

Design hydrostatics report

Designer			
Created by			
Comment			
Filename		Bumerang20_blue_3_bulk_DS.fbm	
Design length	6,000 (m)	Midship location	3,000 (m)
Length over all	6,000 (m)	Relative water density	1,0250
Design beam	4,200 (m)	Mean shell thickness	0,0000 (m)
Maximum beam	3,995 (m)	Appendage coefficient	1,0000
Design draft	0,300 (m)		

Volume properties		Waterplane properties	
Moulded volume	1,183 (m³)	Length on waterline	5,895 (m)
Total displaced volume	1,183 (m³)	Beam on waterline	3,592 (m)
Displacement	1,212 (tonnes)	Entrance angle	0,000 (Degr.)
Block coefficient	0,1565	Waterplane area	6,054 (m²)
Prismatic coefficient	0,7033	Waterplane coefficient	0,2402
Vert. prismatic coefficient	0,6514	Waterplane center of floatation	2,393 (m)
Wetted surface area	9,749 (m²)	Transverse moment of inertia	12,927 (m⁴)
Longitudinal center of buoyancy	2,416 (m)	Longitudinal moment of inertia	12,418 (m⁴)
Longitudinal center of buoyancy	-9,907 %		
Vertical center of buoyancy	0,187 (m)		

Midship properties		Initial stability	
Midship section area	0,280 (m²)	Transverse metacentric height	11,116 (m)
Midship coefficient	0,2225	Longitudinal metacentric height	10,685 (m)

Lateral plane	
Lateral area	0,000 (m²)
Longitudinal center of effort	0,000 (m)
Vertical center of effort	0,000 (m)

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

Location	Area (m²)	Thickness (m)	Weight (tonnes)	LCG (m)	TCG (m)	VCG (m)
Bottom	4,273	0,007	0,022	2,248	0,000 (CL)	0,072
Chine	11,639	0,007	0,061	3,062	0,000 (CL)	0,315
Step	2,156	0,007	0,011	2,726	0,000 (CL)	0,534
Transom_down	0,369	0,007	0,002	0,519	0,000 (CL)	0,380
Transom_up	1,311	0,006	0,006	0,406	0,000 (CL)	0,856
Board_int	6,617	0,005	0,025	2,918	0,000 (CL)	0,820
Board_out	6,610	0,005	0,025	2,918	0,000 (CL)	0,820
Deck	1,450	0,006	0,007	4,971	0,000 (CL)	1,185
Cabin	12,912	0,004	0,039	2,477	0,000 (CL)	1,428
Window	1,705	0,008	0,010	2,380	0,000 (CL)	1,386
Bridge	3,791	0,008	0,023	1,681	0,000 (CL)	0,722
Cocpit	6,465	0,006	0,029	1,782	0,000 (CL)	0,987
Tube	2,183	0,004	0,024	2,645	0,000 (CL)	1,171
Beam	5,379	0,006	0,024	3,337	0,000 (CL)	1,084
Bulkheads	9,876	0,010	0,064	2,456	0,000 (CL)	0,670
Deck_int	10,549	0,006	0,041	2,411	0,000 (CL)	0,461
Total	87,285		0,414	2,567	0,000 (CL)	0,756











