

RESISTANCE & PROPULSION CALCULATION HOLTROP METHOD

INPUT			RESULTS				
Lightship Weight	Lwt	27000	T	Frictional Resistance	Rf	34.73	mt
Deadweight	Dwt	52000	T	Appendage Resistance	Rapp	1.38	mt
Displacement	Δ	79000	T	Wind Resistance	Raa	0.02	mt
Waterline Length	Lwl	233.78	m	Wave Making Resistance	Rwa	0.05	mt
Waterline Breadth	Bwl	43.00	m	Transom Resistance	Rtr	3.67	mt
Draught	T	9.80	m	Towing Resistance	Rt	45.28	mt
Midship area	B2	417	m ²	Towing Power	Pt	2514	Kw
Surface Area	Sf	9248	m ²	Thrust Deduction Coefficient	t	0.19	
Speed	Vs	10.00	Kn	Speed on Propeller	Va	4.32	
Hull Wetted Area	Sm	12319	m ²	Thrust Required on Propeller	T	62	
Transom Area	At	23.50	m ²	Translation Power	Pt	2620	Kw
Bulb Section Area	Abt	12.00	m ²	Hull Efficiency	η_H	0.96	
Bulb Height	hb	4.00	m	Propeller Efficiency	η_0	0.65	
Bulb Draft	Tf	9.80	m	Relative Rotative Efficiency	η_R	1.01	
Angle of Entrance	ie	35.00	deg	Correction Thrust Vector		1	
LCB From Aft Perpendicular		120.00	m ²	Rotary Power	Pd	3981	Kw
Bow Thruster	Sm ₁	15.00	m	Shaft Power	Ps	4104	Kw
	Lref ₁	3.00	m ²	Break Power	Pb	4188	Kw
Bilge Keels	Sm ₂	15.00	m				
	Lref ₁	3.00	m ²				
Propulsion Thrusters	Sm ₃	15.00	m				
	Lref ₁	3.00	m ²				
Skeg	Sm ₄	15.00	m				
	Lref ₁	3.00	m ²				

Tunnel thrusters	S_{m_5}	15.00	m
	L_{ref_1}	3.00	m ²
Hull Frontal Area	$S_{f_{hull}}$	15.00	m
Superstructure Frontal Area	$S_{f_{su}}$	3.00	
Shaft Inclination		0.00	Deg