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1 Details

1.1 Basic Data

Property	Units	Entered	Derived
Length Perpendiculars	m	4.000	
Breadth	m	1.500	
Depth	m	1.000	
Rule Length	m	4.000	
Load Line Length	m	4.000	
Length Overall	m	4.000	
Support Girth	m	0.750	
Craft with Chines		No	
Maximum Speed	knots	15.000	
Max Displacement Mass	tonnes	4.000	
Max Displacement Volume	m3	~~0.000~~	3.902
Water Density	kg/m3	1025.000	
Breadth of Hull between Chines	n/a	~~n/a~~	
Number of Hulls		2	
Waterline Length	m	4.000	
Block Coefficient		0.600	

1.2 Classification

Property	Entered
Craft Type	Catamaran
Service Area	G1
Service Type	Cargo (A)
HSC Compliant	Yes
LDC Compliant	No

1.3 Craft

Property	Entered
LR Number	
Project Title	a25004
Builder	
Yard Number	
Hull Material	Composite
Superstructure Material	Composite

2 Loadings

2.1 Full Load (multi-hull)

Property	Units	Entered	Derived
Total Breadth of Hulls at LCG	m	1.500	
Maximum Air Gap	m	0.100	
Draught	m	0.600	
Waterline Length	m	4.000	
Long Centre Gravity	m	2.000	
Significant Wave Height	m	0.000	0.600
Displacement Mass	tonnes	4.000	
Allowable Speed	knots	15.000	
Froude Number		0.000	1.232
Maximum Wave Height	m	0.000	1.000
Taylor's Quotient		0.000	7.500
Deadrise Angle	deg	0.000	
Surviving Wave Height	m	0.000	0.774
Displacement Volume	m3	0.000	3.902
Vertical Acceleration at LCG	g	0.000	8.500
Volumetric Speed Number		0.000	9.022
Density	kg/m3	1025.000	
In Contact With Water		Yes	
Operational Height	m	**n/a**	
Girth Distance	m	1.000	
Waterline Offset from AP		0.000	
Hull Type		Partially Submerged	
Relative Vertical Speed	knots	0.000	4.400
Operating Mode		Displacement	

3 Structure

3.1 Bottom Shell

3.1.1 Bottom Shell Plate (C)

Property	Units	Entered	Derived	Required
Base Width of Stiffener	mm	10.000		
Inner Skin Thickness	mm	0.000	**n/a**	**n/a**
Outer Skin Thickness	mm	0.000	**n/a**	**n/a**
Direct Core Shear Stress	N/mm2	0.000	**n/a**	**n/a**
Bending Moment	Nm	0.000	-1.539	
Deflection	mm	0.000	**n/a**	**n/a**
Thickness	mm	0.000	6.527	6.415
Curvature	mm	0.000		
Panel Breadth	mm	0.000	320.000	
Panel Length	mm	1000.000		
Panel Aspect Ratio		0.000	3.125	
Stiffener Spacing	mm	330.000		
Neutral Axis	mm	0.000	3.554	
Stiffness	N cm4/mm2	0.000	229.168	
Test At	mm	0.000		
Layup		Bottom Panel		
Slamming Zone		No		
Below Tangential Point		Yes		
Height above Base	m	0.000		
Distance FWD of AP	m	2.000		
Design Pressure	kN/m2	0.000	18.600	

3.1.1.1 XPly

Ply Description	Actual Stress N/mm2	Allowable Stress N/mm2	Ultimate Stress N/mm2	Stress Fraction	C < > T
MAT 600	-14.377	-30.375	-121.500	0.118	
MAT 600	-13.773	-30.375	-121.500	0.113	

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Ply Description	Actual Stress N/mm2	Allowable Stress N/mm2	Ultimate Stress N/mm2	Stress Fraction	C < > T
ROW 800T-450M	-25.605	-36.750	-147.000	0.174	
ROW 800T-450M	-11.220	-36.750	-147.000	0.076	
ROW 800T-450M	3.279	47.500	190.000	0.017	
ROW 800T-450M	18.179	47.500	190.000	0.096	
MAT 600	9.296	22.750	91.000	0.102	
MAT 450	13.671	22.750	91.000	0.150	
MAT 300	16.587	22.750	91.000	0.182	

4 Profiles

4.1 Composite Profiles

4.1.1 Bottom Panel

Property	Units	Entered	Derived
Compressive Modulus	N/mm2	0.000	11982.106
Thickness	mm	0.000	6.527
Tensile Modulus	N/mm2	0.000	12259.544
Ultimate Flexural Strength	N/mm2	0.000	210.074
Glass Content		0.000	0.454
Weight/Unit Area	kg/m2	0.000	10.318
Resin Specific Gravity		1.200	

4.1.1.1 Layup

Description	Fibre Type	Fibre Content	Thickness	Tensile Modulus	Compressive Modulus	Ultimate Tensile Strength	Ultimate Compressive Strength
	MAT 300	0.330	0.625	6950.000	7200.000	91.000	121.500
	MAT 450	0.330	0.937	6950.000	7200.000	91.000	121.500
	MAT 600	0.330	0.125	6950.000	7200.000	91.000	121.500
	ROW 800T-450M	0.500	1.530	14500.000	14000.000	190.000	147.000
	ROW 800T-450M	0.500	1.530	14500.000	14000.000	190.000	147.000
	ROW 800T-450M	0.500	1.530	14500.000	14000.000	190.000	147.000
	MAT 600	0.330	0.125	6950.000	7200.000	91.000	121.500
	MAT 600	0.330	0.125	6950.000	7200.000	91.000	121.500

5 Materials

5.1 Composite Materials

5.1.1 MAT 300

Property	Units	Entered	Derived
Weight	g/m2	300.000	
Reinforcement Type		CSM	
Glass Content		0.330	0.330
Width of Tape (UDR Only)	mm	0.000	
Specific Gravity		2.560	

5.1.2 MAT 450

Property	Units	Entered	Derived
Weight	g/m2	450.000	
Reinforcement Type		CSM	
Glass Content		0.330	0.330
Width of Tape (UDR Only)	mm	0.000	
Specific Gravity		2.560	

5.1.3 MAT 600

Property	Units	Entered	Derived
Weight	g/m2	60.000	
Reinforcement Type		CSM	
Glass Content		0.330	0.330
Width of Tape (UDR Only)	mm	0.000	
Specific Gravity		2.560	

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5.1.4 ROW 800T-450M

Property	Units	Entered	Derived
Weight	g/m2	1250.000	
Reinforcement Type		WR	
Glass Content		0.500	0.500
Width of Tape (UDR Only)	mm	0.000	
Specific Gravity		2.560	

6 Machinery

6.1 Basic Machinery Data

Property	Units	Entered
Total Shaft Power	kW	0.000
Number of Shaftlines		0
Number of Engines per Shaft		0

6.2 Propulsion Trains

6.3 Auxiliary Machinery

7 Transverse Sections