

Design hydrostatics report

KNM Odin

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Created by			
Comment			
Filename	KNM Odin Runde 2 Ferdig.fbm		
Design length	89,000 (m)	Midship location	44,500 (m)
Length over all	96,753 (m)	Relative water density	1,0250
Design beam	16,200 (m)	Mean shell thickness	0,0280 (m)
Maximum beam	16,207 (m)	Appendage coefficient	1,0000
Design draft	5,000 (m)		

Volume properties		Waterplane properties	
Moulded volume	5026,19 (m ³)	Length on waterline	90,942 (m)
Total displaced volume	5077,78 (m ³)	Beam on waterline	16,192 (m)
Displacement	5204,72 (tonnes)	Entrance angle	64,289 (Degr.)
Block coefficient	0,7044	Waterplane area	1280,1 (m ²)
Prismatic coefficient	0,7084	Waterplane coefficient	0,8879
Vert. prismatic coefficient	0,7853	Waterplane center of floatation	40,831 (m)
Wetted surface area	1842,4 (m ²)	Transverse moment of inertia	24670 (m ⁴)
Longitudinal center of buoyancy	44,128 (m)	Longitudinal moment of inertia	695517 (m ⁴)
Longitudinal center of buoyancy	-0,409 ‰		
Vertical center of buoyancy	2,741 (m)		

Midship properties		Initial stability	
Midship section area	80,5 (m ²)	Transverse metacentric height	7,649 (m)
Midship coefficient	0,9944	Longitudinal metacentric height	141,12 (m)

Lateral plane	
Lateral area	424,8 (m ²)
Longitudinal center of effort	45,978 (m)
Vertical center of effort	2,551 (m)

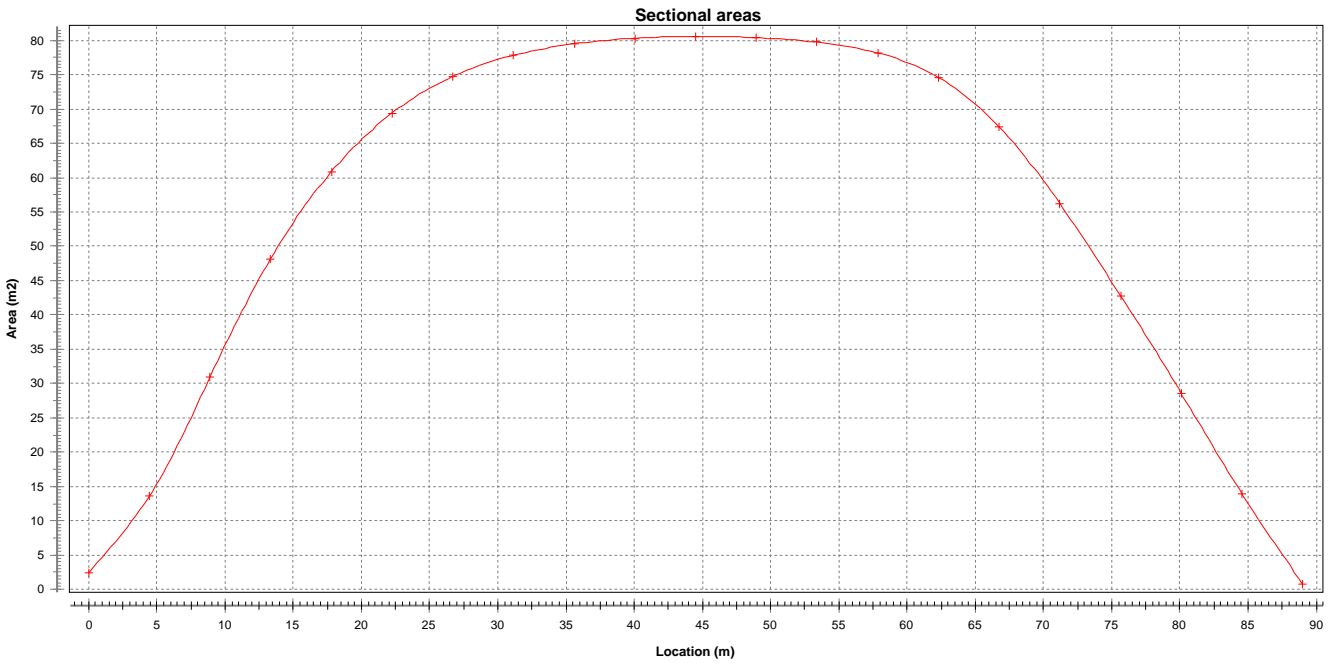
The following layer properties are calculated for both sides of the ship

Location	Area	Thickness	Weight	LCG	TCG	VCG
	(m ²)	(m)	(tonnes)	(m)	(m)	(m)
Skrog	3761,4	0,028	832,02	40,230	0,000 (CL)	5,658
Toppdekk	501,3	0,000	0,00	73,479	0,000 (CL)	12,000
Oppholdsrom	387,6	0,000	0,00	76,953	0,000 (CL)	14,215
Bro	84,0	0,000	0,00	78,400	0,000 (CL)	16,250
Tak Bro	81,2	0,000	0,00	78,473	0,000 (CL)	17,679
Vindusflater	14,0	0,000	0,00	81,298	0,000 (CL)	16,850
Shelter	1003,4	0,000	0,00	28,133	0,000 (CL)	14,910
Total	5833,0		832,02	40,230	0,000 (CL)	5,658

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	2,4	22,250	69,4	44,500	80,5	66,750	67,4	89,000	0,8
4,450	13,6	26,700	74,8	48,950	80,4	71,200	56,2		
8,900	30,9	31,150	77,8	53,400	79,7	75,650	42,8		

Sectional areas

Location (m)	Area (m ²)	Location (m)	Area (m ²)	Location (m)	Area (m ²)	Location (m)	Area (m ²)	Location (m)	Area (m ²)
13,350	48,2	35,600	79,5	57,850	78,2	80,100	28,6		
17,800	60,9	40,050	80,3	62,300	74,6	84,550	13,9		



NOTE 1: Draft (and all other vertical heights) is measured from base Z=0,000

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