

Default Project

Hydrostatics & Stability Analysis

Default Company

Report Time: Tuesday, February 21, 2023, 5:29:52 PM

Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Condition Summary****Load Condition Parameters**

Condition	Weight / Sinkage	LCG / Trim	TCG / Heel	VCG (in)
Condition 1	10.000 lbf	0.000 deg	0.000 deg	0
Condition 2	15.000 lbf	0.000 deg	0.000 deg	0
Condition 3	20.000 lbf	0.000 deg	0.000 deg	0
Condition 4	25.000 lbf	0.000 deg	0.000 deg	0
Condition 5	30.000 lbf	0.000 deg	0.000 deg	0
Condition 6	35.000 lbf	0.000 deg	0.000 deg	0
Condition 7	40.000 lbf	0.000 deg	0.000 deg	0
Condition 8	45.000 lbf	0.000 deg	0.000 deg	0
Condition 9	50.000 lbf	0.000 deg	0.000 deg	0
Condition 10	55.000 lbf	0.000 deg	0.000 deg	0
Condition 11	60.000 lbf	0.000 deg	0.000 deg	0

Resulting Model Attitude and Hydrostatic Properties

Condition	Sinkage (in)	Trim(deg)	Heel(deg)	Ax(ft^2)
Condition 1	2.165	0.000	0.000	0.04
Condition 2	2.859	0.000	0.000	0.06
Condition 3	3.492	0.000	0.000	0.07
Condition 4	4.035	0.000	0.000	0.09
Condition 5	4.558	0.000	0.000	0.11
Condition 6	5.075	0.000	0.000	0.13
Condition 7	5.585	0.000	0.000	0.15
Condition 8	6.088	0.000	0.000	0.17
Condition 9	6.585	0.000	0.000	0.18
Condition 10	7.075	0.000	0.000	0.20
Condition 11	7.554	0.000	0.000	0.22

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Condition	Displacement Weight (lbf)	LCB(in)	TCB(in)	VCB(in)	Wet Area (ft^2)
Condition 1	10.000	27.136	-13.983	1.334	2.350
Condition 2	15.000	27.039	-13.986	1.729	2.962
Condition 3	20.000	26.954	-13.986	2.091	3.530
Condition 4	25.000	26.935	-13.987	2.427	4.147
Condition 5	30.000	26.937	-13.986	2.739	4.610
Condition 6	35.000	26.945	-13.986	3.036	5.070
Condition 7	40.000	26.956	-13.985	3.322	5.526
Condition 8	45.000	26.971	-13.985	3.602	5.979
Condition 9	50.000	26.987	-13.984	3.875	6.428
Condition 10	55.000	27.006	-13.984	4.144	6.874
Condition 11	60.000	27.027	-13.983	4.408	7.370

Condition	Awp(ft^2)	LCF(in)	TCF(in)	VCF(in)
Condition 1	1.283	26.940	-13.987	2.165
Condition 2	1.417	26.754	-13.984	2.859
Condition 3	1.547	26.618	-13.979	3.492
Condition 4	1.776	26.931	-13.983	4.035
Condition 5	1.801	26.967	-13.982	4.558
Condition 6	1.825	27.009	-13.982	5.075
Condition 7	1.850	27.066	-13.981	5.585
Condition 8	1.874	27.110	-13.980	6.088
Condition 9	1.899	27.166	-13.979	6.585
Condition 10	1.923	27.226	-13.979	7.075
Condition 11	2.074	27.338	-13.950	7.554

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Condition	BMt(in)	BMI(in)	GMt(in)	GMI(in)
Condition 1	0.683	158.273	2.017	159.607
Condition 2	0.620	115.671	2.349	117.399
Condition 3	0.611	94.540	2.702	96.631
Condition 4	0.720	88.496	3.146	90.923
Condition 5	0.623	75.057	3.361	77.795
Condition 6	0.554	65.499	3.589	68.534
Condition 7	0.502	58.449	3.825	61.771
Condition 8	0.462	52.889	4.064	56.491
Condition 9	0.431	48.514	4.306	52.389
Condition 10	0.405	44.976	4.549	49.120
Condition 11	0.461	44.907	4.869	49.315

Condition	Cb	Cp	Cwp	Cx	Cws	Cvp
Condition 1	0.577	0.864	0.855	0.667	2.681	0.675
Condition 2	0.580	0.849	0.836	0.683	2.740	0.694
Condition 3	0.567	0.840	0.818	0.675	2.818	0.694
Condition 4	0.544	0.834	0.833	0.653	2.952	0.654
Condition 5	0.568	0.829	0.829	0.685	2.987	0.685
Condition 6	0.584	0.824	0.825	0.709	3.032	0.708
Condition 7	0.596	0.820	0.822	0.727	3.083	0.725
Condition 8	0.605	0.816	0.819	0.742	3.137	0.739
Condition 9	0.612	0.812	0.816	0.753	3.191	0.749
Condition 10	0.616	0.809	0.814	0.762	3.246	0.757
Condition 11	0.584	0.806	0.813	0.724	3.326	0.718

Notes

1. Locations such as the center of buoyancy and center of flotation are measured from the origin in the Rhinoceros world coordinate system.

2. The orientation of the model for an Orca3D hydrostatics solution is defined in terms of "sinkage," "trim," and "heel." The sinkage value represents the depth of the body origin (i.e. the Rhino world origin) below the resultant flotation plane, and is sometimes referred to as "origin depth." Heel and trim represent angular rotations about the Rhino longitudinal and transverse axes, respectively, and are taken in that order. For a more detailed description of these terms see the Orca3D documentation.

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3. Hull form coefficients are non-dimensionalized by the waterline length.
 4. Calculation of C_p and C_x use Orca sections to determine A_x . If no Orca sections are defined, these values will be reported as zero.

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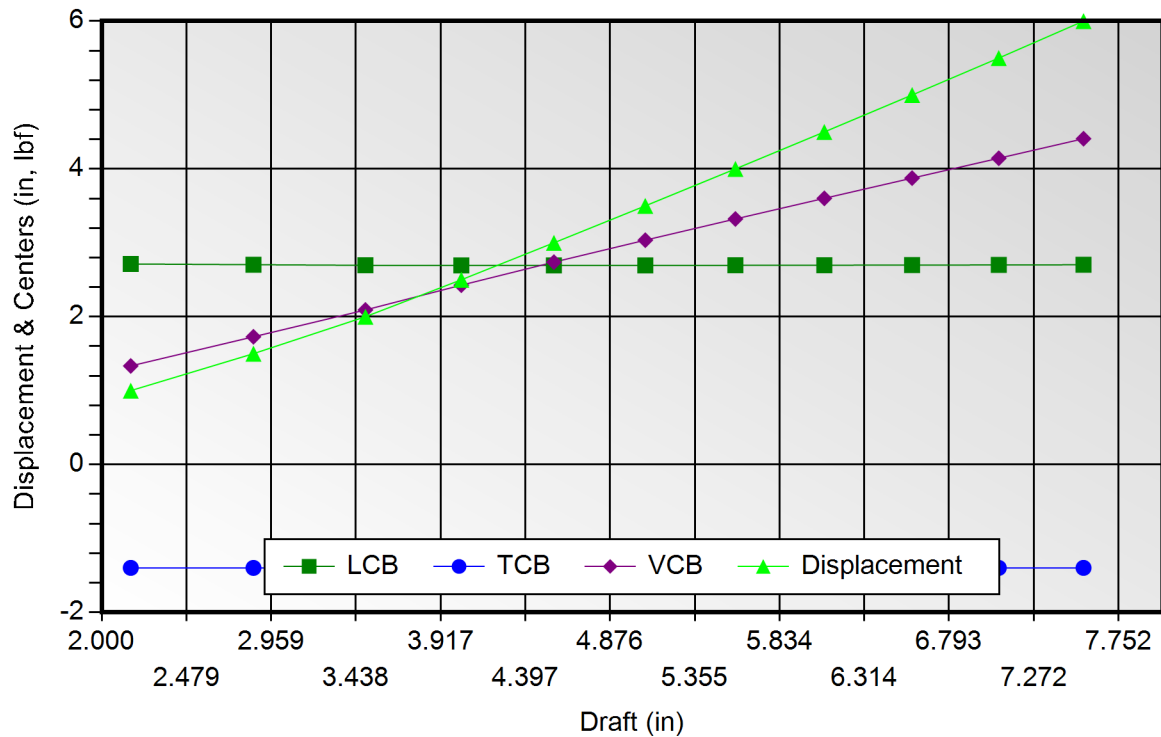
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Volumetric Properties



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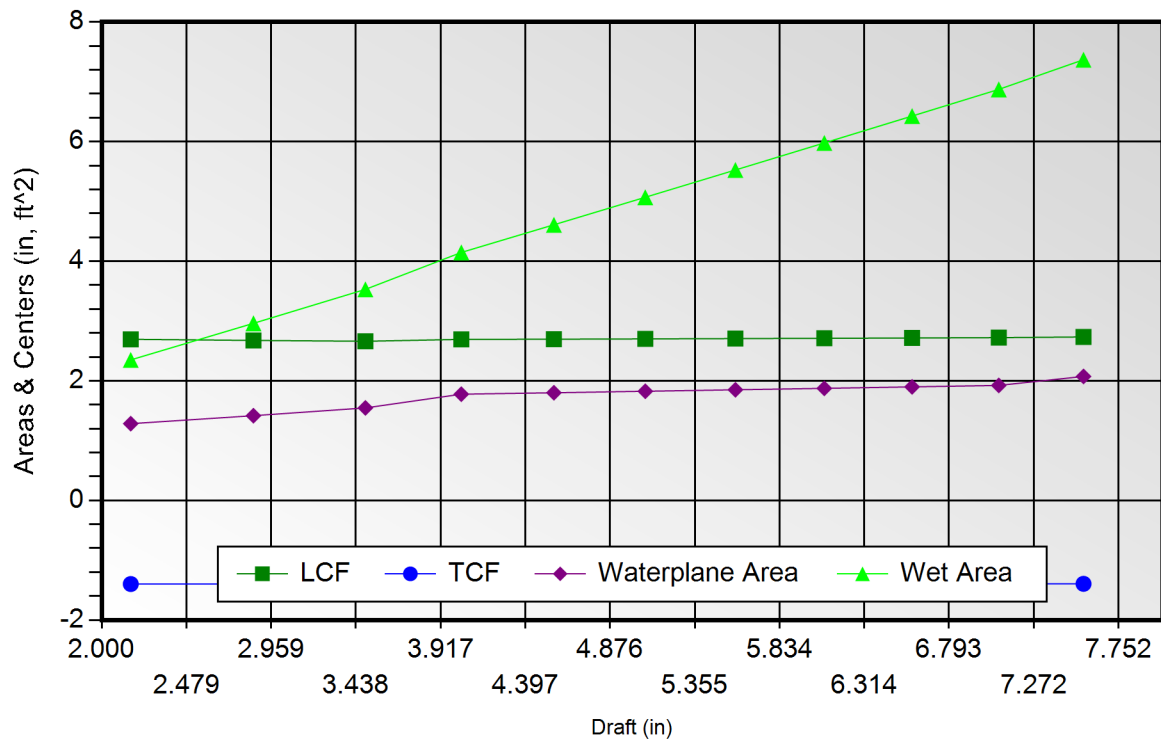
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Area Properties



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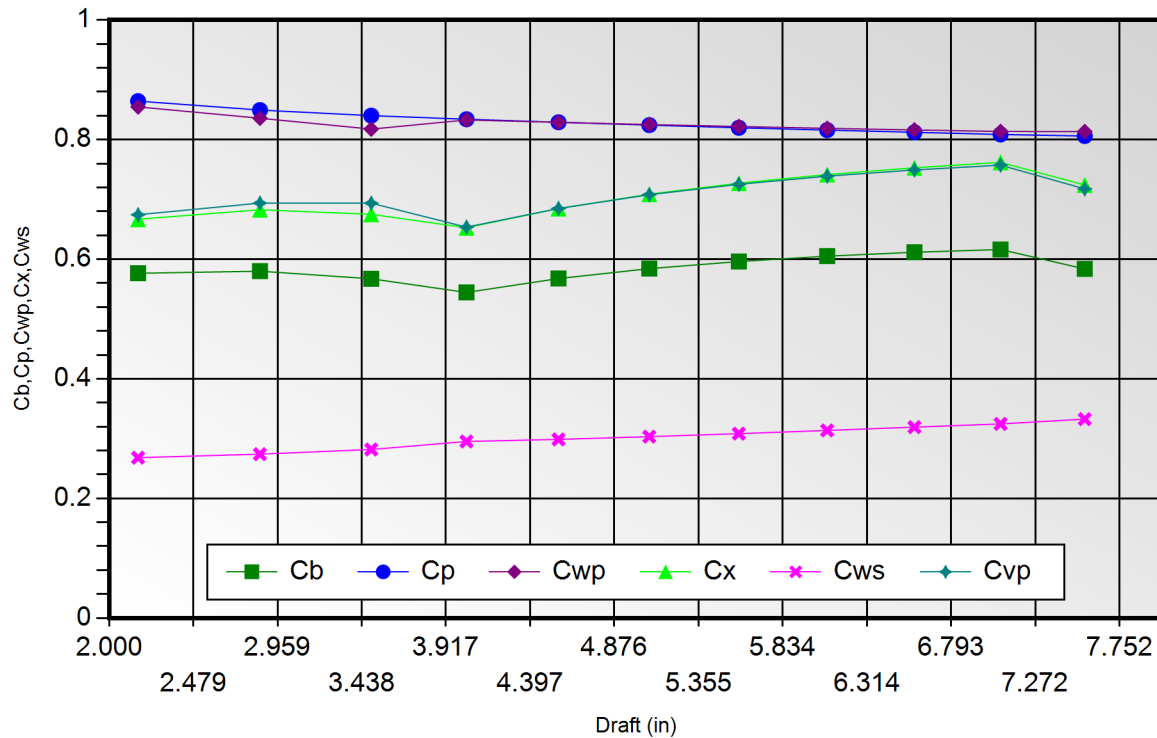
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Hull Form Coefficients



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Object Type	Name	ID
polysurface	Body2	{1efc3b00-06e2-4170-9047-1c2721e1bece}

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Condition Name=Condition 1, Weight=10.00, Model Trim=0.00, Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	10.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	2.165 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

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**Waterline Dimensions**

Waterline Length, Lwl	59.044 in	Lwl / Bwl	16.125
Waterline Beam, Bwl	3.662 in	Bwl / T	1.692
Navigational Draft, T	2.164 in	D / T	3.569

Volumetric Values

Displacement Weight	10.000 lbf	Displ-Length Ratio	37.477
Volume	0.156 ft^3		
LCB	27.136 in	FB/Lwl 0.562	AB/Lwl 0.438
TCB	-13.983 in	TCB / Bwl	-3.819
VCB	1.334 in		
Wetted Surface Area	2.350 ft^2		
Moment To Trim	2.253 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.283 ft^2		
LCF	26.940 in	FF/Lwl 0.565	AF/Lwl 0.435
TCF	-13.987 in	TCF / Lwl	-0.237
Weight To Immerse	6.850 lbf/in		

Sectional Parameters

Ax	0.037 ft^2		
Ax Location	22.083 in	Ax Location / Lwl	0.647

Hull Form Coefficients

Cb	0.577	Cx	0.667
Cp	0.864	Cwp	0.855
Cvp	0.675	Cws	2.681

Static Stability Parameters

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I(transverse)	0.009 ft^4	I(longitudinal)	2.059 ft^4
BMt	0.683 in	BMI	158.273 in
GMt	2.017 in	GMI	159.607 in
Mt	-0.148 in	MI	157.442 in

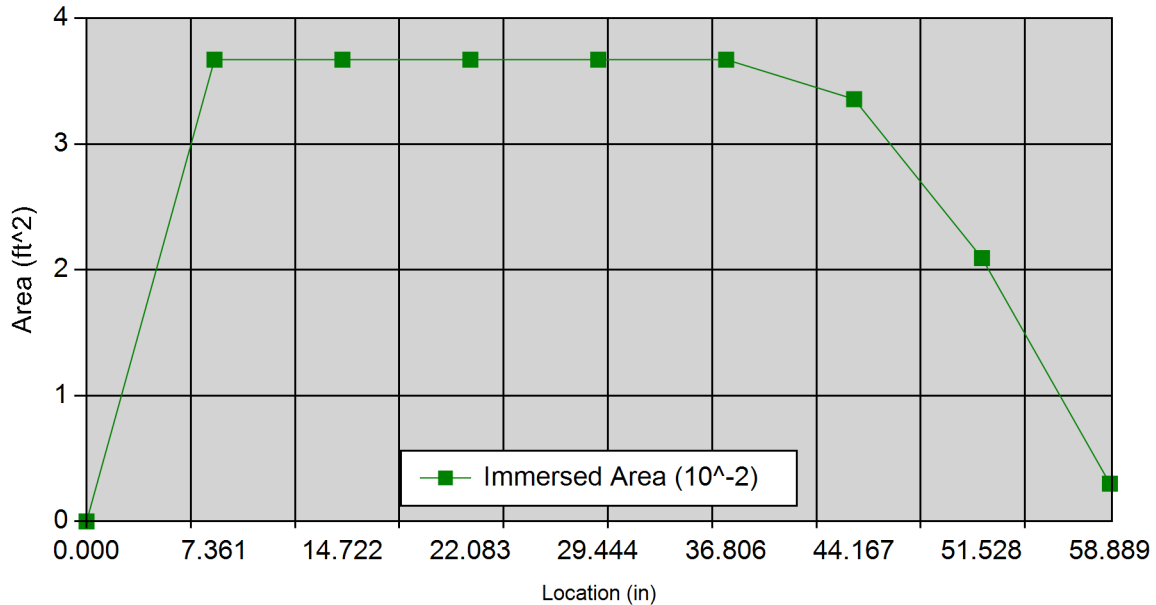
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**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.037	6.022
14.722	0.037	6.022
22.083	0.037	6.022
29.444	0.037	6.022
36.806	0.037	6.022
44.167	0.034	5.771
51.528	0.021	5.038
58.889	0.003	2.333

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Condition Name=Condition 2,Weight=15.00,Model Trim=0.00,Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	15.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	2.859 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

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**Waterline Dimensions**

Waterline Length, Lwl	59.857 in	Lwl / Bwl	14.678
Waterline Beam, Bwl	4.078 in	Bwl / T	1.427
Navigational Draft, T	2.859 in	D / T	2.703

Volumetric Values

Displacement Weight	15.000 lbf	Displ-Length Ratio	53.956
Volume	0.234 ft^3		
LCB	27.039 in	FB/Lwl 0.569	AB/Lwl 0.431
TCB	-13.986 in	TCB / Bwl	-3.430
VCB	1.729 in		
Wetted Surface Area	2.962 ft^2		
Moment To Trim	2.452 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.417 ft^2		
LCF	26.754 in	FF/Lwl 0.574	AF/Lwl 0.426
TCF	-13.984 in	TCF / Lwl	-0.234
Weight To Immerse	7.562 lbf/in		

Sectional Parameters

Ax	0.055 ft^2		
Ax Location	22.083 in	Ax Location / Lwl	0.652

Hull Form Coefficients

Cb	0.580	Cx	0.683
Cp	0.849	Cwp	0.836
Cvp	0.694	Cws	2.740

Static Stability Parameters

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I(transverse)	0.012 ft ⁴	I(longitudinal)	2.258 ft ⁴
BMt	0.620 in	BMI	115.671 in
GMt	2.349 in	GMI	117.399 in
Mt	-0.510 in	MI	114.540 in

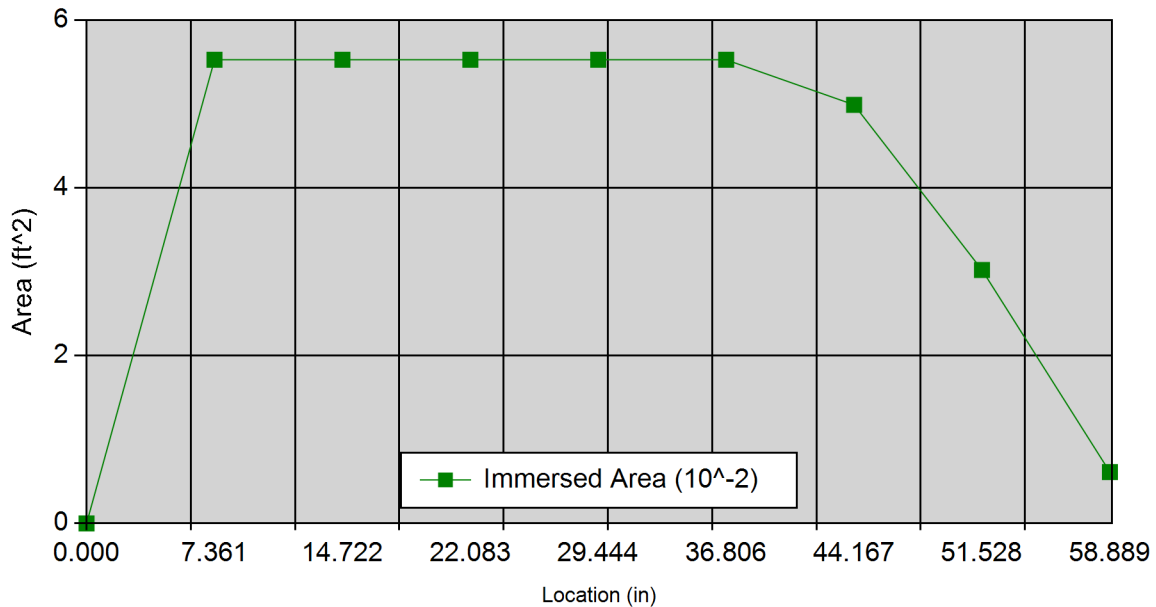
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**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.055	7.471
14.722	0.055	7.471
22.083	0.055	7.471
29.444	0.055	7.471
36.806	0.055	7.471
44.167	0.050	7.191
51.528	0.030	6.427
58.889	0.006	3.725

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Condition Name=Condition 3,Weight=20.00,Model Trim=0.00,Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	20.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	3.492 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

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**Waterline Dimensions**

Waterline Length, Lwl	60.294 in	Lwl / Bwl	13.346
Waterline Beam, Bwl	4.518 in	Bwl / T	1.294
Navigational Draft, T	3.492 in	D / T	2.212

Volumetric Values

Displacement Weight	20.000 lbf	Displ-Length Ratio	70.389
Volume	0.312 ft^3		
LCB	26.954 in	FB/Lwl 0.574	AB/Lwl 0.426
TCB	-13.986 in	TCB / Bwl	-3.096
VCB	2.091 in		
Wetted Surface Area	3.530 ft^2		
Moment To Trim	2.671 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.547 ft^2		
LCF	26.618 in	FF/Lwl 0.579	AF/Lwl 0.421
TCF	-13.979 in	TCF / Lwl	-0.232
Weight To Immerse	8.255 lbf/in		

Sectional Parameters

Ax	0.074 ft^2		
Ax Location	22.083 in	Ax Location / Lwl	0.654

Hull Form Coefficients

Cb	0.567	Cx	0.675
Cp	0.840	Cwp	0.818
Cvp	0.694	Cws	2.818

Static Stability Parameters

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I(transverse)	0.016 ft ⁴	I(longitudinal)	2.460 ft ⁴
BMt	0.611 in	BMI	94.540 in
GMt	2.702 in	GMI	96.631 in
Mt	-0.790 in	MI	93.139 in

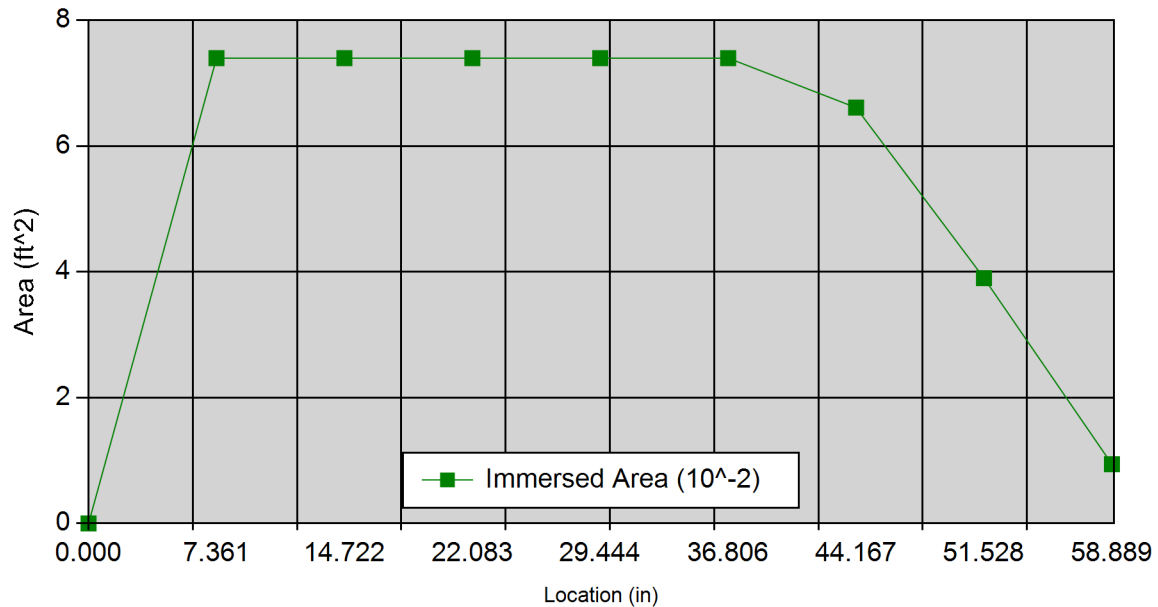
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**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.074	8.794
14.722	0.074	8.794
22.083	0.074	8.794
29.444	0.074	8.794
36.806	0.074	8.794
44.167	0.066	8.487
51.528	0.039	7.697
58.889	0.009	4.995

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Condition Name=Condition 4, Weight=25.00, Model Trim=0.00, Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	25.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	4.035 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

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**Waterline Dimensions**

Waterline Length, Lwl	60.668 in	Lwl / Bwl	11.986
Waterline Beam, Bwl	5.062 in	Bwl / T	1.255
Navigational Draft, T	4.034 in	D / T	1.915

Volumetric Values

Displacement Weight	25.000 lbf	Displ-Length Ratio	86.371
Volume	0.390 ft^3		
LCB	26.935 in	FB/Lwl 0.577	AB/Lwl 0.423
TCB	-13.987 in	TCB / Bwl	-2.763
VCB	2.427 in		
Wetted Surface Area	4.147 ft^2		
Moment To Trim	3.122 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.776 ft^2		
LCF	26.931 in	FF/Lwl 0.577	AF/Lwl 0.423
TCF	-13.983 in	TCF / Lwl	-0.230
Weight To Immerse	9.480 lbf/in		

Sectional Parameters

Ax	0.093 ft^2		
Ax Location	22.083 in	Ax Location / Lwl	0.657

Hull Form Coefficients

Cb	0.544	Cx	0.653
Cp	0.834	Cwp	0.833
Cvp	0.654	Cws	2.952

Static Stability Parameters

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I(transverse)	0.023 ft ⁴	I(longitudinal)	2.879 ft ⁴
BMt	0.720 in	BMI	88.496 in
GMt	3.146 in	GMI	90.923 in
Mt	-0.888 in	MI	86.888 in

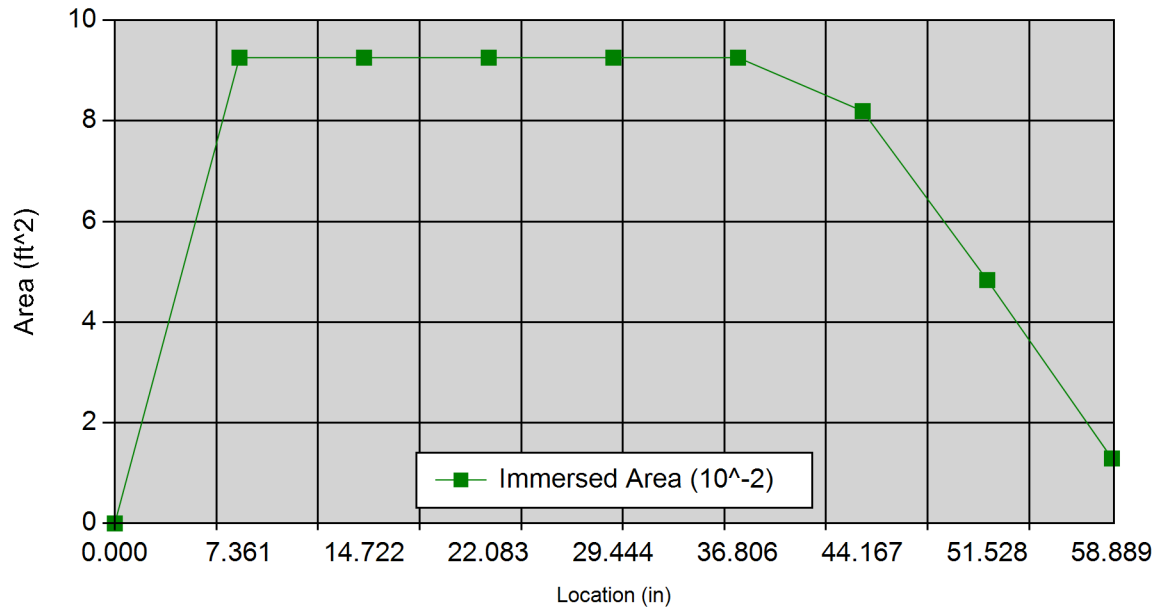
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**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.093	10.307
14.722	0.093	10.307
22.083	0.093	10.307
29.444	0.093	10.307
36.806	0.093	10.307
44.167	0.082	9.874
51.528	0.048	9.118
58.889	0.013	6.145

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Condition Name=Condition 5, Weight=30.00, Model Trim=0.00, Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	30.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	4.558 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

Default Project

Hydrostatics & Stability Analysis

Default Company

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Waterline Dimensions**

Waterline Length, Lwl	61.029 in	Lwl / Bwl	11.907
Waterline Beam, Bwl	5.125 in	Bwl / T	1.124
Navigational Draft, T	4.558 in	D / T	1.695

Volumetric Values

Displacement Weight	30.000 lbf	Displ-Length Ratio	101.816
Volume	0.468 ft^3		
LCB	26.937 in	FB/Lwl 0.579	AB/Lwl 0.421
TCB	-13.986 in	TCB / Bwl	-2.729
VCB	2.739 in		
Wetted Surface Area	4.610 ft^2		
Moment To Trim	3.187 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.801 ft^2		
LCF	26.967 in	FF/Lwl 0.579	AF/Lwl 0.421
TCF	-13.982 in	TCF / Lwl	-0.229
Weight To Immerse	9.610 lbf/in		

Sectional Parameters

Ax	0.111 ft^2		
Ax Location	22.083 in	Ax Location / Lwl	0.659

Hull Form Coefficients

Cb	0.568	Cx	0.685
Cp	0.829	Cwp	0.829
Cvp	0.685	Cws	2.987

Static Stability Parameters

Default Project

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I(transverse)	0.024 ft^4	I(longitudinal)	2.930 ft^4
BMt	0.623 in	BMI	75.057 in
GMt	3.361 in	GMI	77.795 in
Mt	-1.197 in	MI	73.237 in

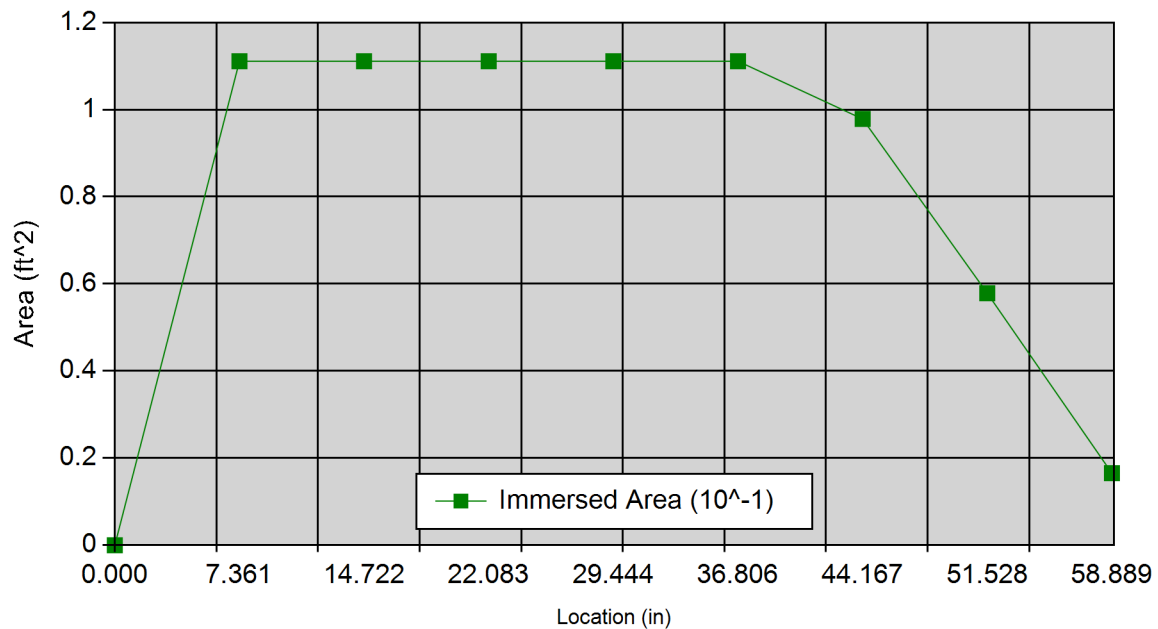
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Hydrostatics & Stability Analysis

Default Company

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.111	11.356
14.722	0.111	11.356
22.083	0.111	11.356
29.444	0.111	11.356
36.806	0.111	11.356
44.167	0.098	10.924
51.528	0.058	10.167
58.889	0.017	7.194

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm



Condition Name=Condition 6, Weight=35.00, Model Trim=0.00, Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	35.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	5.075 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

Default Project

Hydrostatics & Stability Analysis

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**Waterline Dimensions**

Waterline Length, Lwl	61.385 in	Lwl / Bwl	11.832
Waterline Beam, Bwl	5.188 in	Bwl / T	1.022
Navigational Draft, T	5.075 in	D / T	1.522

Volumetric Values

Displacement Weight	35.000 lbf	Displ-Length Ratio	116.729
Volume	0.546 ft^3		
LCB	26.945 in	FB/Lwl 0.581	AB/Lwl 0.419
TCB	-13.986 in	TCB / Bwl	-2.696
VCB	3.036 in		
Wetted Surface Area	5.070 ft^2		
Moment To Trim	3.256 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.825 ft^2		
LCF	27.009 in	FF/Lwl 0.580	AF/Lwl 0.420
TCF	-13.982 in	TCF / Lwl	-0.228
Weight To Immerse	9.741 lbf/in		

Sectional Parameters

Ax	0.130 ft^2		
Ax Location	7.361 in	Ax Location / Lwl	0.900

Hull Form Coefficients

Cb	0.584	Cx	0.709
Cp	0.824	Cwp	0.825
Cvp	0.708	Cws	3.032

Static Stability Parameters

Default Project

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I(transverse)	0.025 ft ⁴	I(longitudinal)	2.983 ft ⁴
BMt	0.554 in	BMI	65.499 in
GMt	3.589 in	GMI	68.534 in
Mt	-1.486 in	MI	63.459 in

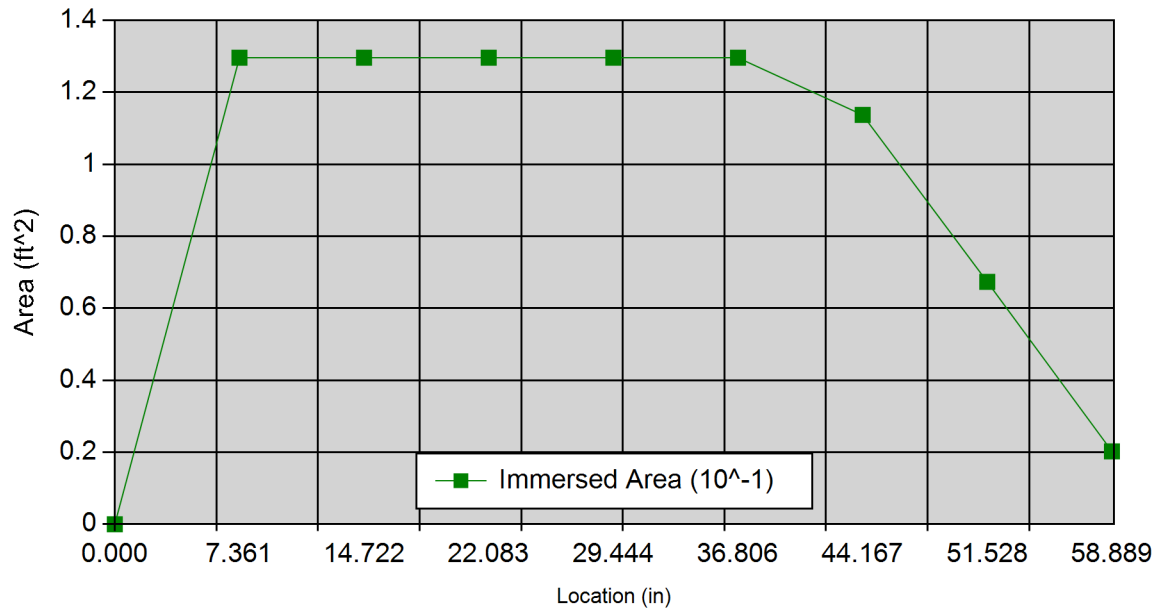
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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.130	12.392
14.722	0.130	12.392
22.083	0.130	12.392
29.444	0.130	12.392
36.806	0.130	12.392
44.167	0.114	11.959
51.528	0.067	11.201
58.889	0.020	8.229

Default Project

Hydrostatics & Stability Analysis

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm



Condition Name=Condition 7,Weight=40.00,Model Trim=0.00,Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	40.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	5.585 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

Default Project

Hydrostatics & Stability Analysis

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Waterline Dimensions**

Waterline Length, Lwl	61.736 in	Lwl / Bwl	11.759
Waterline Beam, Bwl	5.250 in	Bwl / T	0.940
Navigational Draft, T	5.585 in	D / T	1.383

Volumetric Values

Displacement Weight	40.000 lbf	Displ-Length Ratio	131.140
Volume	0.625 ft^3		
LCB	26.956 in	FB/Lwl 0.584	AB/Lwl 0.416
TCB	-13.985 in	TCB / Bwl	-2.664
VCB	3.322 in		
Wetted Surface Area	5.526 ft^2		
Moment To Trim	3.335 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.850 ft^2		
LCF	27.066 in	FF/Lwl 0.582	AF/Lwl 0.418
TCF	-13.981 in	TCF / Lwl	-0.226
Weight To Immerse	9.875 lbf/in		

Sectional Parameters

Ax	0.148 ft^2		
Ax Location	22.083 in	Ax Location / Lwl	0.663

Hull Form Coefficients

Cb	0.596	Cx	0.727
Cp	0.820	Cwp	0.822
Cvp	0.725	Cws	3.083

Static Stability Parameters

Default Project

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm



I(transverse)	0.026 ft ⁴	I(longitudinal)	3.042 ft ⁴
BMt	0.502 in	BMI	58.449 in
GMt	3.825 in	GMI	61.771 in
Mt	-1.760 in	MI	56.186 in

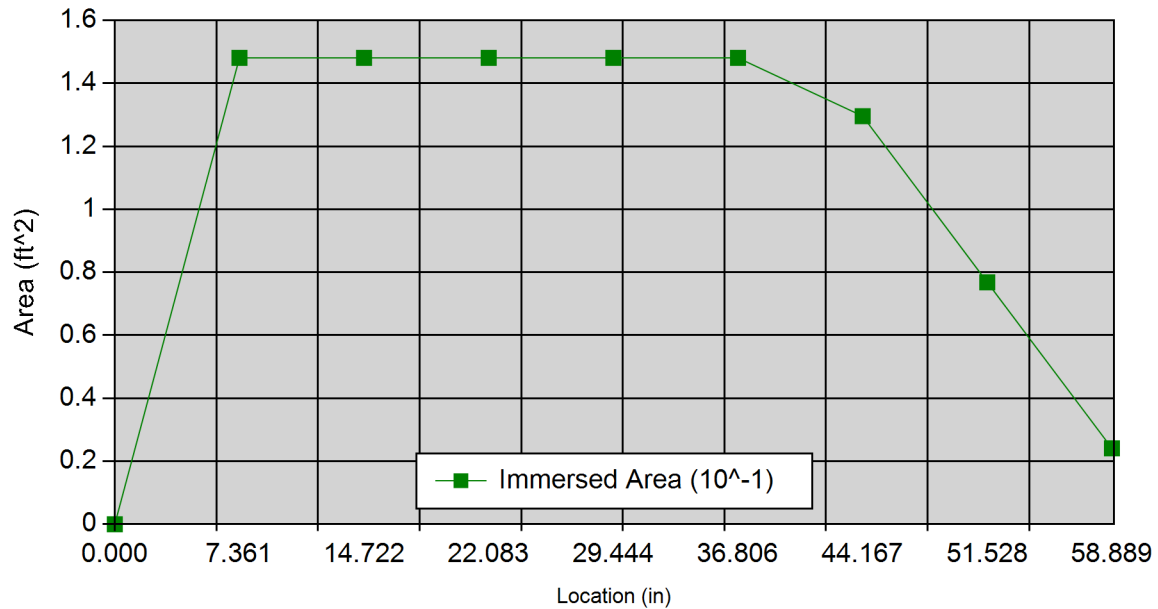
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Model Name: C:\Users\hlebri\river2021\Desktop\Cat_multihull.3dm

**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.148	13.413
14.722	0.148	13.413
22.083	0.148	13.413
29.444	0.148	13.413
36.806	0.148	13.413
44.167	0.130	12.980
51.528	0.077	12.221
58.889	0.024	9.250

Default Project

Hydrostatics & Stability Analysis

Default Company

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm



Condition Name=Condition 8, Weight=45.00, Model Trim=0.00, Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	45.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	6.088 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

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Hydrostatics & Stability Analysis

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Waterline Dimensions**

Waterline Length, Lwl	62.053 in	Lwl / Bwl	11.684
Waterline Beam, Bwl	5.311 in	Bwl / T	0.872
Navigational Draft, T	6.088 in	D / T	1.269

Volumetric Values

Displacement Weight	45.000 lbf	Displ-Length Ratio	145.287
Volume	0.703 ft^3		
LCB	26.971 in	FB/Lwl 0.585	AB/Lwl 0.415
TCB	-13.985 in	TCB / Bwl	-2.633
VCB	3.602 in		
Wetted Surface Area	5.979 ft^2		
Moment To Trim	3.414 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.874 ft^2		
LCF	27.110 in	FF/Lwl 0.583	AF/Lwl 0.417
TCF	-13.980 in	TCF / Lwl	-0.225
Weight To Immerse	10.003 lbf/in		

Sectional Parameters

Ax	0.167 ft^2		
Ax Location	22.083 in	Ax Location / Lwl	0.664

Hull Form Coefficients

Cb	0.605	Cx	0.742
Cp	0.816	Cwp	0.819
Cvp	0.739	Cws	3.137

Static Stability Parameters

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I(transverse)	0.027 ft ⁴	I(longitudinal)	3.097 ft ⁴
BMt	0.462 in	BMI	52.889 in
GMt	4.064 in	GMI	56.491 in
Mt	-2.024 in	MI	50.403 in

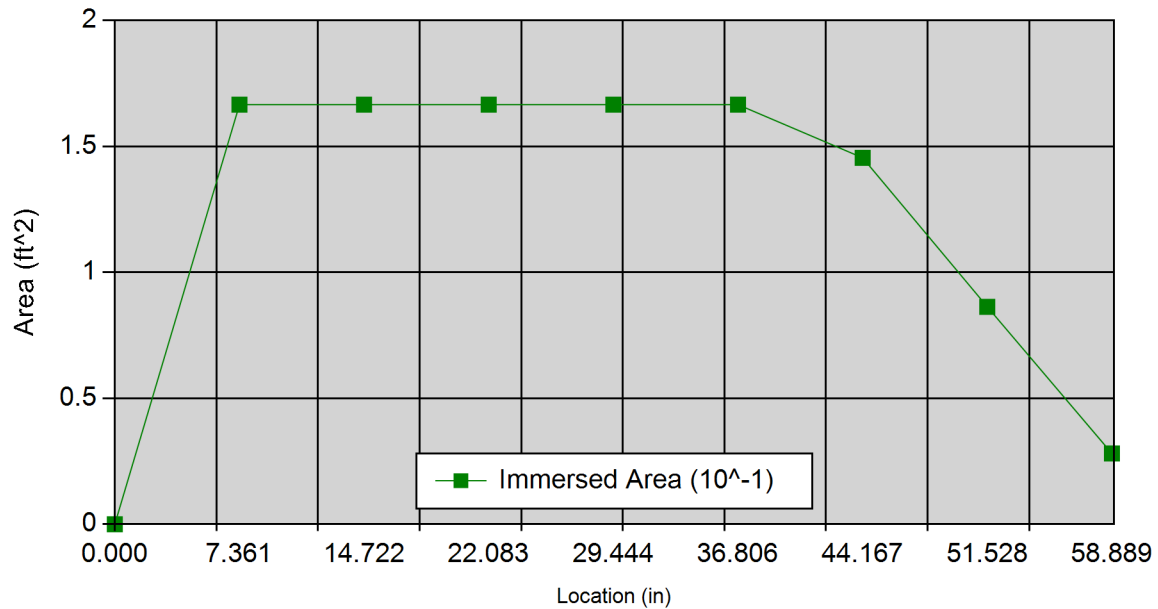
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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.167	14.421
14.722	0.167	14.421
22.083	0.167	14.421
29.444	0.167	14.421
36.806	0.167	14.421
44.167	0.145	13.988
51.528	0.086	13.228
58.889	0.028	10.257

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm



Condition Name=Condition 9,Weight=50.00,Model Trim=0.00,Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	50.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	6.585 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

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Hydrostatics & Stability Analysis

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Waterline Dimensions**

Waterline Length, Lwl	62.364 in	Lwl / Bwl	11.610
Waterline Beam, Bwl	5.371 in	Bwl / T	0.816
Navigational Draft, T	6.584 in	D / T	1.173

Volumetric Values

Displacement Weight	50.000 lbf	Displ-Length Ratio	159.025
Volume	0.781 ft^3		
LCB	26.987 in	FB/Lwl 0.587	AB/Lwl 0.413
TCB	-13.984 in	TCB / Bwl	-2.603
VCB	3.875 in		
Wetted Surface Area	6.428 ft^2		
Moment To Trim	3.500 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.899 ft^2		
LCF	27.166 in	FF/Lwl 0.584	AF/Lwl 0.416
TCF	-13.979 in	TCF / Lwl	-0.224
Weight To Immerse	10.134 lbf/in		

Sectional Parameters

Ax	0.185 ft^2		
Ax Location	22.083 in	Ax Location / Lwl	0.666

Hull Form Coefficients

Cb	0.612	Cx	0.753
Cp	0.812	Cwp	0.816
Cvp	0.749	Cws	3.191

Static Stability Parameters

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I(transverse)	0.028 ft ⁴	I(longitudinal)	3.156 ft ⁴
BMt	0.431 in	BMI	48.514 in
GMt	4.306 in	GMI	52.389 in
Mt	-2.279 in	MI	45.805 in

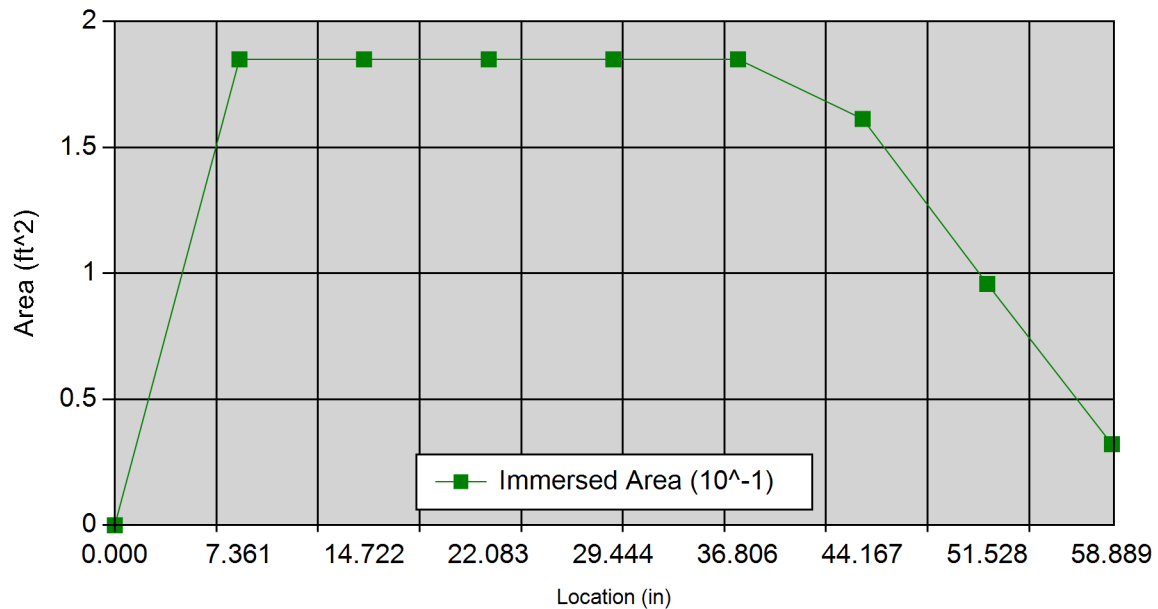
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**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.185	15.416
14.722	0.185	15.416
22.083	0.185	15.416
29.444	0.185	15.416
36.806	0.185	15.416
44.167	0.161	14.982
51.528	0.096	14.222
58.889	0.032	11.251

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm



Condition Name=Condition 10,Weight=55.00,Model Trim=0.00,Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	55.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	7.075 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

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Hydrostatics & Stability Analysis

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Waterline Dimensions**

Waterline Length, Lwl	62.671 in	Lwl / Bwl	11.540
Waterline Beam, Bwl	5.431 in	Bwl / T	0.768
Navigational Draft, T	7.075 in	D / T	1.092

Volumetric Values

Displacement Weight	55.000 lbf	Displ-Length Ratio	172.367
Volume	0.859 ft^3		
LCB	27.006 in	FB/Lwl 0.589	AB/Lwl 0.411
TCB	-13.984 in	TCB / Bwl	-2.575
VCB	4.144 in		
Wetted Surface Area	6.874 ft^2		
Moment To Trim	3.592 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	1.923 ft^2		
LCF	27.226 in	FF/Lwl 0.586	AF/Lwl 0.414
TCF	-13.979 in	TCF / Lwl	-0.223
Weight To Immerse	10.265 lbf/in		

Sectional Parameters

Ax	0.203 ft^2		
Ax Location	22.083 in	Ax Location / Lwl	0.668

Hull Form Coefficients

Cb	0.616	Cx	0.762
Cp	0.809	Cwp	0.814
Cvp	0.757	Cws	3.246

Static Stability Parameters

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I(transverse)	0.029 ft ⁴	I(longitudinal)	3.219 ft ⁴
BMt	0.405 in	BMI	44.976 in
GMt	4.549 in	GMI	49.120 in
Mt	-2.526 in	MI	42.045 in

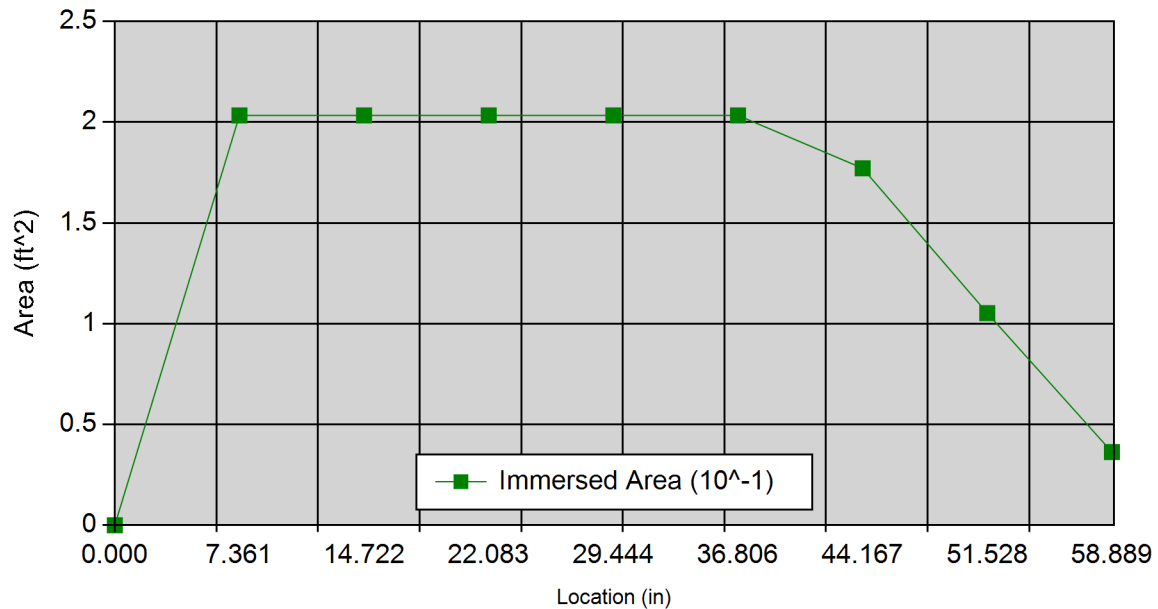
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Hydrostatics & Stability Analysis

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.203	16.398
14.722	0.203	16.398
22.083	0.203	16.398
29.444	0.203	16.398
36.806	0.203	16.398
44.167	0.177	15.964
51.528	0.105	15.203
58.889	0.036	12.233

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Hydrostatics & Stability Analysis

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm



Condition Name=Condition 11,Weight=60.00,Model Trim=0.00,Model Heel=0.00

General Info

Analysis Type	FreeFloatEquilibrium	Up Direction = Positive_Z
		Fwd Direction = Positive_X

Surface Meshing Parameters

Density	1	Minimum edge length	0.0001 in
Maximum angle	0	Maximum edge length	0 in
Maximum aspect ratio	0	Max distance, edge to surf.	0 in
Minimum initial grid quads	0	Jagged seams	False
Refine mesh	True	Simple planes	True

Load Condition Parameters

Weight	60.000 lbf
Model Trim	0.000 deg
Model Heel	0.000 deg
VCG	0 in
Fluid Type	Seawater
Fluid Density	1.991 slug/ft^3
Mirror Geometry	False

Resultant Model Attitude

Heel Angle	0.000 deg	Sinkage	7.554 in
Trim Angle	0.000 deg		

Overall Dimensions

Length Overall, LOA	66.249 in	Loa / Boa	8.292
Beam Overall, Boa	7.989 in	Boa / D	1.034
Depth Overall, D	7.726 in		

Default Project

Hydrostatics & Stability Analysis

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Waterline Dimensions**

Waterline Length, Lwl	62.920 in	Lwl / Bwl	10.785
Waterline Beam, Bwl	5.834 in	Bwl / T	0.772
Navigational Draft, T	7.554 in	D / T	1.023

Volumetric Values

Displacement Weight	60.000 lbf	Displ-Length Ratio	185.815
Volume	0.937 ft^3		
LCB	27.027 in	FB/Lwl 0.590	AB/Lwl 0.410
TCB	-13.983 in	TCB / Bwl	-2.397
VCB	4.408 in		
Wetted Surface Area	7.370 ft^2		
Moment To Trim	3.919 lbf-ft/in		

Waterplane Values

Waterplane Area, Awp	2.074 ft^2		
LCF	27.338 in	FF/Lwl 0.585	AF/Lwl 0.415
TCF	-13.950 in	TCF / Lwl	-0.222
Weight To Immerse	11.068 lbf/in		

Sectional Parameters

Ax	0.222 ft^2		
Ax Location	14.722 in	Ax Location / Lwl	0.786

Hull Form Coefficients

Cb	0.584	Cx	0.724
Cp	0.806	Cwp	0.813
Cvp	0.718	Cws	3.326

Static Stability Parameters

Default Project

Hydrostatics & Stability Analysis

Default Company

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Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm



I(transverse)	0.036 ft ⁴	I(longitudinal)	3.506 ft ⁴
BMt	0.461 in	BMI	44.907 in
GMt	4.869 in	GMI	49.315 in
Mt	-2.685 in	MI	41.761 in

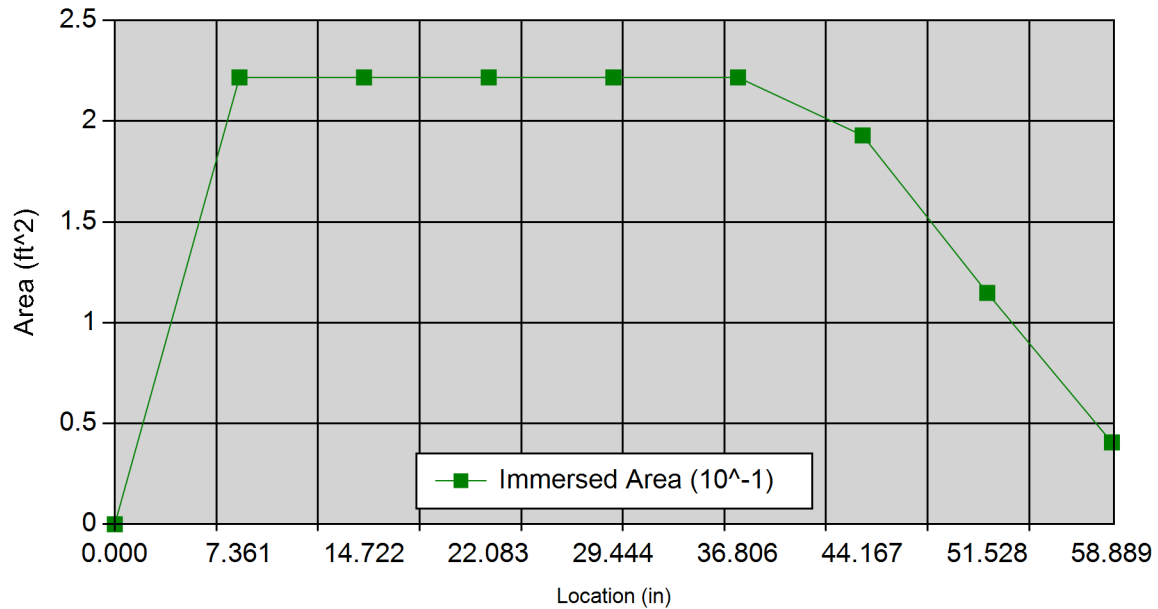
Default Project

Hydrostatics & Stability Analysis

Default Company

Report Time: Tuesday, February 21, 2023, 5:29:52 PM

Model Name: C:\Users\hlebronriver2021\Desktop\Cat_multihull.3dm

**Station Data**

Location (in)	Immersed Area (ft^2)	Immersed Girth (in)
0.000	0.000	0.000
7.361	0.222	17.511
14.722	0.222	17.511
22.083	0.222	17.511
29.444	0.222	17.511
36.806	0.222	17.511
44.167	0.193	17.036
51.528	0.115	16.324
58.889	0.041	13.200