.5 \times 1.4687 \times 28} = 85.24\%$

WP =  $\frac{22 (23.5 - 2) 85.24}{195} = 207 \text{ LBS.}^2$

TENSILE STRENGTH OF SHELL PLATES & BUTT STRAPS 28 TO 32 TONS PER SQ. IN.

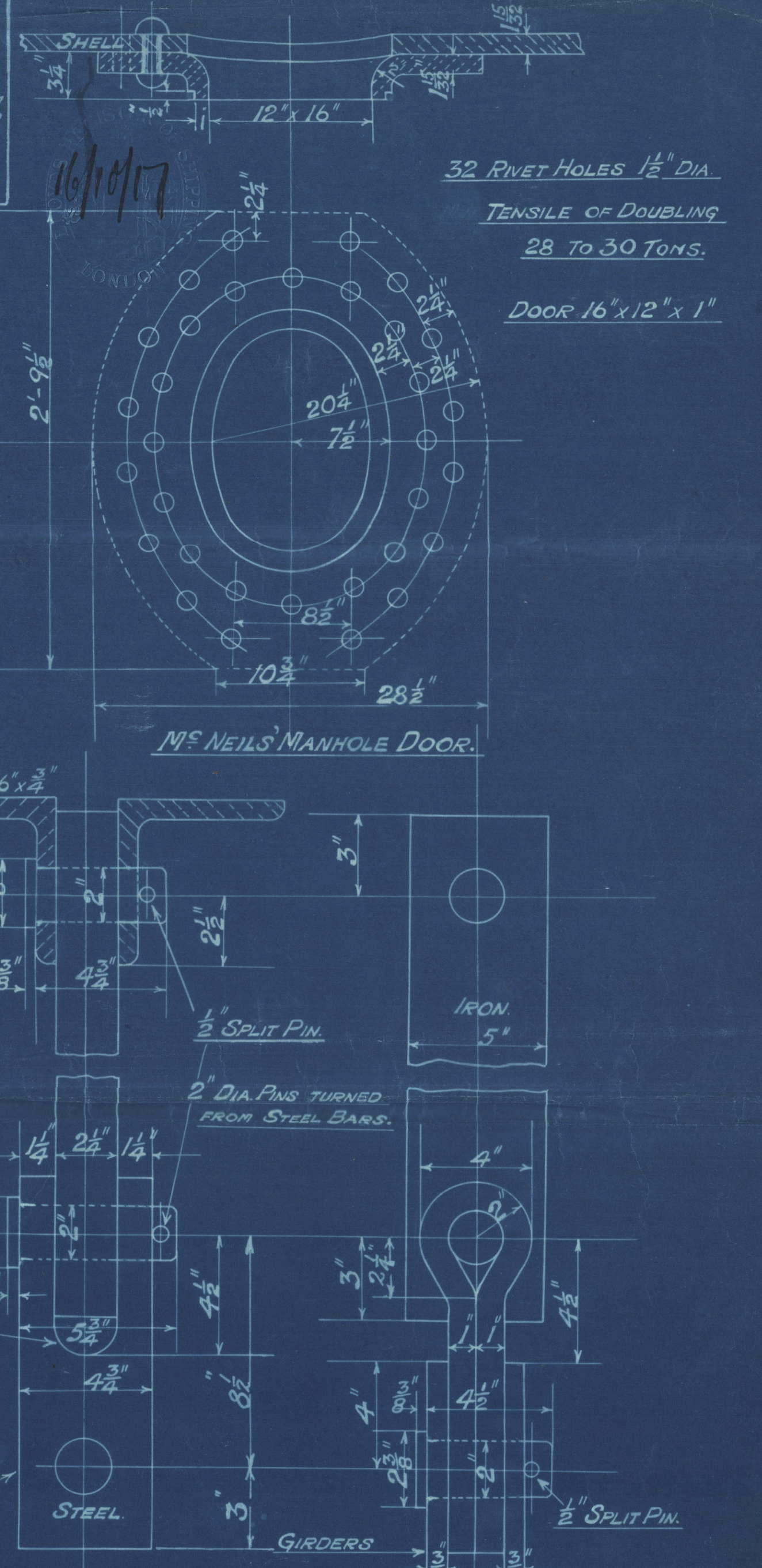
GIRDER PLATES 28 " 32 "

ALL OTHER PLATES 26 " 30 "

ALL RIVET HOLES DRILLED IN PLACE.

OUTSIDE BUTT STRAPS = 1 1/8" THICK.

INSIDE " = 1 1/8"



MADE OF BOILER FLANGING STEEL PLATE  
1" THICK & ANNEALED AFTER BENDING  
PLATE TAKEN FROM CUTTINGS.

COMBUSTION CHAMBER SLING STAYS.  
SCALE 3" = 1 FT.

PLATE LIST (3 BOILERS)				STAY BAR LIST (3 BOILERS)			
Nº	MARK	DESCRIPTION	LENGTH	BREADTH	THICK	Nº	DESCRIPTION
6	A	SHELL TOP OUTER	29'-5 1/4"	84 3/8"	1 1/8"	54	STEAM SPACE
6	B	" BOT "	28'-"	"	"	9	WATER
3	C	" TOP INNER	17'-4 1/2"	87"	"	36	BREAST STAYS
3	D	" BOT "	33'-1 1/4"	"	"	90	SCREWED
12	E	BUTTS END OUTER	7'-0 3/4"	22 1/4"	1 1/8"	40	"
12	F	" INNER	5'-11 1/2"	"	1 1/8"		
6	G	" MID OUTER	5'-11 1/4"	"	1 1/8"		
6	H	" INNER	7'-2 3/4"	"	1 1/8"		
6	J	GIRDERS	11'-3"	56"	3/4"		
6	K	TOP FRONTS	7'-1 1/4"	79 3/4"	1 1/8"		
6	L	FRONT TUBE PLATES	17'-11"	79 3/4"	1 1/8"		
6	M	FURNACE FRONTS	10'-11 1/2"	87 1/2"	3/4"		
6	N	CR BACK TUBE PLATES	10'-11 1/2"	87 1/2"	3/4"		
12	P	WING	8'-1 1/8"	62 1/4"	3/4"		
6	Q	CR WRAPPER PLATES	25'-0 1/2"	49 1/2"	1 1/8"		
6	R	WING	20'-11 1/2"	"	1 1/8"		

WASHERS ON TOP FRONTS & GUSSET  
PLATES UNDER COMB CHAMBERS TO BE  
MADE FROM CUTTINGS.

MAIN BOILERS.  
450 FT. STANDARD VESSEL.  
"G" CLASS.

16'-3" MEAN DIA. x 20'-6" LONG x 200 LBS. W.P.  
TO PASS "BRITISH CORPORATION" & "LLOYDS" SURVEYS.



Belfast

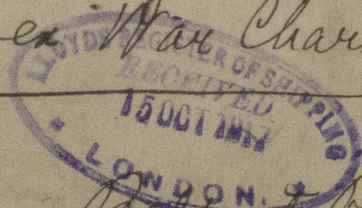
Maritime Club & Co

4150 ft T.S.S. Standard

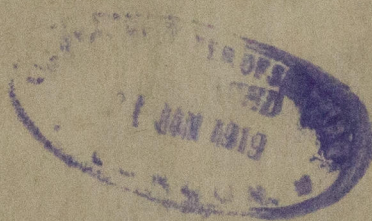
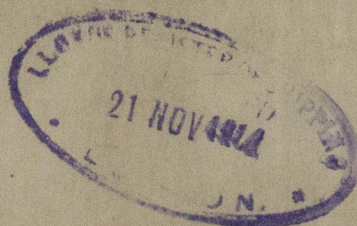
Versels ( )

Main

T.S.S. Royal Star  
ex War Charon



Belfast Report No 8070



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Lloyd's Register  
W259-0025  
Foundation