

Calculations of Latitudinal, or Transverse, Metacentres and Centres of Buoyancy of the Composite Sea 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 DOCK" OF MESSRS FLETCHER, SON & FARNELL, LIMITED, LIMEHOUSE, LONDON, JANUARY, 1922.

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

2 nd Water Line.				3 rd Water Line				20 th Water Line.				
Ords.	Cubes.	Meta Functions.		Ords.	Cubes.	Meta Functions.		Ords.	Cubes.	Meta Functions.		
0	0	1	0	0	0	1	0	0	0	1	0	
1	2.5	3.4	4	10.6	2.3	12.2	4	62.8	3.4	39.3	4	157.2
2	5.6	46.7	2	93.4	5.2	140.6	2	281.2	6.7	360.8	2	601.6
3	6.2	238.3	4	953.2	7.2	551.4	4	2265.6	9.7	912.7	4	3650.8
4	8.9	705.0	2	1410.0	11.1	1367.6	2	2735.2	12.6	1906.6	2	3213.2
5	11.4	1421.5	4	5926.0	13.5	2460.4	4	9841.6	16.4	2986.0	4	11964.0
6	12.7	2571.4	2	5162.8	15.4	3652.3	2	7306.6	16.0	4096.0	2	2192.0
7	15.3	3521.6	4	16326.4	16.6	4670.3	4	18297.2	16.8	4741.6	4	12966.4
8	16.6	4610.9	2	2221.8	17.3	5177.7	2	10355.4	17.3	5177.7	2	10355.4
9	17.1	5700.2	4	20000.2	17.7	5565.2	4	22180.8	17.5	5359.4	4	21637.6
10	17.4	5268.0	2	10536.0	18.0	5832.0	2	11644.0	17.7	5545.2	2	11090.4
11	17.3	5177.7	4	20710.2	18.0	5832.0	4	22328.0	17.7	5545.2	4	22180.8
12	16.8	4741.6	2	9483.2	17.8	5639.2	2	11279.4	17.6	5451.8	2	10903.6
13	15.8	3964.3	4	15777.2	17.4	5268.0	4	21072.0	17.4	5268.0	4	21072.0
14	16.3	2924.2	2	5848.4	16.6	4670.3	2	9168.6	17.0	4912.0	2	9226.0
15	12.2	1815.2	4	7263.2	15.2	3511.8	4	14067.2	16.4	4610.9	4	17443.6
16	9.7	912.7	2	1825.4	13.2	2300.6	2	4600.0	15.2	3511.8	2	7023.6
17	6.8	314.4	4	1257.6	10.4	1126.9	4	4499.6	13.4	2606.1	4	9624.6
18	4.1	62.9	2	137.2	6.9	322.5	2	657.0	12.5	1157.6	2	2315.2
19	1.9	6.9	4	27.6	3.3	35.9	4	143.6	6.3	250.0	4	1000.0
Sum	2	1	1	1	5	1	1	5	1	1	1	
<div>129555.3 10.5 64777.65 129555.3 3/1360330.65 453643.55 2 3/966887.10 25465.22 11.77</div>				<div>173690.1 10.5 86245.05 173690.1 3/1823746.05 607915.35 2 3/1215230.70 48426.53 2.36</div>				<div>191797.9 10.5 95292.95 191797.9 3/2013277.95 671292.26 2 3/1342228.30 73492.63 6.08</div>				
Metacentre above Centre of Buoy at 24 ft. W.L.				Metacentre above Centre of Buoy at 27 ft. W.L.				Metacentre above Centre of Buoy at 30 ft. W.L.				

$$\begin{aligned}
 410.1 \times 1 &= 410.1 \times 0 \\
 246.3 \times 4 &= 985.2 \times 1 = 985.2 \\
 41.1 \times 1 &= 41.1 \times 2 = 82.2 \\
 1276.4 & \quad 1907.4 \\
 71 & \\
 2.35 & \\
 35 & \\
 2.13 & \\
 145 & \\
 1.665 & \\
 \text{C. of Buoy. below} & \\
 10 \text{ ft. W.L.} &
 \end{aligned}$$

$$\begin{aligned}
 632.3 \times 1 &= 632.3 \times 0 \\
 410.1 \times 4 &= 1640.4 \times 1 = 1640.4 \\
 41.1 \times 1 &= 41.1 \times 2 = 82.2 \\
 2312.2 & \quad 1722.6 \\
 74 & \\
 4.7 & \\
 5.12 & \\
 2.94 & \\
 3.478 & \\
 \text{C. of Buoy. below} & \\
 27 \text{ ft. W.L.} &
 \end{aligned}$$

$$\begin{aligned}
 733.9 \times 1 &= 733.9 \times 0 \\
 632.3 \times 3 &= 1896.9 \times 1 = 1896.9 \\
 410.1 \times 3 &= 1230.3 \times 2 = 2460.6 \\
 41.1 \times 1 &= 41.1 \times 2 = 82.2 \\
 3962.2 & \quad 10420.2 \\
 1.14 & \\
 6.7 & \\
 7.92 & \\
 4.54 & \\
 5.382 & \\
 \text{C. of Buoy. below} & \\
 30 \text{ ft. W.L.} &
 \end{aligned}$$

$$\begin{aligned}
 793.7 \times 1 &= 793.7 \times 0 \\
 733.9 \times 4 &= 2935.6 \times 1 = 2935.6 \\
 632.3 \times 2 &= 1264.6 \times 2 = 2529.2 \\
 410.1 \times 4 &= 1640.4 \times 2 = 3280.8 \\
 41.1 \times 1 &= 41.1 \times 4 = 164.4 \\
 6478.4 & \quad 10380.4 \\
 1.58 & \\
 6.7 & \\
 11.06 & \\
 6.52 & \\
 7.426 & \\
 \text{C. of Buoy. below} & \\
 26 \text{ ft. W.L.} &
 \end{aligned}$$



© 2018

Lloyd's Register
Foundation