

SUNDERLAND

JOHN DICKINSON & SONS W.D.

DONKEY

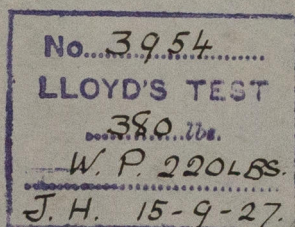
B. BOILER No. 1090

ENG No. 885

INTENDED FOR

SHORT BROTHERS W.D.

S. S. No. 424



S. S. HOLYSTONE

SUNDERLAND RPT. NO. 29601

W41-0153



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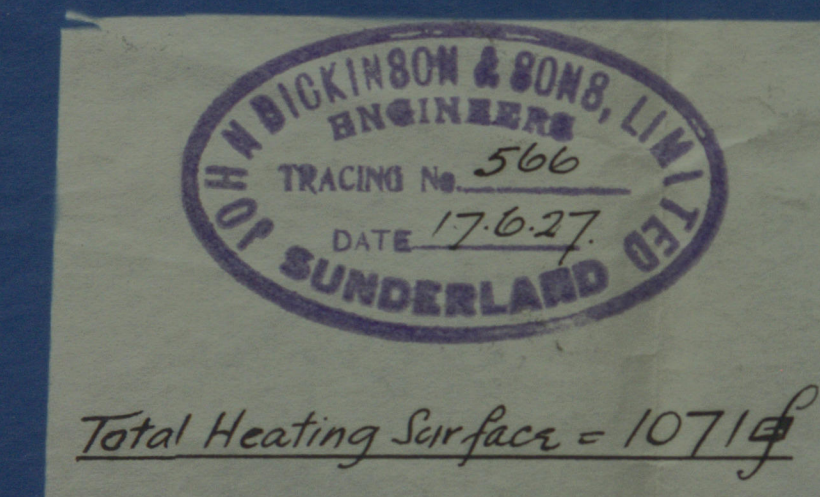
Lloyd's Register
Foundation

HORIZONTAL DONKEY BOILER

To Lloyds requirements for a working pressure of 220 lbs per sq. in. Test pressure 380 lbs per sq. in.

All plates, rivets, stays & girders of steel Tubes of wrought iron.

Scale: One inch = one foot



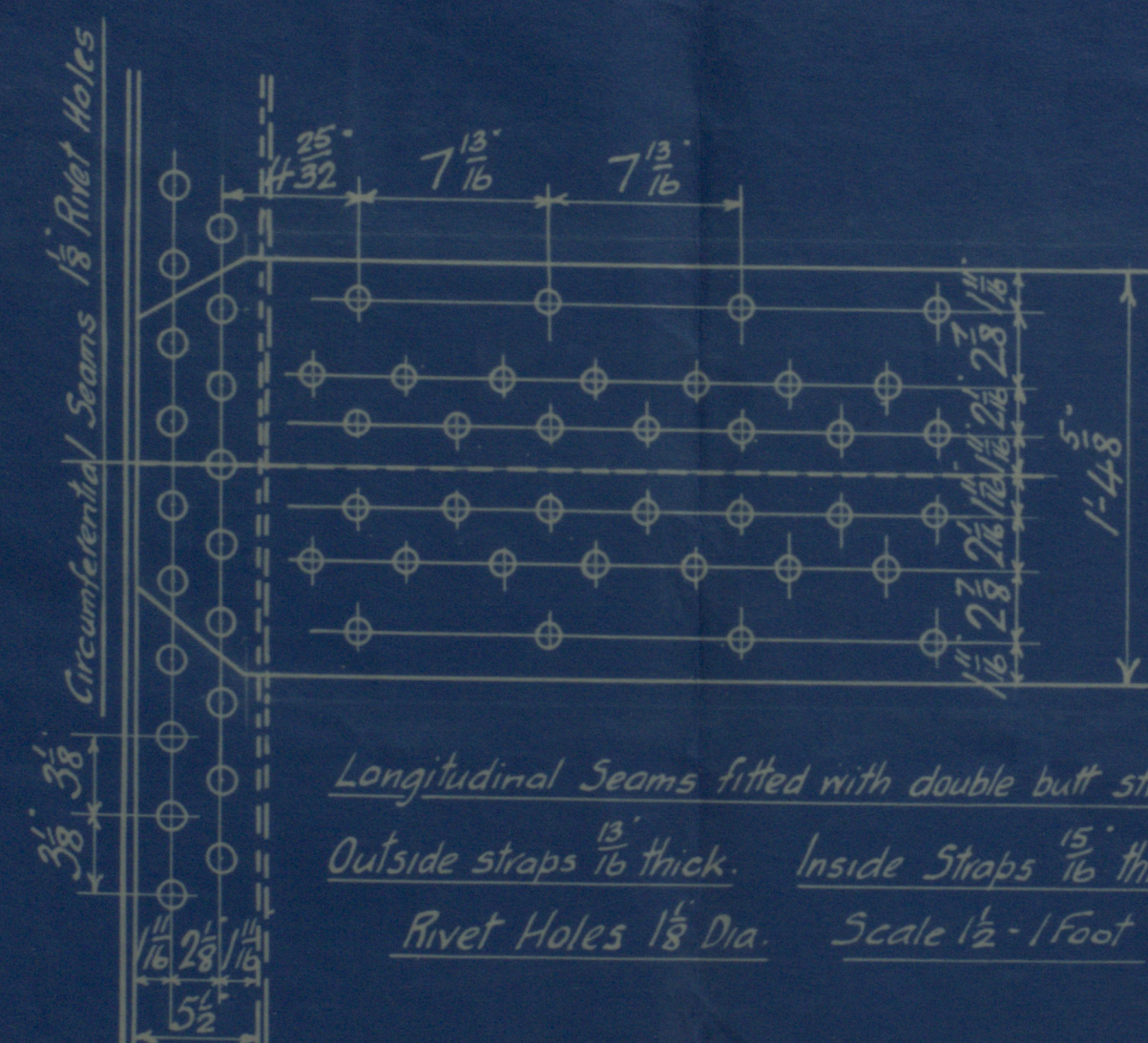
Total Heating Surface = 10714

TENSILE STRENGTH

Plate	Tons / Sq. inch
Shell plates, butt straps	24 3/4 to 33 1/2
Manhole Stiffening Ring	24 3/4 to 33 1/2
Comb. Chamber Girders	28 to 32
All other plates	26 to 30

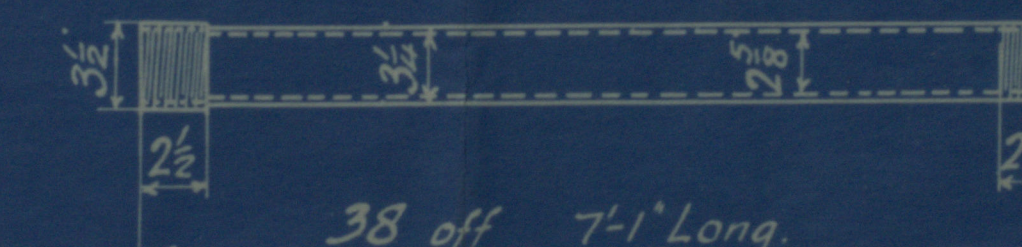
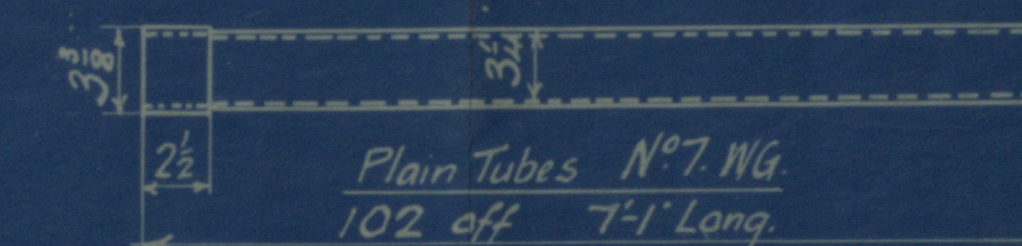
RIVETING

Position	Riveting	Rivet Holes	Pitch	Lap
Comb. Chamber Longitudinal Seams	Single	1"	2 1/2"	3"
Comb. Chamber & Furnace Seams	Single	1"	2 1/2"	3"

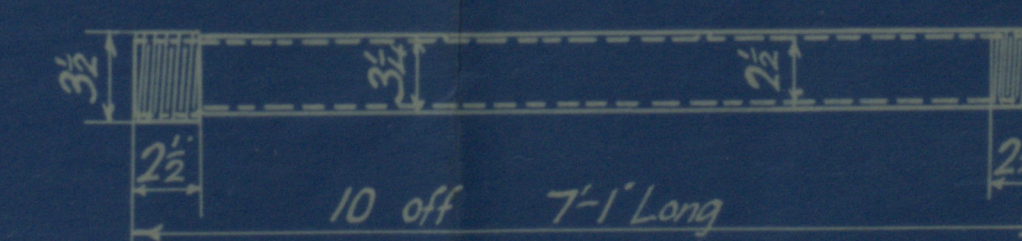


Longitudinal Seams fitted with double butt straps
Outside straps 1/8 thick. Inside Straps 1/16 thick
Rivet Holes 1 1/8 Dia. Scale 1/2 = 1 Foot

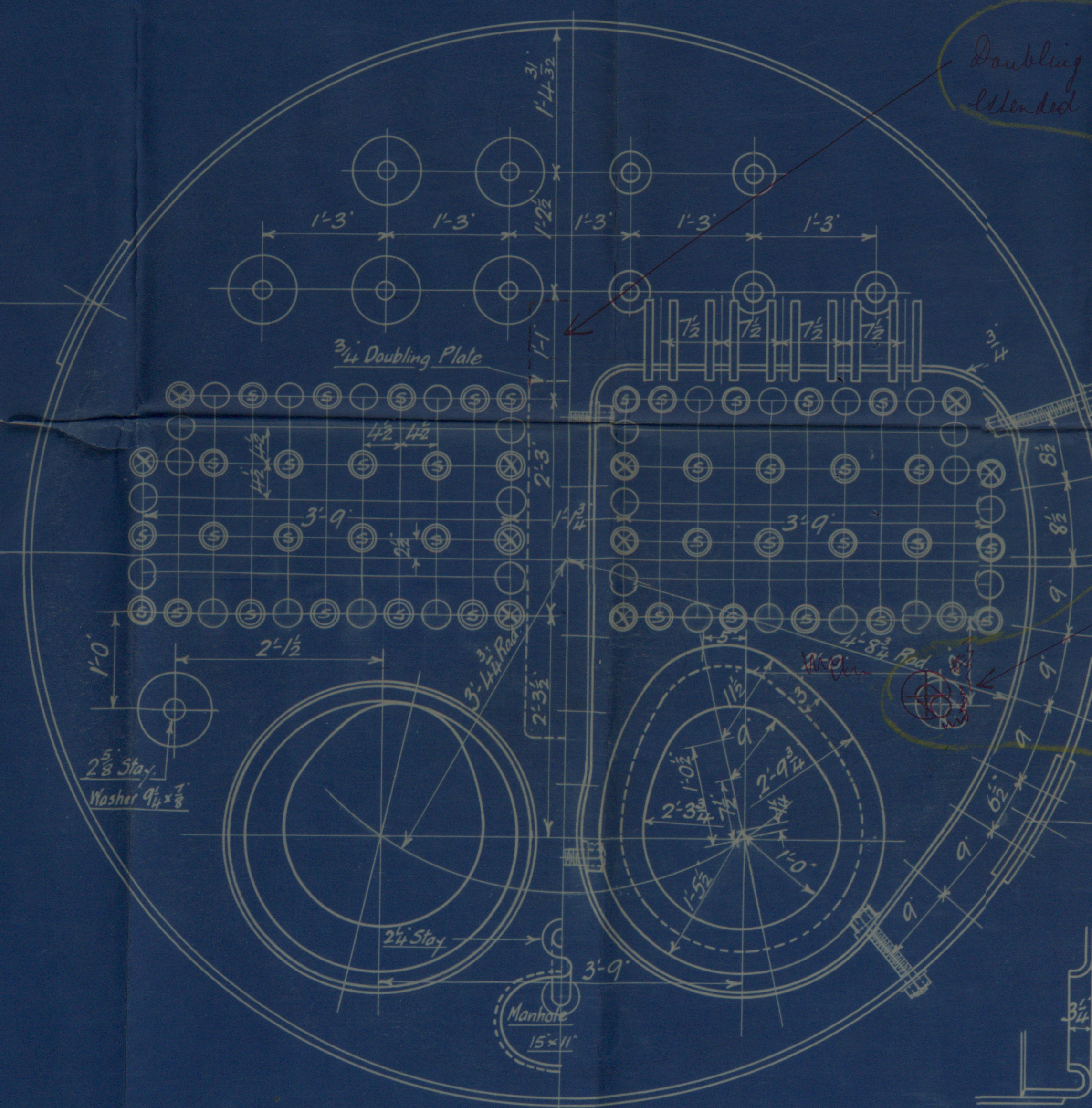
STAYS					
TENSILE	DIAM.	SQUARE	EFF. AREA	EFF. AREA	Nº IN BOILER
TONS PER SQ. IN.		PER IN.			
26	1 3/4"	9	1.607	2.031	20
to	1 7/8"	9	1.7528	2.355	
30	2"	9	1.8578	2.69	
28	2 1/2"	6	2.036	3.25	
32	2 5/8"	6	2.41	4.567	



Stay Tubes 5/16 thick, screwed 9 Thds. per inch
Eff. Area 2.173 sq. in.

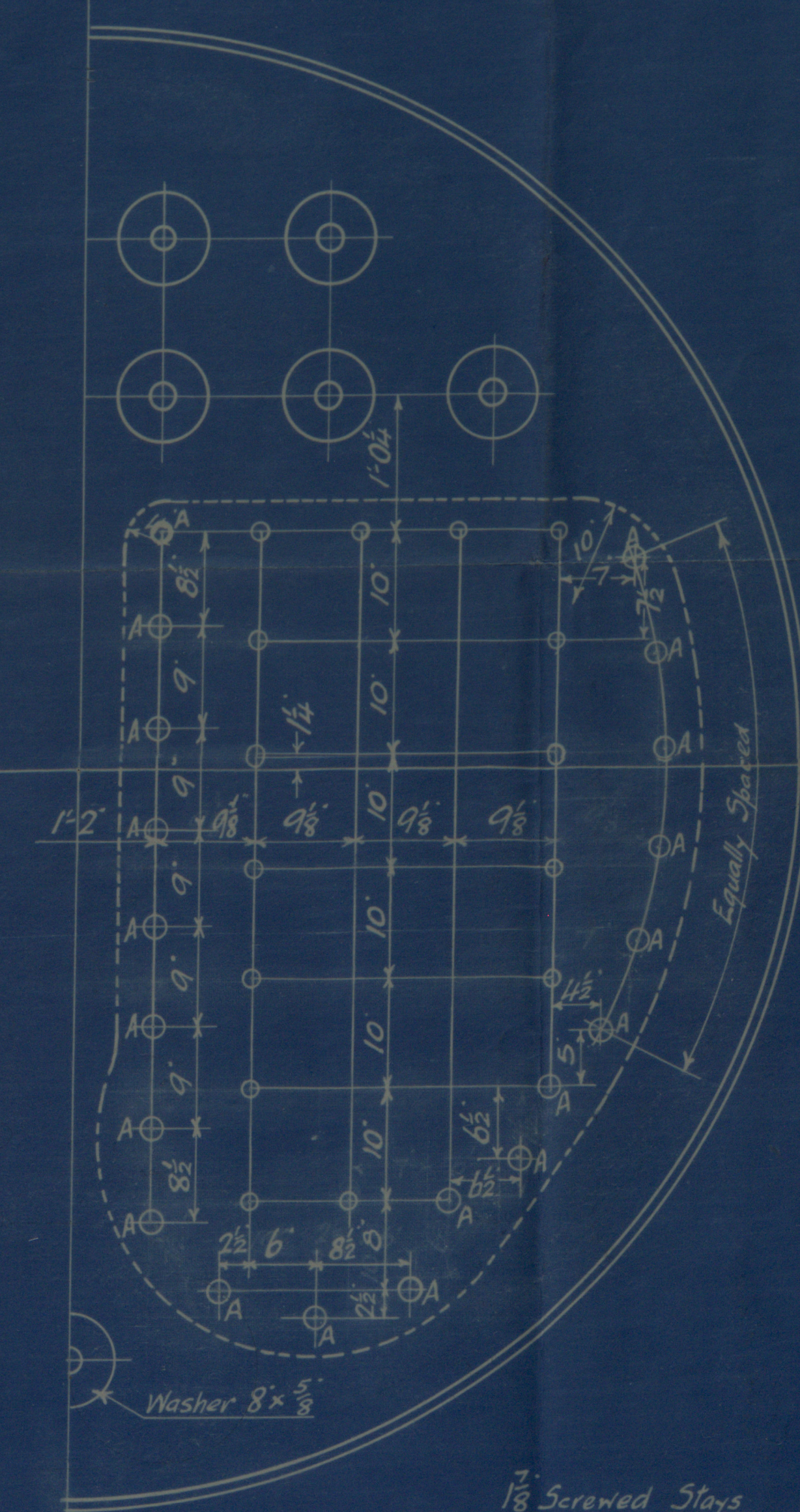
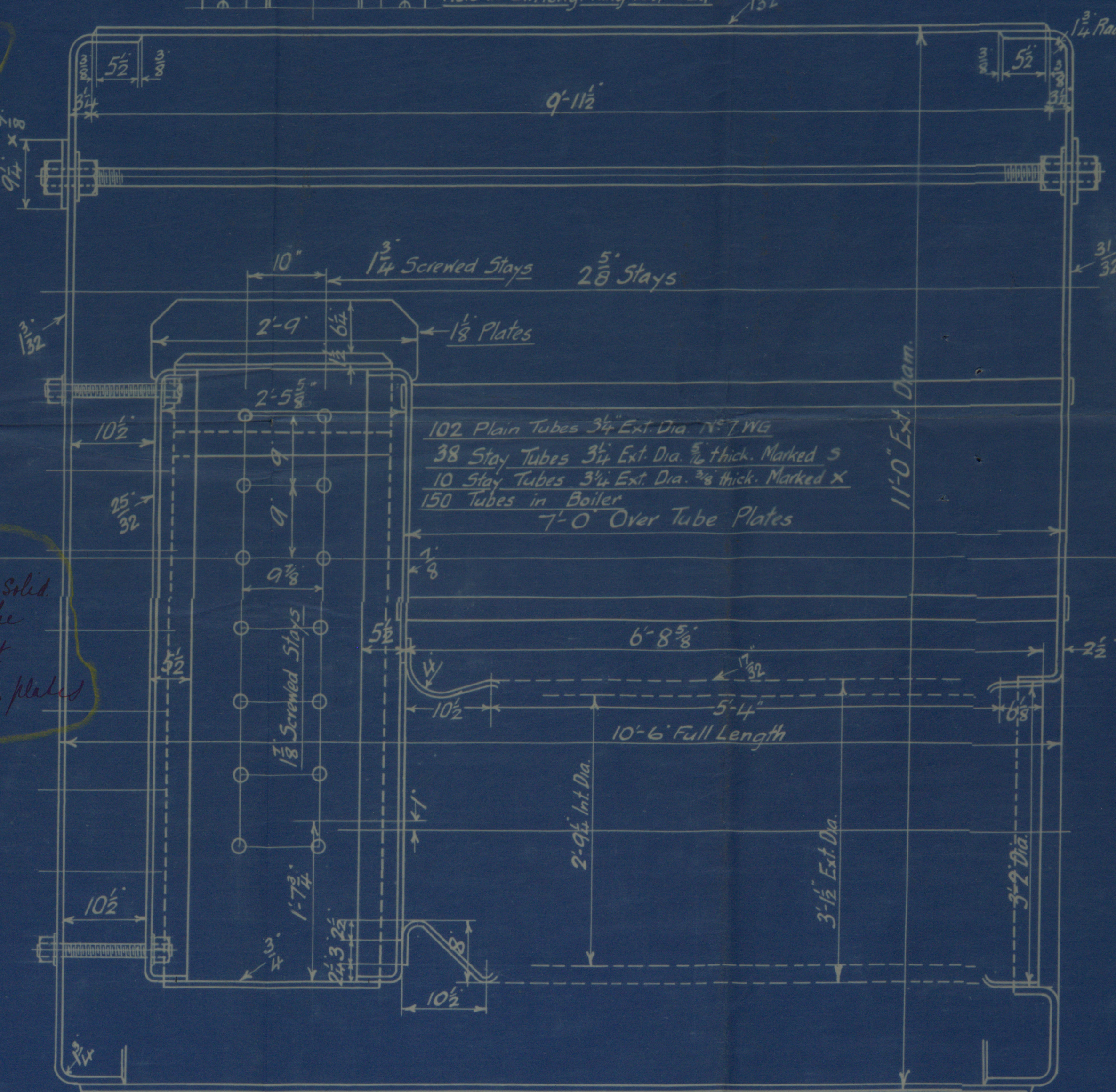


Stay Tubes 3/8 thick, screwed 9 Thds. per inch
Eff. Area 2.6765 sq. in.



Doubting Plate to be extended as shown

Position of Solid straps to be added at back like plates



1/8 Screwd Stays
2 Screwd Stays (Marked 'A')

NOTE: All Screwd Stays to have nut fitted on each end.

Nº 1090	ENG. 885	Intended for Messrs. Short Bros. & Co.	June 16 th 27

CB
20/6/27