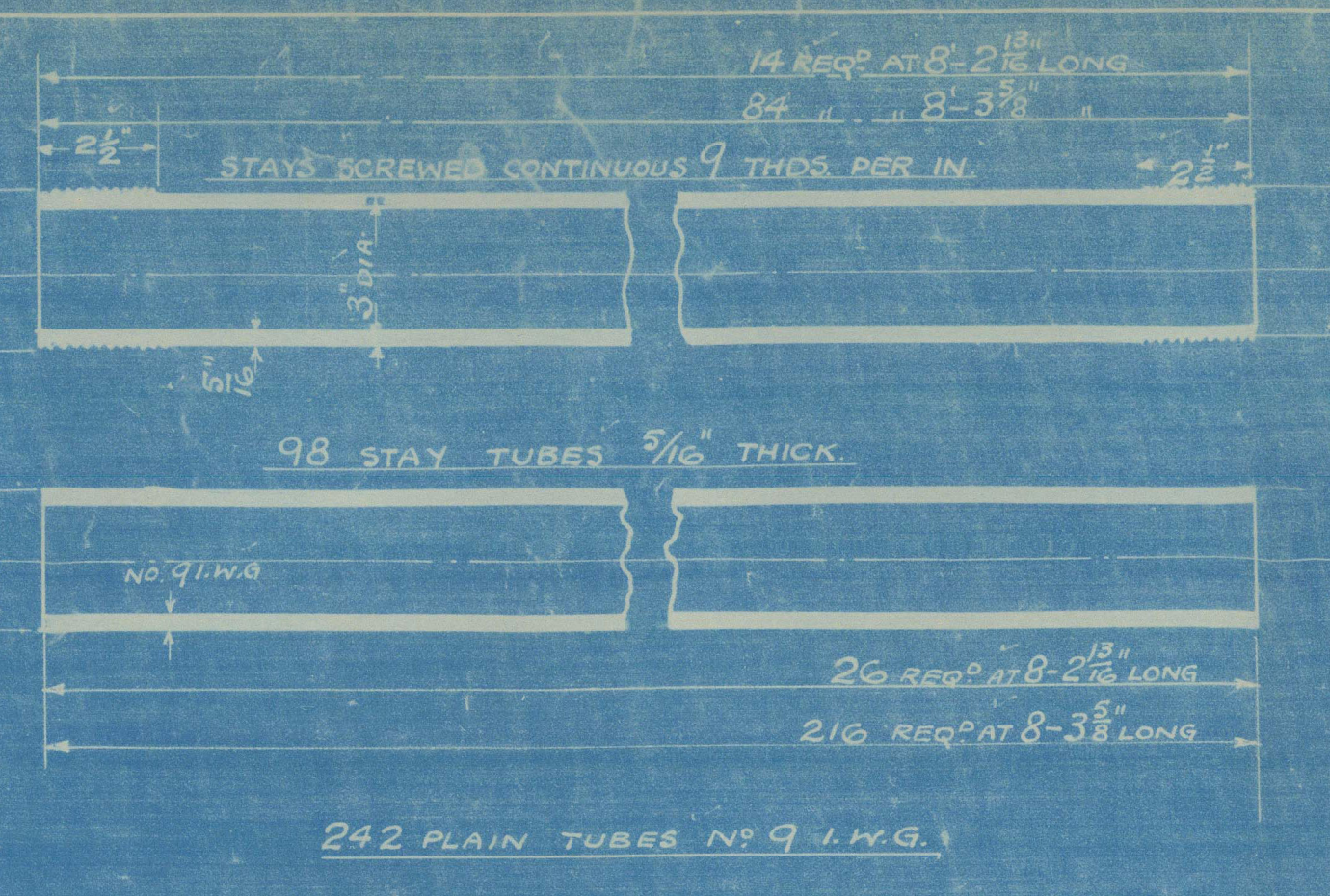


LLOYD'S RULES			CANADIAN RULES		
ITEM	QTY	W.P.	ITEM	QTY	W.P.
SHELL	22 x (22-2) x 19-45	1864	SHELL	22 x (22-2) x 19-45	1864
UPPER HEADS	175 x 175	184	UPPER HEADS	175 x 175	184
WIDE WATER FRONT BRG	140 x (13-75) x 2	248	WIDE WATER FRONT BRG	140 x (13-75) x 2	248
WIDE WATER BACK BRG	135 x 135	183	WIDE WATER BACK BRG	135 x 135	183
WHIPPER SHEET	155 x 155	196	WHIPPER SHEET	155 x 155	196
CROWN SHEET	135 x 135	196	CROWN SHEET	135 x 135	196
BAR	30 x 25 x 10	250	BAR	30 x 25 x 10	250
WIDE WATER CHAMBER	155 x 155	204	WIDE WATER CHAMBER	155 x 155	204
WIDE WATER PLATE SHEET	135 x 135	187	WIDE WATER PLATE SHEET	135 x 135	187
WIDE WATER CHAMBER PLATE SHEET	135 x 135	240	WIDE WATER CHAMBER PLATE SHEET	135 x 135	240
WIDE WATER CHAMBER PLATE SHEET	135 x 135	240	WIDE WATER CHAMBER PLATE SHEET	135 x 135	240
WIDE WATER CHAMBER PLATE SHEET	135 x 135	246	WIDE WATER CHAMBER PLATE SHEET	135 x 135	246
FURNACE	1259 x (35-2) x 25	188	FURNACE	1259 x (35-2) x 25	188
MAIN STAYS	5'262 x 10'400	202	MAIN STAYS	5'262 x 10'400	202
MAIN STAYS	18 x 15	199	MAIN STAYS	18 x 15	199
MAIN STAYS	3'4243 x 10'400 x 18	198	MAIN STAYS	3'4243 x 10'400 x 18	198
MAIN STAYS	180	198	MAIN STAYS	180	198

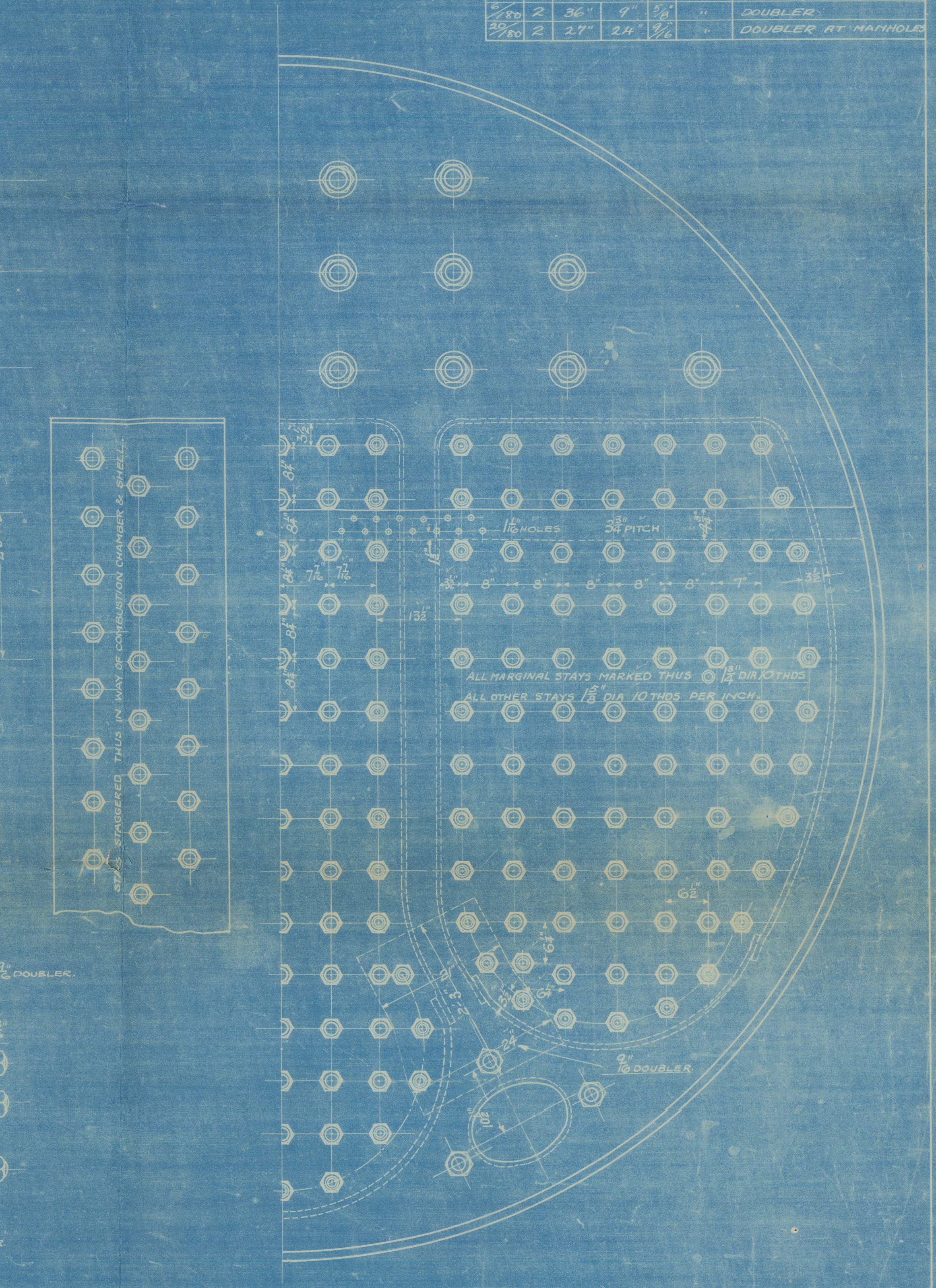
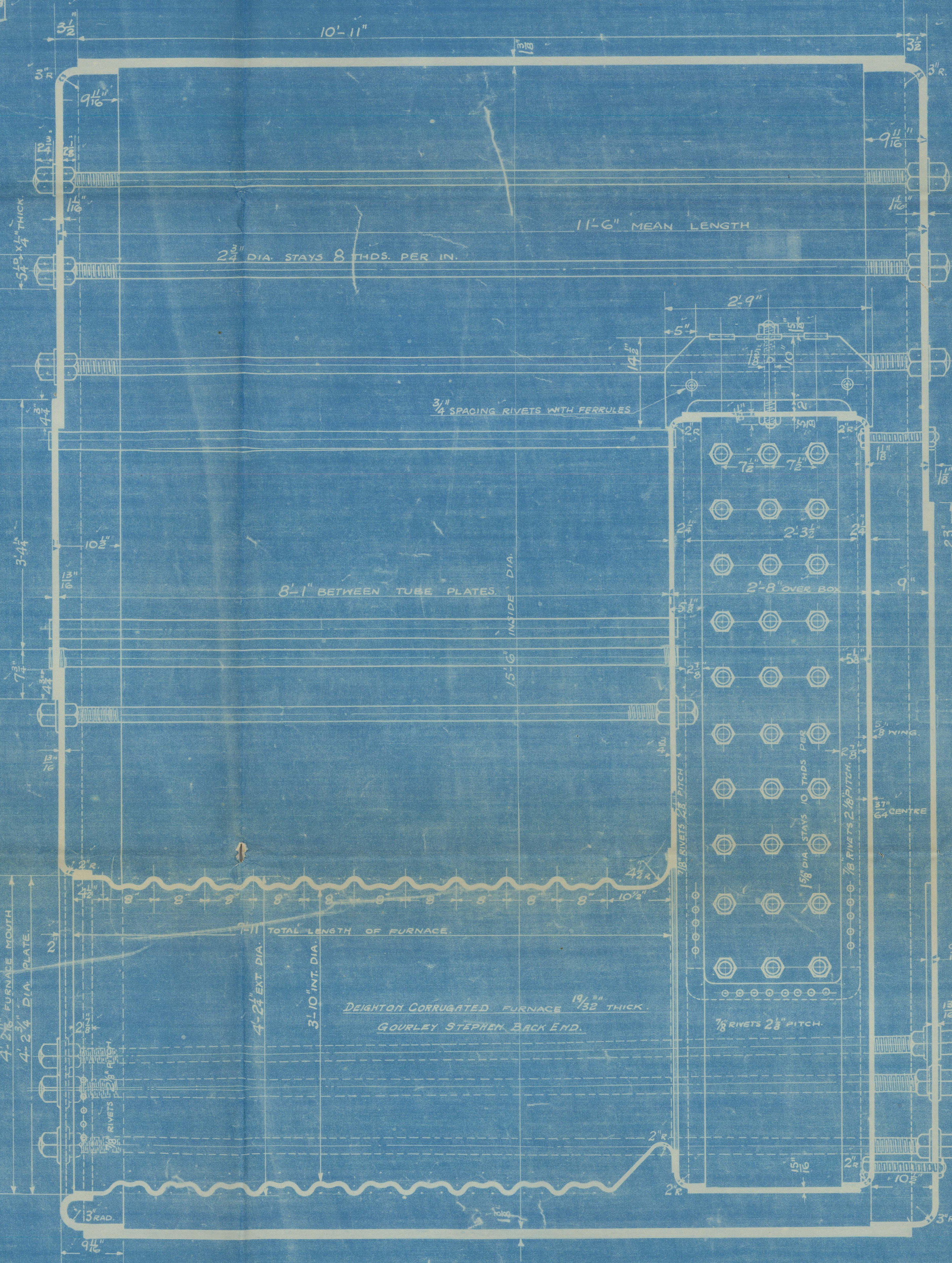
HEATING SURFACE  
TUBES ----- 2149 SQ. FT.  
FURNACES ----- 160 SQ. FT.  
2 WING COMB. CHAMBERS ----- 188 SQ. FT.  
CENTRE COMB. CHAMBER ----- 84 SQ. FT.  
TOTAL 2581 SQ. FT.

GRATE AREA ----- 46'12 SQ. FT.  
AREA THROUGH TUBES ----- 3'06 SQ. FT.  
H.S. TO G.A. ----- 39'03  
G.A. TO T.A. ----- 5'06

STAYS  
MAIN STAYS IN STEAM SPACE. STRAIN = 9236 LBS. PER SQ. IN.  
MAIN STAYS IN WATER SPACE. STRAIN = 9409 LBS. PER SQ. IN.  
BREAST STAYS ----- STRAIN = 9461 LBS. PER SQ. IN.

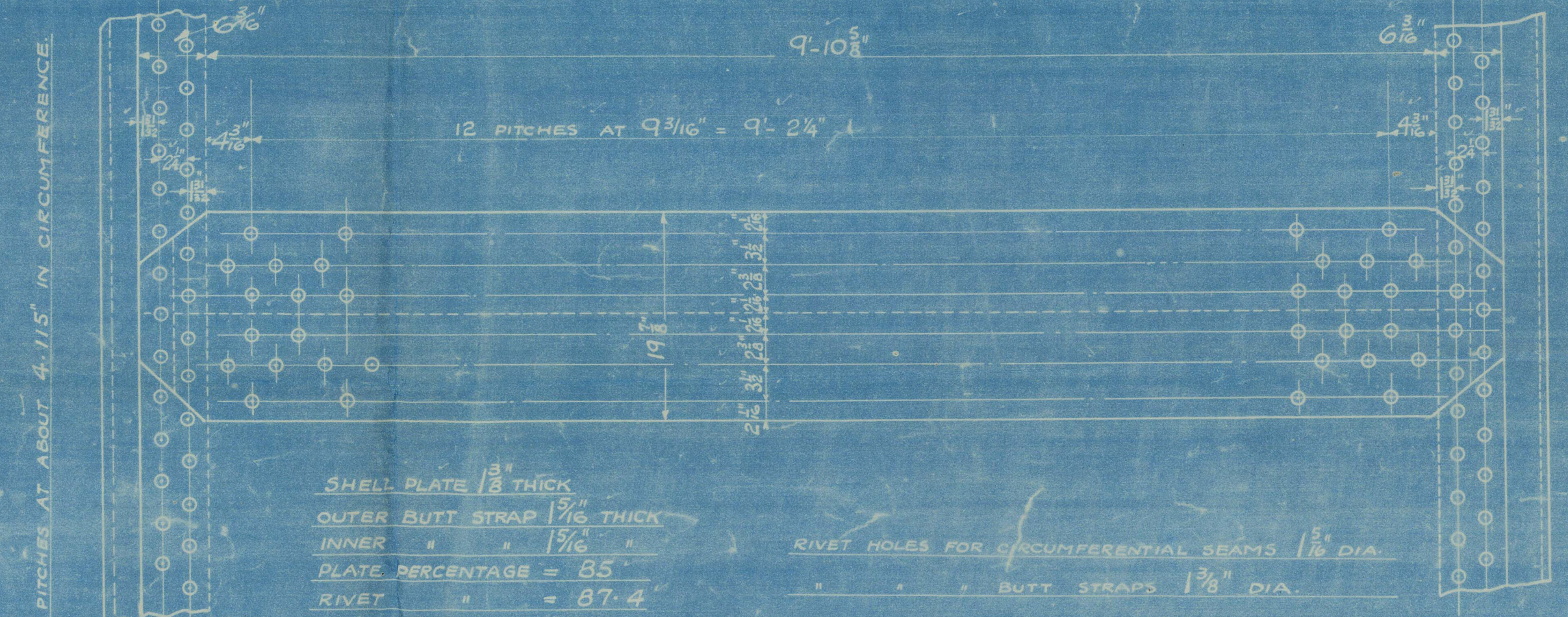


MARK	NO.	LENGTH	QTY	TEST	DESCRIPTION
180	2	225"	131 1/2	1/2	SHELL
180	2	21"	122 1/2	1/2	BUTT STRAPS (OUTER)
180	2	21"	122 1/2	1/2	" " (INNER)
180	2	35"	122 1/2	1/2	GRIDERS
180	1	37"	58	1/2	COMPENSATING PLATE
180	2	243"	25 1/2	1/2	COMB. CHAMBER WRAPPER TOP
180	1	234"	25 1/2	1/2	" " CENTRE
180	2	61"	25 1/2	1/2	" " WING " STM
180	1	103"	25 1/2	1/2	" " CENTRE
180	2	108"	12 1/2	1/2	BACK TUBE PLATE WINGS
180	1	190"	62 1/2	1/2	" " C.C.
180	1	191"	54 1/2	1/2	TOP END PLATE (FRONT)
180	1	204"	49 1/2	1/2	" " (BACK)
180	1	204"	100 1/2	1/2	FRONT END MIDDLE PLATE
180	1	204"	126 1/2	1/2	" " BOTTOM
180	1	204"	126 1/2	1/2	BACK END " "
180	1	204"	126 1/2	1/2	" " TUBE PLATE (CENTRE)
180	1	204"	126 1/2	1/2	" " C.C.
180	2	36"	9 1/2	1/2	DOUBLER
180	2	27"	24 1/2	1/2	DOUBLER AT MANHOLE



ALL MATERIAL STEEL  
MINIMUM TENSILE STRENGTH OF SHELL & BUTT STRAPS 60000 LB. PER SQ. INCH  
OTHER PLATES & RIVETS 55000 TO 65000 LB. PER SQ. INCH  
ALL RIVET HOLES TO BE DRILLED  
TO LLOYD'S & CAN. S.B. INS. 180 LB. W.P.  
TEST PRESSURE 360 LB. PER SQ. INCH.

TOTAL HEATING SURFACE = 2581 SQ. FT.  
TOTAL GRATE AREA = 46'12 SQ. FT.



SHELL PLATE 1/8" THICK  
OUTER BUTT STRAP 1/16" THICK  
INNER " 1/16" THICK  
PLATE PERCENTAGE = 85  
RIVET " = 87.4

HULL NO 11-14  
J. COUGHLAN & SONS  
SHIPBUILDERS & ENGINEERS  
ENGINEERING DEPT. VANCOUVER B.C.

15'-6" x 11'-6" MARINE BOILER.

DRAWN BY A.D. 12/13 CHECKED BY J.W. 1/14  
TRACED BY C. 12/13 CH. DUFFIN.  
APPROVED BY LLOYD'S  
DATE JAN 24 1913  
APPROVED BY LLOYD'S  
DATE JAN 24 1913

DESIGNS 301  
OLD 730



Plan of Three Scotch Boilers

fitted into

J. Coughlan & Sons L<sup>rs</sup>

Nessee

N<sup>o</sup> 12. B. S. Canadian Exporters  
of

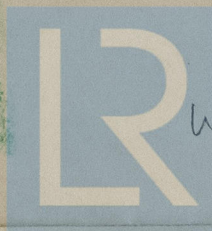
Montreal

Built by Vulcan Iron Works L<sup>rs</sup>.

Vancouver B.C.

Rpt. Vancouver. 189

RETAIN



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Lloyd's Register  
Foundation