

LLOYD'S REGISTER OF SHIPPING RULES			BRITISH BOARD OF TRADE RULES		
ITEM	FORMULA	W.P.	ITEM	FORMULA	W.P.
SHELL	$25 \times (21.2 + 2.84 \sqrt{L})$	191	SHELL	$25 \times (21.2 + 2.84 \sqrt{L})$	182.5
UPPER HEADS	$17.5 \times 21.2 \times 2$	167	UPPER HEADS	$15.0 \times (21.2 + 1.1)$	196.3
WIDE WATER SPACE FROM WRAPPER SHEET	$14.5 \times 3$	195	WRAPPER SHEETS	$5.5 \times (16.5 \times 2)$	182.5
WIDE WATER SPACE FROM WRAPPER SHEET	$13.5 \times 14.5 \times 2$	200			
CROWN SHEET	$100 \times 11.5 \times 2$	195	CROWN SHEETS	$100 \times (11.5 + 1)$	187.8
FLAME SHEETS	$100 \times 11.5 \times 2$	200	FLAME SHEETS	$60 \times 11.5 \times 1$	182.5
GIRDERS	$15.0 \times 17.5 \times 1.5$	203	GIRDERS	$22.0 \times 17.5 \times 1.5$	223.7
TUBE SHEETS	$175.0 \times (38.75 + 2.45 \sqrt{L})$	222	TUBE SHEETS	$3.875 \times 24.5 \times 1.5$	227
CONCH CORNERS	$50 \times (50.0 + 2.5 \sqrt{L})$	199	CONCH CORNERS	$54 \times 5.875$	187.5
FURNACES	$12.5 \times (10.5 + 2)$	192	FURNACES	$4.0 \times (10.5 + 1)$	187.5

FOR LOCATION OF UPPER MANHOLE  
SEE DWS. PDAMS-G-25 & PDAMS-G-26

BOILER TO PASS LLOYD'S REGISTER OF SHIPPING  
AND BRITISH BOARD OF TRADE RULES FOR  
180° WORKING PRESSURE - 320° TEST PRESSURE

HEATING SURFACE	
COAL BURNING	
TUBES	2312.5 sq. ft.
FURNACES	195
CONCH CORNERS	320
TOTAL	2827.5

MATERIAL	
SHELL PLATES - BUTT STRAPS	BOILER STEEL - 62720 TO 71680 T.S.
CROWN BARS	FLANGE STEEL - 26000 TO 71680 T.S.
ALL OTHER PLATES	FLANGE STEEL - 30240 TO 67200 T.S.
RIVETS - STEEL RIVET BARS	58240 TO 67200 T.S.
STAY BOLTS - 1/2" DIA. 2 1/8" DIA. TESTED STEEL	

NOTE: - ALL STAY BOLTS TO HAVE 1/2" DRILLED HOLE IN EACH END, HOLE TO EXTEND 1" BEYOND SHEET SUPPORTED.  
RIVET HOLES DRILLED 1/8" LARGER THAN RIVET IN PLATES THAT ARE FLAT WHEN FINISHED.  
SHELL - ROUNDABOUT SCAMS - DRILLED 1/8" IN FLAT PLATE - EXCEPT UNDER BUTT STRAPS, WHERE HOLES ARE DRILLED FULL SIZE FROM BUTT STRAPS IN PLACE.

RIVETS IN CONE CORNERS	
200 RIV. 1/2" x 2 1/2" LG.	35
216 RIV. 1/2" x 2 1/2" LG.	35
36 RIV. 1/2" x 3 1/2" LG.	35
40 RIV. 1/2" x 2 1/2" LG.	35
QUAL CYR. HEAD	



PART NO.	MATERIAL	PART NO.	MATERIAL	PART NO.	MATERIAL	REV.	DATE	BY	CHKD.
12	SHELLS	2-PLTS. 1/2" x 132" x 295"	8	ROUND BOT. WING COMB. CORR. 2-PLTS. 1/2" x 32" x 69"	15	UPPER HEADS	2-PLTS. 1/2" x 32" x 69"		
3	OUTSIDE BUTT STRAPS	2-PLTS. 1/2" x 21" x 131 1/2"	9	RO. BOT. CENTER CORR. CORR. 1-PLT. 1/2" x 32" x 74"	16	LOWER FRONT HD. 1-PLT. 1/2" x 32" x 74"			
4	INSIDE BUTT STRAPS	2-PLTS. 1/2" x 21" x 111 1/2"	10	WING WRAPPER	2-PLTS. 1/2" x 32" x 74"				
6	WING TUBE SHEET	2-PLTS. 1/2" x 69" x 109"	11	CENTER WRAPPER	1-PLT. 1/2" x 32" x 250"				
7	WING FLAME SHEET	2-PLTS. 1/2" x 69" x 109"	13	FRONT HD. DOUBLER	1-PLT. 1/2" x 32" x 74"				
			14	FRONT HD. DOUBLER	1-PLT. 1/2" x 32" x 74"				
					16	MANHOLE REPAIR PLT. 1-PLT. 1/2" x 32" x 40"			

RAH	AS	Part No. Douglas Inc. Inspection	W	DATE
AUTHOR	THAN	ALTERATION	RAH	DATE
JUL 6 11 17 SCOTCH MARINE BOILER FOR UNION CONSTRUCTION CO.				
WILLAMETTE IRON AND STEEL WORK				
PORTLAND, OREGON ENGINEERING DEPT.				
OFFICE				
SCALE: 1/4" = 1'-0"	DATE: 7/6/17	THAN	RAH	DATE: 7/6/17
CREATED: 7/6/17	APPROVED: 7/6/17			

FILED 2024



## MAIN Boilers

Southwestern S.B. Co's

Hulls 24-25-26.

No. 24,  $\frac{1}{2}$  "Scopas," SF. Rpt. No. 3575

No. 25,  $\frac{1}{2}$  "Silvanus," " " 3603

No. 26,  $\frac{1}{2}$  "Semiramis," " " 3726



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Lloyd's Register  
Foundation

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