

Design hydrostatics report.

Designer

Created by

Comment

Filename

New model 10.fbm

Design length	6.500 (m)	Midship location	3.250 (m)
Length over all	6.528 (m)	Relative water density	1.025
Design beam	1.100 (m)	Mean shell thickness	0.0000 (m)
Maximum beam	1.109 (m)	Appendage coefficient	1.0000
Design draught	0.360 (m)		

Volume properties		Waterplane properties	
Moulded volume	1.783 (m ³)	Length on waterline	6.471 (m)
Total displaced volume	1.783 (m ³)	Beam on waterline	1.049 (m)
Displacement	1.828 (tonnes)	Entrance angle	44.199 (Degr.)
Block coefficient	0.6927	Waterplane area	4.924 (m ²)
Prismatic coefficient	0.5976	Waterplane coefficient	0.6887
Vert. prismatic coefficient	1.0058	Waterplane center of floatation	2.929 (m)
Wetted surface area	11.514 (m ²)	Transverse moment of inertia	0.326 (m ⁴)
Longitudinal center of buoyancy	3.329 (m)	Longitudinal moment of inertia	11.714 (m ⁴)
Longitudinal center of buoyancy	1.214 %		
Vertical center of buoyancy	0.126 (m)		

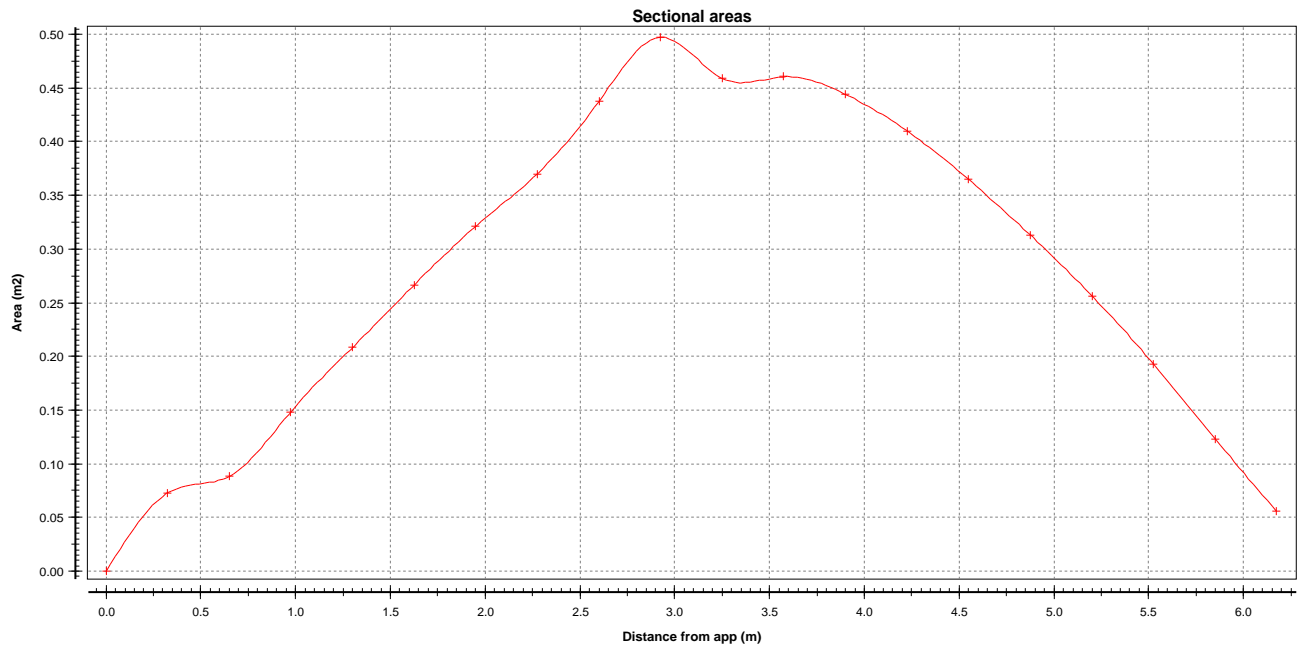
Midship properties		Initial stability	
Midship section area	0.459 (m ²)	Transverse metacentric height	0.309 (m)
Midship coefficient	1.1590	Longitudinal metacentric height	6.696 (m)

Lateral plane	
Lateral area	4.208 (m ²)
Longitudinal center of effort	3.218 (m)
Vertical center of effort	-0.160 (m)

The following layer properties are calculated for both sides of the ship

Location	Area	Thickness	Weight	LCG	TCG	VCG
	(m ²)		(tonnes)	(m)	(m)	(m)
Layer 0	14.073	0.000	0.000	3.419	0.000 (CL)	0.260
Trapezoidal keel 0010	2.369	0.000	0.000	2.766	0.000 (CL)	-0.750
Trapezoidal rudder 0010	0.831	0.000	0.000	0.244	0.000 (CL)	-0.163
Total	17.273		0.000	0.000	0.000 (CL)	0.000

Sectional areas									
Location	Area	Location	Area	Location	Area	Location	Area	Location	Area
(m)	(m ²)	(m)	(m ²)	(m)	(m ²)	(m)	(m ²)	(m)	(m ²)
0.000	0.000	1.300	0.208	2.600	0.438	3.900	0.444	5.200	0.256
0.325	0.073	1.625	0.266	2.925	0.497	4.225	0.410	5.525	0.193
0.650	0.088	1.950	0.321	3.250	0.459	4.550	0.365	5.850	0.123
0.975	0.148	2.275	0.370	3.575	0.461	4.875	0.313	6.175	0.055



NOTE 1: Draught (and all other vertical heights) is measured above base Z=

NOTE 2: All calculated coefficients based on project length, draught and beam.