

Design hydrostatics report.

Designer

Created by

Comment

Filename

Sailboat 35 Beta 316.fbm

Design length 42.000 (ft)

Midship location 21.000 (ft)

Length over all 41.724 (ft)

Relative water density 1.025

Design beam 12.500 (ft)

Mean shell thickness 0.0000 (ft)

Maximum beam 12.832 (ft)

Appendage coefficient 1.0000

Design draught 1.500 (ft)

Volume properties		Waterplane properties	
Moulded volume	295.44 (ft ³)	Length on waterline	34.642 (ft)
Total displaced volume	295.44 (ft ³)	Beam on waterline	11.256 (ft)
Displacement	8.440 (tons)	Entrance angle	27.112 (Degr.)
Block coefficient	0.3752	Waterplane area	272.50 (ft ²)
Prismatic coefficient	0.5607	Waterplane coefficient	0.5191
Vert. prismatic coefficient	0.7228	Waterplane center of floatation	15.914 (ft)
Wetted surface area	299.33 (ft ²)	Transverse moment of inertia	2005.7 (ft ⁴)
Longitudinal center of buoyancy	15.891 (ft)	Longitudinal moment of inertia	17674 (ft ⁴)
Longitudinal center of buoyancy	-14.747 %		
Vertical center of buoyancy	0.858 (ft)		

Midship properties		Initial stability	
Midship section area	12.545 (ft ²)	Transverse metacentric height	7.647 (ft)
Midship coefficient	0.6691	Longitudinal metacentric height	60.682 (ft)

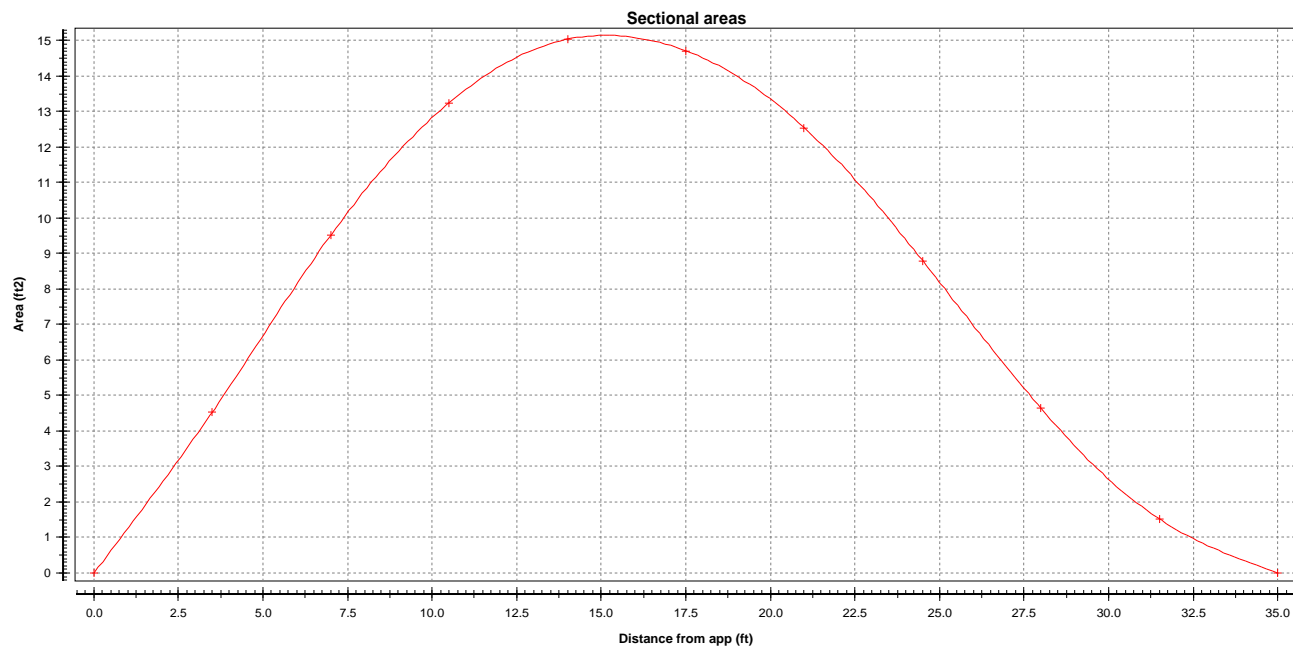
Lateral plane	
Lateral area	44.287 (ft ²)
Longitudinal center of effort	16.528 (ft)
Vertical center of effort	0.776 (ft)

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

Location	Area (ft ²)	Thickness	Weight (tons)	LCG (ft)	TCG (ft)	VCG (ft)
Layer 0	664.51	0.000	0.000	15.659	0.000 (CL)	2.061

Sectional areas

Location (ft)	Area (ft ²)	Location (ft)	Area (ft ²)	Location (ft)	Area (ft ²)	Location (ft)	Area (ft ²)	Location (ft)	Area (ft ²)
0.000	0.001	10.500	13.247	21.000	12.545	31.500	1.514		
3.500	4.531	14.000	15.039	24.500	8.795	35.000	0.000		
7.000	9.512	17.500	14.713	28.000	4.638				



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.