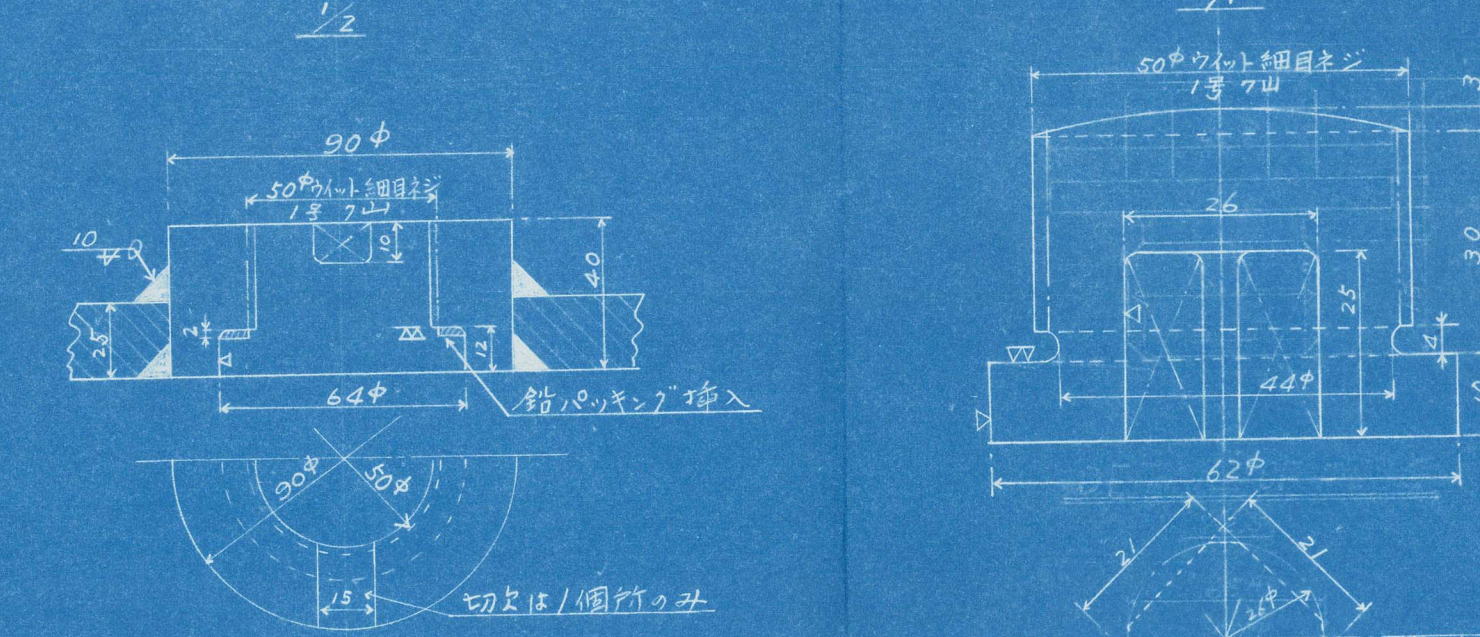
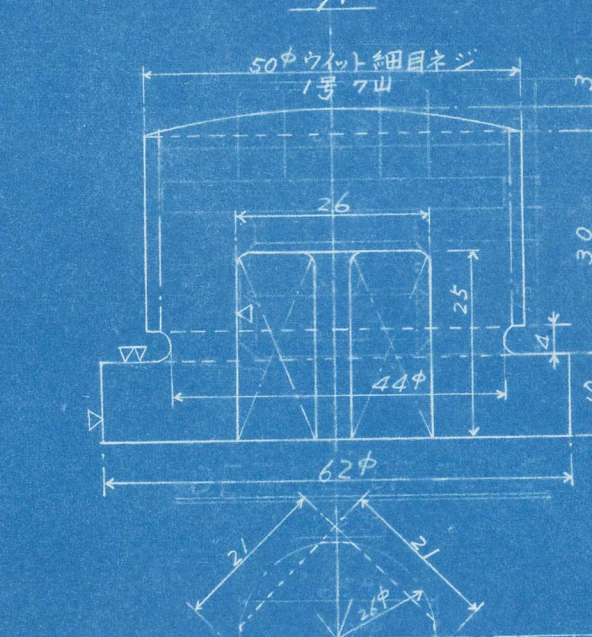


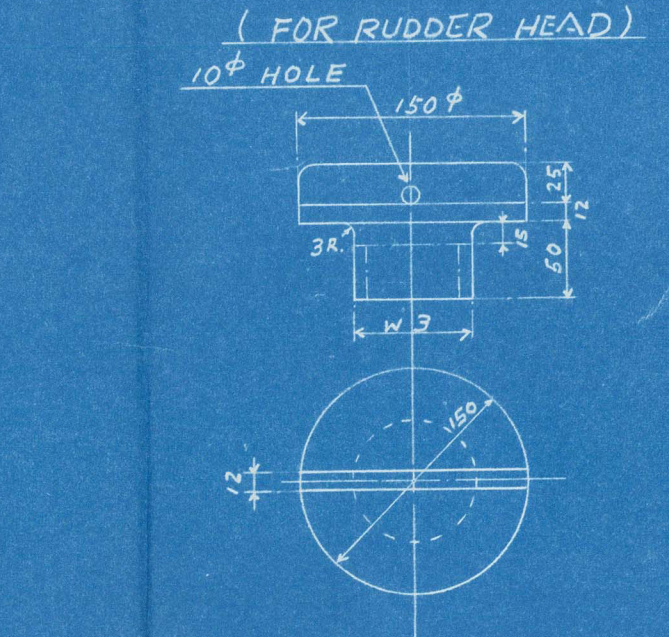
22 FILLING & DRAIN FLANGE
1/2



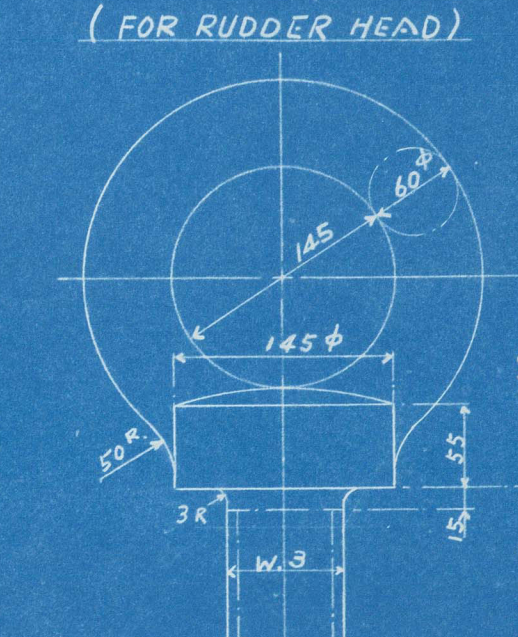
21 FILLING & DRAIN PLUG
1/2



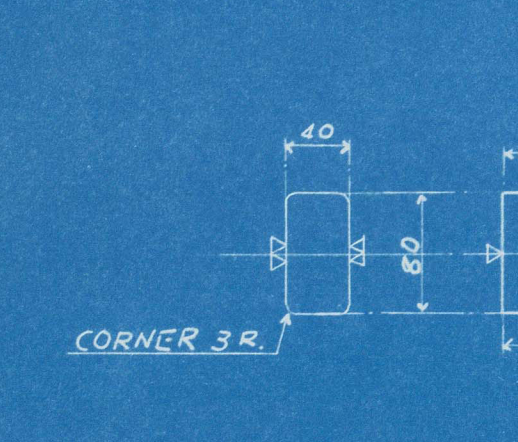
4 EYE BOLT HOLE COVER
1/2



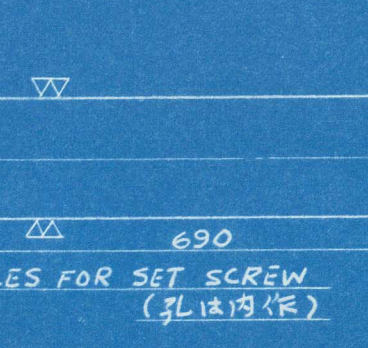
5 EYE BOLT
1/2



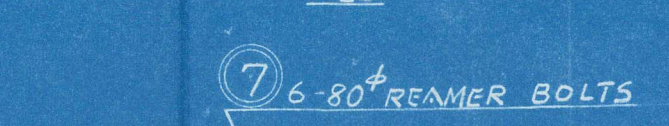
10 SET SCREW
1/2



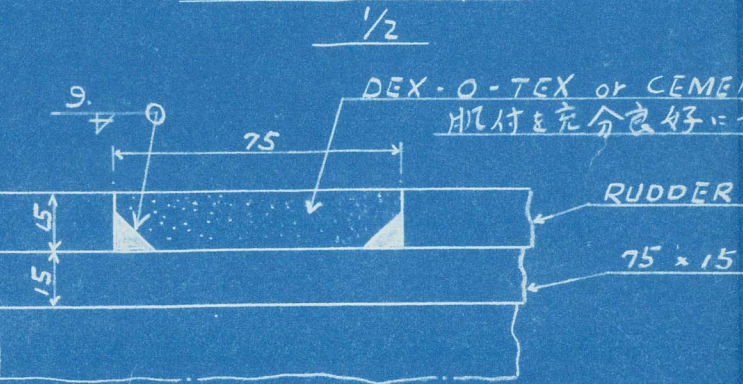
9 KEY
1/2



SECTION OF RUDDER
1/2



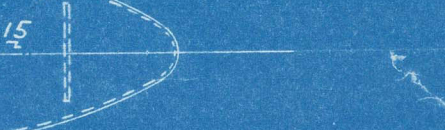
DETAIL OF SLOT WELDING
(S. SIDE ONLY)
1/2



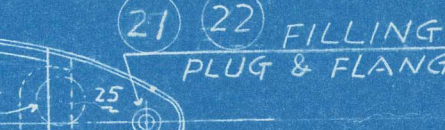
TOP OF RUDDER



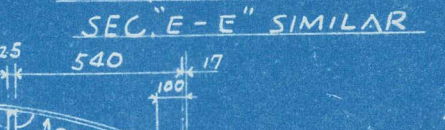
SEC. A-A'



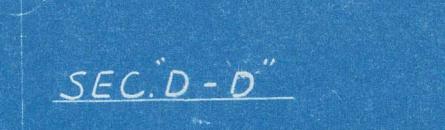
SEC. B-B'



SEC. C-C'



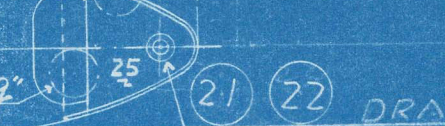
SEC. D-D'



SEC. E-E'



SEC. F-F'



SEC. G-G'



SEC. H-H'



SEC. I-I'



SEC. J-J'



SEC. K-K'



SEC. L-L'



SEC. M-M'



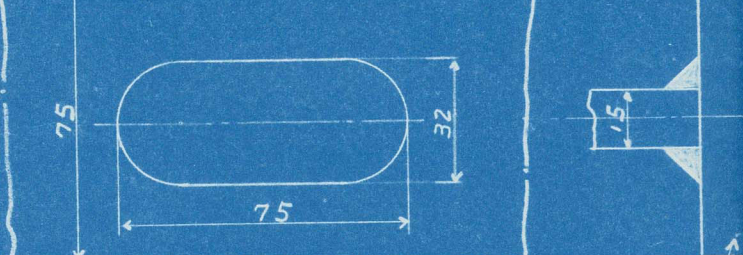
SEC. N-N'



DETAIL OF LIFTING HOLE
1/2



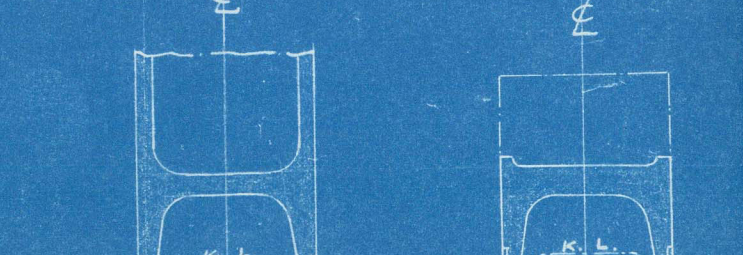
DETAIL OF LIFTING HOLE
1/2



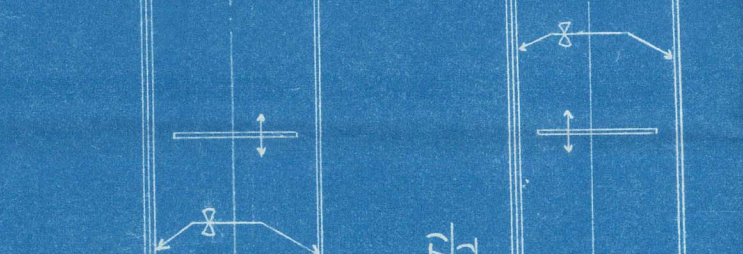
DETAIL OF LIFTING HOLE
1/2



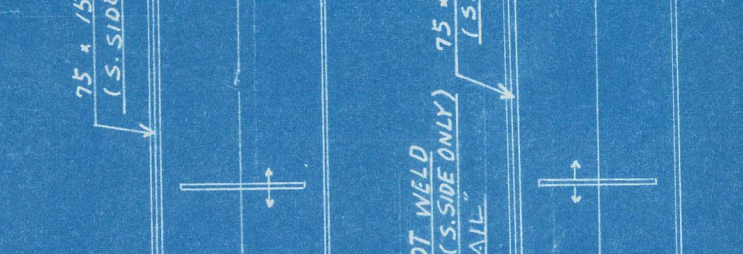
DETAIL OF LIFTING HOLE
1/2



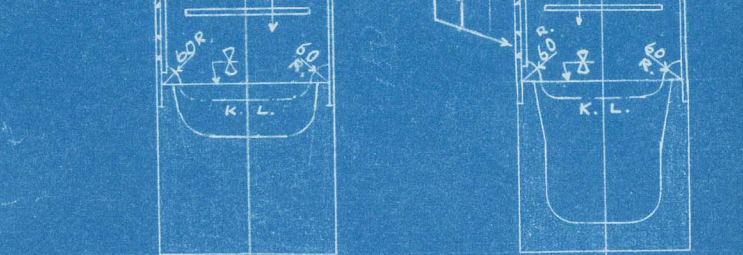
DETAIL OF LIFTING HOLE
1/2



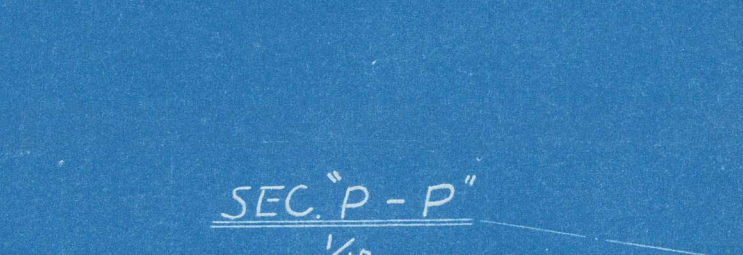
DETAIL OF LIFTING HOLE
1/2



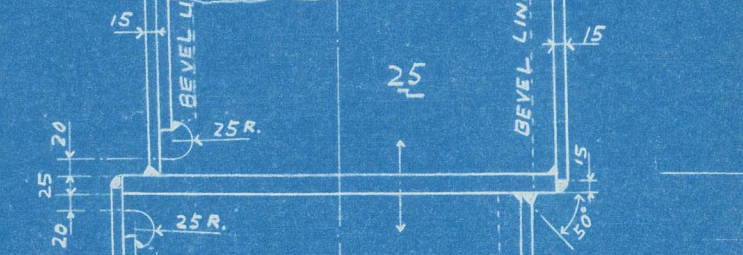
DETAIL OF LIFTING HOLE
1/2



DETAIL OF LIFTING HOLE
1/2



DETAIL OF LIFTING HOLE
1/2



DETAIL OF LIFTING HOLE
1/2



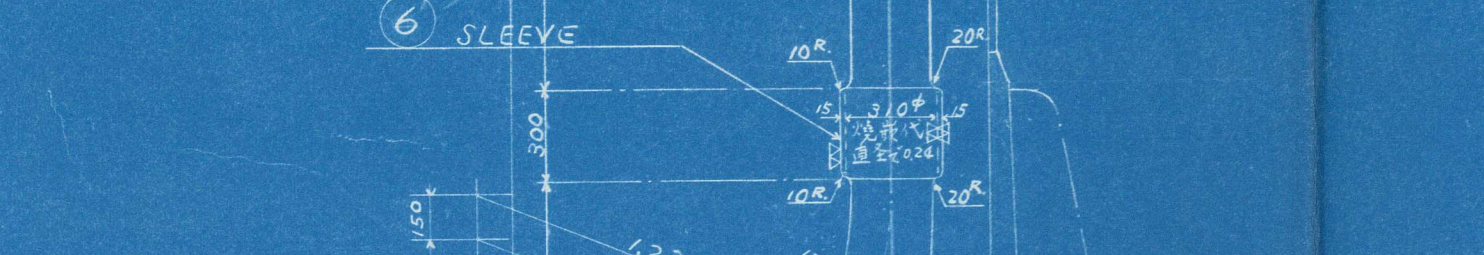
DETAIL OF LIFTING HOLE
1/2



DETAIL OF LIFTING HOLE
1/2



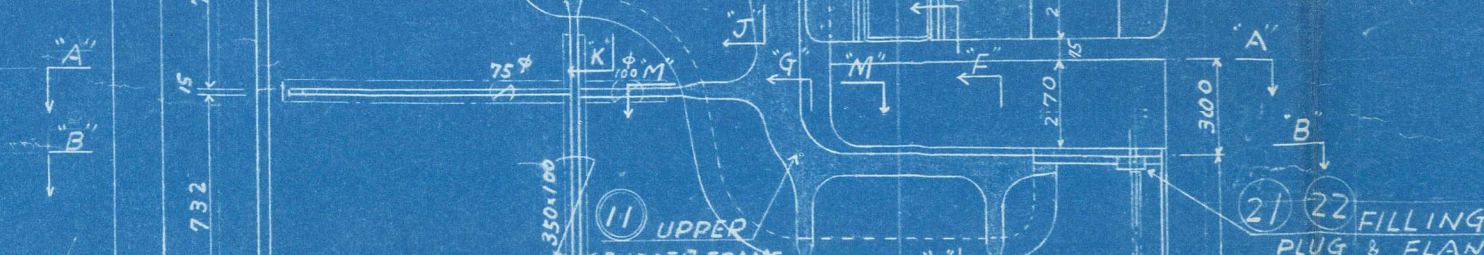
DETAIL OF LIFTING HOLE
1/2



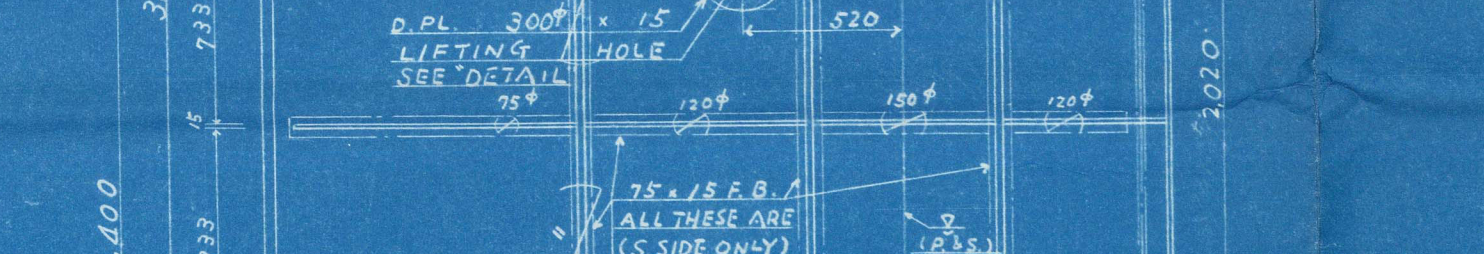
DETAIL OF LIFTING HOLE
1/2



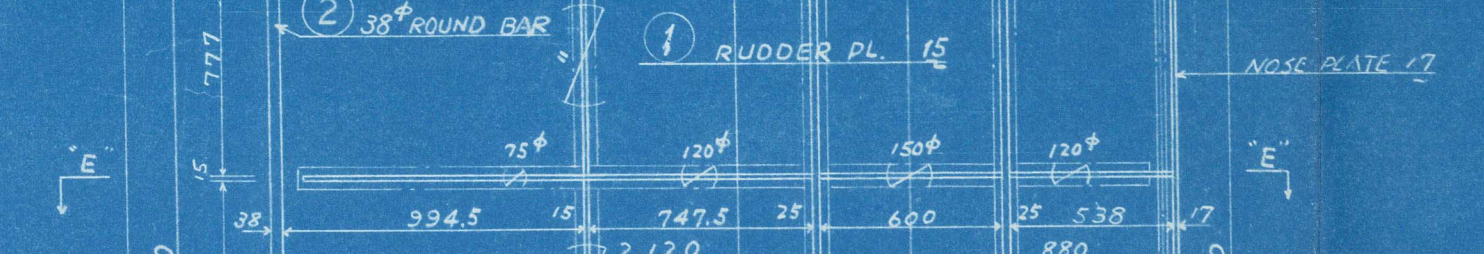
DETAIL OF LIFTING HOLE
1/2



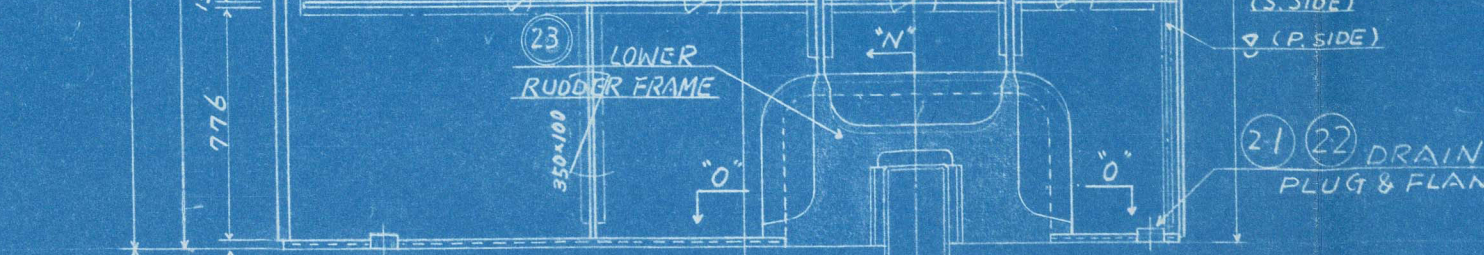
DETAIL OF LIFTING HOLE
1/2



DETAIL OF LIFTING HOLE
1/2



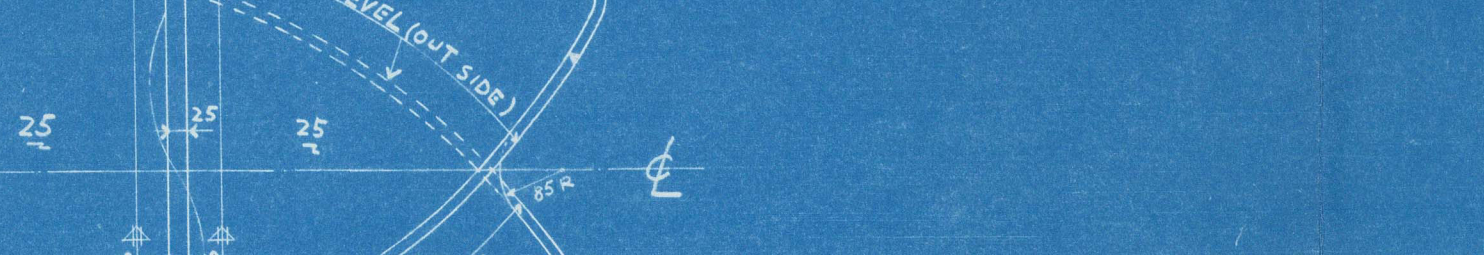
DETAIL OF LIFTING HOLE
1/2



DETAIL OF LIFTING HOLE
1/2



DETAIL OF LIFTING HOLE
1/2



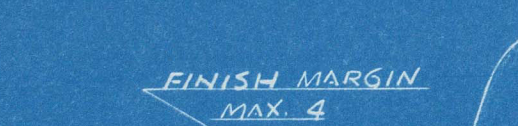
DETAIL OF LIFTING HOLE
1/2



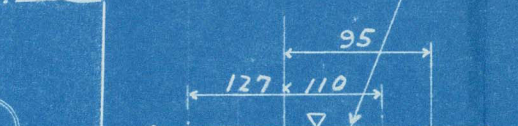
DETAIL OF LIFTING HOLE
1/2



SEC. X-X'



SEC. Y-Y'



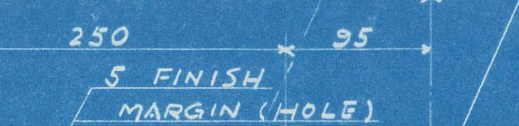
SEC. Z-Z'



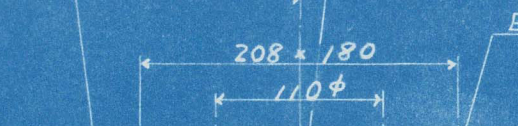
SEC. AA'



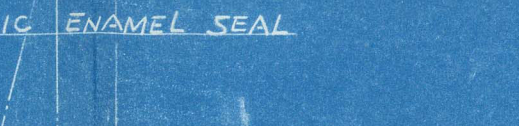
SEC. BB'



SEC. CC'



SEC. DD'



SEC. EE'



SEC. FF'



SEC. GG'



SEC. HH'



SEC. II'



SEC. JJ'



SEC. KK'



SEC. LL'



SEC. MM'



SEC. NN'



SEC. OO'



SEC. PP'



SEC. QQ'



SEC. RR'



SEC. SS'



SEC. TT'



SEC. UU'



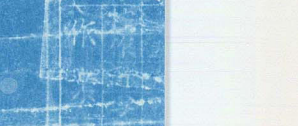
SEC. VV'



SEC. WW'



SEC. XX'



SEC. YY'



SEC. ZZ'



SEC. AA'



SEC. BB'



SEC. CC'



PRINCIPAL PARTICULARS

LENGTH BETWEEN P.P. (L)	13'0.00
BREADTH SHOULDER (B)	1'7.60
DEPTH SHOULDER (D)	1'0.70
DRAUGHT SHOULDER (d)	7'6.00
TRIAL SPEED (S)	12.00
SEA SPEED (S)	12.00
RUDDER TOTAL AREA (A)	15.00
RUDDER AREA ABOUT C.L. OF PIVOT (A ₁)	11.50
BEFORE (A ₂)	4.50
RATIO (A ₁ /A ₂)	2.56
BALANCING RATIO	1.74
DISTANCE FROM THE C.L. OF RUDDER HEAD TO C.L. OF PIVOT (P)	0.60
DIAMETER OF RUDDER HEAD (C.M.A. L. P. = 0.60)	0.60
INSTANTANEOUS MOMENT (AT 12.00 SPEED) (M)	16.00

MATERIAL LIST

NO.	ITEM	MATERIAL	QTY.	UNIT	REMARKS
1	RUDDER PL.	L.K.S. 41	1	PC	
2	RUDDER HT. EDGE ROUNDED BAR	L.K.S. 41	1	PC	
3	RUDDER HEAD	L.K.S. 41	1	PC	
4	STE. BOLT HOLE COVER (FOR RUDDER HEAD)	S.F. 45	1	PC	
5	STE. BOLT (FOR RUDDER HEAD)	S.F. 45	1	PC	
6	BRASS SLEEVE (FOR RUDDER HEAD)	B.C. 3	1	PC	
7	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
8	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
9	COUPLING KEY	S.F. 45	1	PC	
10	W. SET SCREW (FOR COUPLING KEY)	W. 8.8	1	PC	
11	UPPER RUDDER FRAME	L.K.S. 41	1	PC	
12	UPPER RUDDER FRAME	L.K.S. 41	1	PC	
13	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
14	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
15	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
16	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
17	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
18	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
19	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
20	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
21	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
22	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	
23	STE. BOLT H. OUT (FOR COUPLING)	S.F. 45	1	PC	

NOTE:
1. RUDDER DIMENSIONS TO BE TESTED BY COMPRESSION W/P.
2. CERTIFICATES TO BE REQUIRED FOR MARKED ITEMS.
3. FOR THE RING PLATE ARRANGEMENT SEE ANOTHER PLAN.

MATERIAL LIST					
NO.	ITEM	QTY.	UNIT	REMARKS	
24	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
25	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
26	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
27	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
28	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
29	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
30	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
31	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
32	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
33	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
34	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
35	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
36	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
37	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
38	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
39	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
40	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
41	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
42	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
43	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
44	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
45	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
46	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
47	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
48	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
49	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
50	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
51	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
52	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
53	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
54	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
55	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
56	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
57	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
58	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
59	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
60	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
61	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
62	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
63	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
64	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
65	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
66	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
67	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
68	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
69	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
70	STE. BOLT H. OUT (FOR COUPLING)	1	PC		
71	STE. BOLT H. OUT (FOR COUPLING)	1	PC		

ロイド行

RECORDS DEPT.
LONDON

7

Kobe Rpt. No.	FE 8236
Port of Survey	TAMANO
Name of ship	NAGAOSAN MARU
Title of man	RUDDER



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Lloyd's Register
Foundation

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