

- (1) 20 sq" additional plating in bottom
- (2) 24 sq" " " " " Top
- (3) Trunk sides & top of Chrome bld to be .60
- (4) Extra Internal Keelson in bottoms

RETAIN

The thickness of the plating ~~was~~ of trunk sides, ~~is~~ ~~had~~ ~~by~~ ~~stroke~~ ~~finally~~, Middle stroke of shelter deck plating was finally decided to be .54.

X Deck plating mean = 70×12
= 8.4

W1196-0127

Full draft

28-3/8 mld.

MODULUS OF SECTION

NAME:—

Particulars of Vessel

"LINERTON"

411.5 x 55.16 x 29.0 to upper deck
37.0 to shelter deck.

Height of Assumed Axis above Keel

BELOW ASSUMED AXIS.								ABOVE ASSUMED AXIS.							
ITEM.	SCANTLING.	AREA.	h.	Ah.	Ah ² .	d.	Ad ² .	ITEM.	SCANTLING.	AREA.	h.	Ah.	Ah ² .	d.	Ad ² .
FLAT KEEL ...	23.5 x 1.02 ✓	23.95	17.50	419.0	7340	—	—	shelter plate TOP DECK STRINGER	1/2 x 30 x 40 ✓	6.00	13.0	169.0	1015	—	—
" " " "	—	—	—	—	—	—	—	" " STINGER	58 x 58 ✓	33.60	20.0	642.0	13440	—	—
CENTRE GIRDER PLATE	1/2 x 44 x 52 ✓	11.42	15.20	144.0	2645	3.66	153	" " ANGLE	6 x 6 x 50 ✓	5.75	20.1	115.5	2320	—	—
" " BOTTOM ANGLES	1/2 @ 6 x 6 x 66 ✓	3.74	16.90	63.2	1066	—	—	" " PLATING	266 x 42 ✓	111.80	20.7	2315.0	47850	—	—
" " TOP ANGLES	1/2 @ 6 x 6 x 66 ✓	3.74	13.50	50.5	682	—	—	2ND DECK STRINGER	60 x 48 ✓	28.80	12.1	349.0	4220	—	—
CENTRE STRAKE TANK TOP	22 x 52 ✓	11.42	13.40	153.2	2055	—	—	" " ANGLE	20 x 50 ✓	10.00	12.1	121.0	1465	—	—
MARGIN PLATE	38 x 48 ✓	18.25	14.80	240.0	4000	3.0	163	" " PLATING	152 x 46 ✓	60.80	12.8	160.0	9500	—	—
" " ANGLES	1 @ 3 1/2 x 3 1/2 x 55 ✓	3.55	16.00	56.8	910	—	—	3RD DECK STRINGER	1/2 x 50 x 50 ✓	12.50	18.7	234.0	4375	4.2	220
BOTTOM PLATING	276 x 60 ✓	165.50	16.80	2480.0	46700	—	—	" " ANGLE	1/2 x 54 x 38 ✓	10.25	14.7	151.0	2220	4.5	208
BILGE PLATING	120 x 64 ✓	76.80	14.00	1075.0	15050	7.0	3460	" " PLATING	1/2 x 130 x 40 ✓	26.00	7.5	194.5	1458	10.8	3040
SIDE PLATING	126 x 68 ✓	85.60	5.0	428.0	2140	10.5	9400	4TH DECK STRINGER	1/2 x 31 x 42 ✓	6.52	1.3	8.5	11	2.5	41
TANK TOP PLATING	126 x 40 ✓	50.40	13.4	675.0	9050	—	—	" " ANGLE	1/2 x 5 x 5 x 50 ✓	2.38	20.8	49.5	1030	—	—
No. 1 SIDE STRINGER PLATE	20 x 54 ✓	10.80	6.0	64.8	389	—	—	" " PLATING	1/2 x 24 x 42 ✓	5.04	3.4	14.2	58	—	—
" " " " ANGLES	1 @ 7 x 3 1/2 x 62 ✓	6.65	6.2	41.2	256	—	—	SHEER STRAKE	1/2 x 8 x 1/2 x 50 ✓	3.12	3.2	10.0	32	—	—
No. 2 " " " " PLATE	1/2 x 66 x 60 ✓	19.80	10.6	210.0	2225	5.5	600	SHEER STRAKE	66 x 78 ✓	51.40	17.7	910.0	16100	5.5	1550
" " " " ANGLES	1/2 x 66 x 44 ✓	14.50	5.5	49.8	438	5.5	440	STRAKE BELOW SHEER STRAKE	66 x 68 ✓	44.80	12.7	570.0	1250	5.5	1360
No. 3 " " " " PLATE	1/2 x 36 x 42 ✓	7.56	1.8	13.6	25	3.0	68	SHELL PLATING	130 x 68 ✓	88.40	5.25	468.0	2455	10.8	10250
" " " " ANGLES	1/2 @ 5 x 5 x 52 ✓	2.46	13.1	32.2	422	—	—	SIDE STRINGER PLATE	20 x 54 ✓	10.80	3.50	37.8	133	—	—
SIDE KEELSON PLATE	2 x 9 x 50 ✓	9.00	13.0	117.0	1520	—	—	Face Bulk ANGLE	1/2 x 3 1/2 x 62 ✓	6.65	3.30	21.9	42	—	—
" " TOP ANGLES	4 @ 9 x 3 1/2 x 50 ✓	27.76	13.2	366.0	4840	—	—	Trunk side	96 x 50 ✓	48.00	16.7	802.0	13380	8.0	243
Centre line girder	1/2 x 28 x 46 ✓	6.45	6.0	38.6	232	—	—	angle at top of trunk	1 @ 3 1/2 x 3 1/2 x 48 ✓	3.13	20.5	64.2	1315	—	3070
Face to A	1/2 x 8 x 3 1/2 x 50 ✓	3.12	6.2	19.4	120	—	—	TOTALS ABOVE ASSUMED AXIS.		575.44		4949.1	129699		19739
TOTALS BELOW ASSUMED AXIS.		562.47		7127.3	102105		14584	" " BELOW ASSUMED AXIS.		562.47		8207.5	134478		20000
								SUM OR DIFFERENCE		1138.21		821.8	231804		34323
								Ad ² /12		1151.41	.714	1080.2	2860		2850

$$f_1 = \frac{25000}{55.16 \times 28.3} = 16.0$$

See Balfour's curves

N.B.—The assumed axis is to be taken below lowest deck. The Top Deck is the uppermost strength deck, and other decks are to be numbered from that deck.

SUMMARY.		
MOMENT OF INERTIA ABOUT ASSUMED AXIS	(1.)	239463
NEUTRAL AXIS ABOVE ASSUMED AXIS (x)	(2.)	7.14
TOTAL AREA x x ²	(3.)	586
CORRECTED INERTIA (ONE SIDE ONLY) = (1.) - (3.)	(4.)	238448
CORRECTED INERTIA (BOTH SIDES)		476896
VALUE OF "Y" AT HEEL OF GUNWALE BAR		19.06
MODULUS OF SECTION AT GUNWALE		24250
VALUE OF "Y" AT KEEL		17.91
MODULUS OF SECTION AT KEEL		

Initials

Log Craig 2/11/20

Date

Checked by M. Jackson 2/11/20



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