

Calculations of Latitudinal, or Transverse, Metacentres and Centres of Buoyancy of the Composite Tea Clipper "Cutty Sark," built at Dumbarton by Messrs Scott & Linton in 1869, under the Special Survey of the Surveyors to Lloyd's Register of Shipping, and Classed +16A1.

THESE CALCULATIONS HAVE BEEN MADE FROM THE LINES OF THE VESSEL CONSTRUCTED FROM MEASUREMENTS AND PARTICULARS OF THE VESSEL OBTAINED WHILE IN DRY DOCK AT THE "UNION DOCKS" OF MESSRS FLATHER, SON & FEARNELL, LIMITED, LIMEHOUSE, LONDON, JANUARY 1922.

CHAS. H. JORDAN, M. Inst. N. A.

Sections	2 nd Water Line.			3 rd Water Line			20 th Water Line.		
	Ords.	Cubes.	Meta Functions.	Ords.	Cubes.	Meta Functions.	Ords.	Cubes.	Meta Functions.
Sum	0	10	1	0	0	1	0	10	1
1	1.5	3.4	4	13.6	2.3	12.2	4	42.8	3.4
2	3.6	46.7	2	93.4	5.2	140.6	2	281.2	6.7
3	6.2	232.3	4	953.2	8.2	551.4	4	2205.6	9.7
4	8.9	708.0	2	1410.0	11.1	1367.6	2	2735.2	12.6
5	11.6	1421.5	4	5926.0	13.5	2460.4	4	9841.6	16.6
6	13.7	2571.4	2	5162.8	15.4	3652.3	2	7304.6	16.0
7	15.3	3521.6	4	14326.4	16.6	4570.3	4	18297.2	16.2
8	16.4	4410.9	2	8221.2	17.3	5177.7	2	10355.4	17.3
9	17.1	5060.2	4	20000.8	17.7	5565.2	4	22180.8	17.5
10	17.4	5268.0	2	10536.0	18.0	5832.0	2	11664.0	17.7
11	17.3	5177.7	4	20710.2	18.0	5832.0	4	23328.0	17.7
12	16.8	4741.6	2	9483.2	17.8	5639.2	2	11279.6	17.6
13	15.8	3964.3	4	15777.2	17.4	5268.0	4	21072.0	17.4
14	14.3	2924.2	2	5848.4	16.6	4570.3	2	9162.6	17.0
15	12.2	1815.8	4	7263.2	15.2	3511.2	4	14067.2	16.4
16	9.7	912.7	2	1825.4	13.2	2300.0	2	4600.0	15.2
17	6.8	314.4	4	1257.6	10.4	1124.9	4	4499.6	13.4
18	4.1	68.9	2	137.2	6.7	328.5	2	657.0	10.5
19	1.9	6.9	4	27.6	3.3	35.9	4	143.6	6.3
Sum	0	1	1	1	0	1	0	1	1
			129555.3						
			10.5						
			6477765						
			1295553						
			3/1366330.45						
			483443.55						
			2						
			3/906227.10						
			25645.82						
			11.77						
			Metacentre above						
			Centre of Buoy						
			at 24 ft. W.L.						
			11.77						
			173690.1						
			10.8						
			8684505						
			1736901						
			3/1823746.05						
			607915.55						
			2						
			3/1215030.70						
			48426.53						
			2.56						
			Metacentre above						
			Centre of Buoy						
			at 24 ft. W.L.						
			2.56						
			191797.9						
			10.8						
			9529295						
			1917979						
			3/2013877.95						
			671292.65						
			2						
			3/1342583.30						
			78498.63						
			6.08						
			Metacentre above						
			Centre of Buoy						
			at 20 feet W.L.						
			6.08						

$$\begin{aligned}
 410.1 \times 1 &= 410.1 \times 0 \\
 206.3 \times 4 &= 825.2 \\
 41.1 \times 1 &= 41.1 \times 2 = 82.2 \\
 1276.4 &= 1276.4 \\
 3.35 &= 3.35 \\
 355 &= 355 \\
 213 &= 213 \\
 142 &= 142 \\
 1.6685 &= 1.6685 \\
 \text{C. of Buoy. below} &= 10 \text{ ft. W.L.}
 \end{aligned}$$

$$\begin{aligned}
 632.8 \times 1 &= 632.8 \times 0 \\
 410.1 \times 4 &= 1640.4 \times 1 = 1640.4 \\
 41.1 \times 1 &= 41.1 \times 2 = 82.2 \\
 2313.2 &= 2313.2 \\
 74 &= 74 \\
 4.7 &= 4.7 \\
 5.2 &= 5.2 \\
 324 &= 324 \\
 3.478 &= 3.478 \\
 \text{C. of Buoy. below} &= 27 \text{ ft. W.L.}
 \end{aligned}$$

$$\begin{aligned}
 733.9 \times 1 &= 733.9 \times 0 \\
 632.8 \times 3 &= 1898.4 \times 1 = 1898.4 \\
 410.1 \times 3 &= 1230.3 \times 2 = 2460.6 \\
 41.1 \times 1 &= 41.1 \times 2 = 82.2 \\
 3982.2 &= 3982.2 \\
 1.76 &= 1.76 \\
 4.7 &= 4.7 \\
 7.6 &= 7.6 \\
 5.355 &= 5.355 \\
 \text{C. of Buoy. below} &= 37 \text{ ft. W.L.}
 \end{aligned}$$

$$\begin{aligned}
 793.7 \times 1 &= 793.7 \times 0 \\
 733.9 \times 4 &= 2935.6 \times 1 = 2935.6 \\
 632.8 \times 2 &= 1265.6 \times 2 = 2531.2 \\
 410.1 \times 4 &= 1640.4 \times 3 = 4921.2 \\
 41.1 \times 1 &= 41.1 \times 4 = 164.4 \\
 6079.1 &= 6079.1 \\
 1.76 &= 1.76 \\
 4.7 &= 4.7 \\
 7.6 &= 7.6 \\
 5.355 &= 5.355 \\
 \text{C. of Buoy. below} &= 47 \text{ ft. W.L.}
 \end{aligned}$$



© 2014 Lloyd's Register Foundation