KELVIN & HUGHES STRESS FINDER

003706-0031110204

NAME OF SHIP REGENT JAGUAR BUILDERS YARD NUMBER Blythswood No 63 OWNERS C.T. Bowring

Built :- 1941 DIMENSIONS:— LENGTH 460' BREADTH 61' DEPTH 33' - 3"

TYPE 2A

WEIGHT OF STEEL & OUTFIT	4108	x.24 L	460·00	=	453523
" " MACHINERY & BOILERS	722	xLCG #	173·90	=	125556
" " SHAFTING & PROP.		x "		=	
" " LIGHT SHIP	4830	LCG #	27·26	2	579079
			½ MOMENT	=	289540

(1) ½△LOAD x MEAN LCB LOAD = 8393 x 94·53 = 793390

(2) ½△LIGHT x " " LIGHT = 2415 x 87·78 = 211989

(1)-(2) 581401

$\frac{I}{Y}$ = 28000

$X = \frac{2 \times TRAVEL \times \frac{I}{Y}}{\triangle LOAD \times MLCB - \triangle LIGHT \times MLCB} = \frac{2 \times 9 \times 28000}{1162802} = 43344$

$Y = \frac{\frac{1}{2} MOMENT\ LIGHT\text{-}SHIP - \frac{1}{2}\triangle LIGHT \times MLCB}{\frac{I}{Y}} \times X = \frac{44551 \times 43344}{28000} = 1·201$

$A = \frac{\frac{1}{2}\triangle LOAD \times MLCB \times X}{\frac{I}{Y}} = \frac{793390 \times 43344}{28000} = 12·282$ "

$B = \frac{\frac{1}{2}\triangle LIGHT \times MLCB \times X}{\frac{I}{Y}} = \frac{211989 \times 43344}{28000} = 3·282$ "

A - B = 9

TRAVERSE & EFFECTIVE DIAMETER OF WHEELS

FOR'D. OF # :-

$\frac{\frac{1}{2} TOTAL\ MOMENT \times TRAVEL}{\frac{1}{2}\triangle LOAD \times MLCB - \frac{1}{2}\triangle LIGHT \times MLCB} = \frac{56921 \times 9}{581401} = 8·714$

∴ DIA. WHEEL = $\frac{}{3.142}$ = 2·773

AFT OF #

$\frac{\frac{1}{2} TOTAL\ MOMENT \times TRAVEL}{\frac{1}{2}\triangle LOAD \times MLCB - \frac{1}{2}\triangle LIGHT \times MLCB} = \frac{301050 \times 9}{581401} = 4·660$

∴ DIA. WHEEL = $\frac{}{3.142}$ = 1·483

DRAFT LINES = $\frac{DW\ @\ DRAFT}{DW\ @\ LOAD} \times RANGE$

D	△	DEAD WEIGHT	D.LINE ABOVE 0
8-9	4830	0	
9	4976	146	
10	5595	765	
11	6220	1390	
12	6850	2020	
13	7483	2653	
14	8120	3290	
15	8761	3931	
16	9405	4575	
17	10052	5222	
18	10703	5873	
19	11357	6527	
20	12015	7185	
21	12678	7848	
22	13346	8516	
23	14018	9188	
24	14694	9864	
25	15375	10545	
26	16061	11231	
27	16752	11922	
27-0½	16785	11955	
28	17449	12619	

DIVISION = $\frac{MOMENT\ OF\ SPACE}{TOTAL\ MOMENT\ For'd\ or\ Aft} \times 360° = ...°$

COMPARTMENT	TONS	TONS ROUNDED UP	L.C.G.	MOMENTS	DIV'S.°
DIAL	PARTICULARS	SENT	TO		
BARKINGSIDE		27-11-56			

TRIM LINES

D	△	L.C.B. Fd. + [redacted]	m △ x LCB	M L'ht. SHIP MOMENT	M ± m	x EVEN KEEL $\frac{X}{2\frac{I}{Y}}$	MCT 1"	x 12 MCT 1'	x $\frac{X}{2\frac{I}{Y}}$	2'	4'	6'	8'
8-9	4830	12·50	60375	131666	192041	1·486	1265	15180	·1175	·235	·470	·705	·940
12	6850	11·68	80008		211674	1·638	1345	16140	·1249	·250	·500	·750	·999
16	9405	10·66	100257		231923	1·795	1424	17088	·1323	·265	·529	·794	1·058
20	12015	9·55	114763		246609	1·907	1513	18156	·1405	·281	·562	·843	1·124
24	14694	8·16	119903		251569	1·947	1655	19860	·1537	·307	·615	·922	1·230
27-0½	16785	6·95	116656		248322	1·922	1755	21060	·1630	·326	·652	·978	1·304
28	17449	6·50	113449		245085	1·897	1791	21492	·1663	·333	·665	·998	1·330

D	10'	12'	14'	16'
8-9	1·175	1·410	1·645	1·880
12	1·249	1·499	1·750	1·998
16	1·323	1·588	1·852	2·117
20	1·405	1·686	1·967	2·248
24	1·537	1·844	2·152	2·459
27-0½	1·630	1·956	2·282	2·608
28	1·663	1·996	2·328	2·661

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STRESS LINES

D	½△ x MLCB x X ÷ $\frac{I}{Y}$				-(Y+B)		MEASURED HORIZONTALLY From Y ZERO	From ZERO Tons 1·5-2·5	Tons 2-3
8-9	2415	87·78	211989		3·282	4·483	-1·201	·650	·867
12	3425	89·08	305099		4·723		+ ·240	·723	·940
16	4703	90·24	424399		6·570		2·087	·816	1·033
20	6008	91·37	548951		8·498		4·015	·910	1·127
24	7347	92·80	681802		10·554		6·071	1·008	1·225
27-0½	8393	94·53	793390		12·282		7·799	1·083	1·300
28	8725	95·13	830009		12·849		8·366	1·108	1·325

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ORDER RECEIVED SB 11061 INDENT No.

1st. DATA " COMPLETED

1st. DATA to WORKS INSPECTED

FINAL DATA RECEIVED DESPATCHED

FINAL DATA to WORKS SERIAL No.

REGENT JAGUAR

Regent Jaguar

003706-003711-0204