

Equilibrium Calculation - D:\13.714\Final Design\14 Meter final (Plus).msd

.oadcase - Upright

Damage Case - Intact

Free to Trim

Specific Gravity = 1.025

Fluid analysis method: Use corrected VCG

	Item Name	Quantity	Weight kg	Long Arm m	Vert Arm m
1	Yacht	1	10180	-0.627	-0.166
2		Total Weight=	10180	LCG=-0.627m	VCG=-0.166 m

1	Draft Amidsh. m	0.469
2	Displacement kg	10179
3	Heel to Starboard degrees	0
4	Draft at FP m	0.466
5	Draft at AP m	0.471
6	Draft at LCF m	0.469
7	Trim (+ve by stern) m	0.005
8	WL Length m	12.800
9	WL Beam m	3.656
10	Wetted Area m ²	43.831
11	Waterpl. Area m ²	32.295
12	Prismatic Coeff.	0.469
13	Block Coeff.	0.074
14	Midship Area Coeff.	0.172
15	Waterpl. Area Coeff.	0.690
16	LCB from Amidsh. (+ve fwd) m	-0.627
17	LCF from Amidsh. (+ve fwd) m	-1.005
18	KB m	0.220
19	KG fluid m	0.305
20	BMt m	2.597
21	BML m	27.909
22	GMt m	2.511
23	GML m	27.824
24	KMt m	2.817
25	KML m	28.129
26	Immersion (TPc) tonne/cm	0.331
27	MTc tonne.m	0.221
28	RM at 1deg = GMt.Disp.sin(1) kg.m	446.151
29	Max deck inclination deg	0.0
30	Trim angle (+ve by stern) deg	0.0

Stability Calculation - 14 Meter final (Plus)

Loadcase - Upright

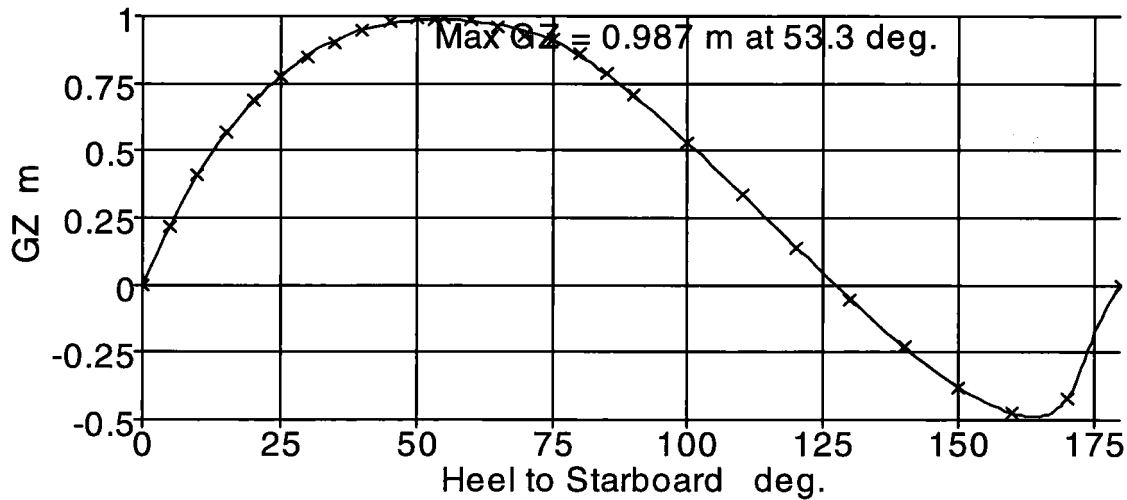
Damage Case - Intact

Free to Trim

Specific Gravity = 1.025

Fluid analysis method: Use corrected VCG

	Item Name	Quantity	Weight kg	Long Arm m	Vert. Arm m
1	Yacht	1	10180	-0.627	-0.166
2		Total Weight=	10180	LCG=-0.627m	VCG=-0.166 m



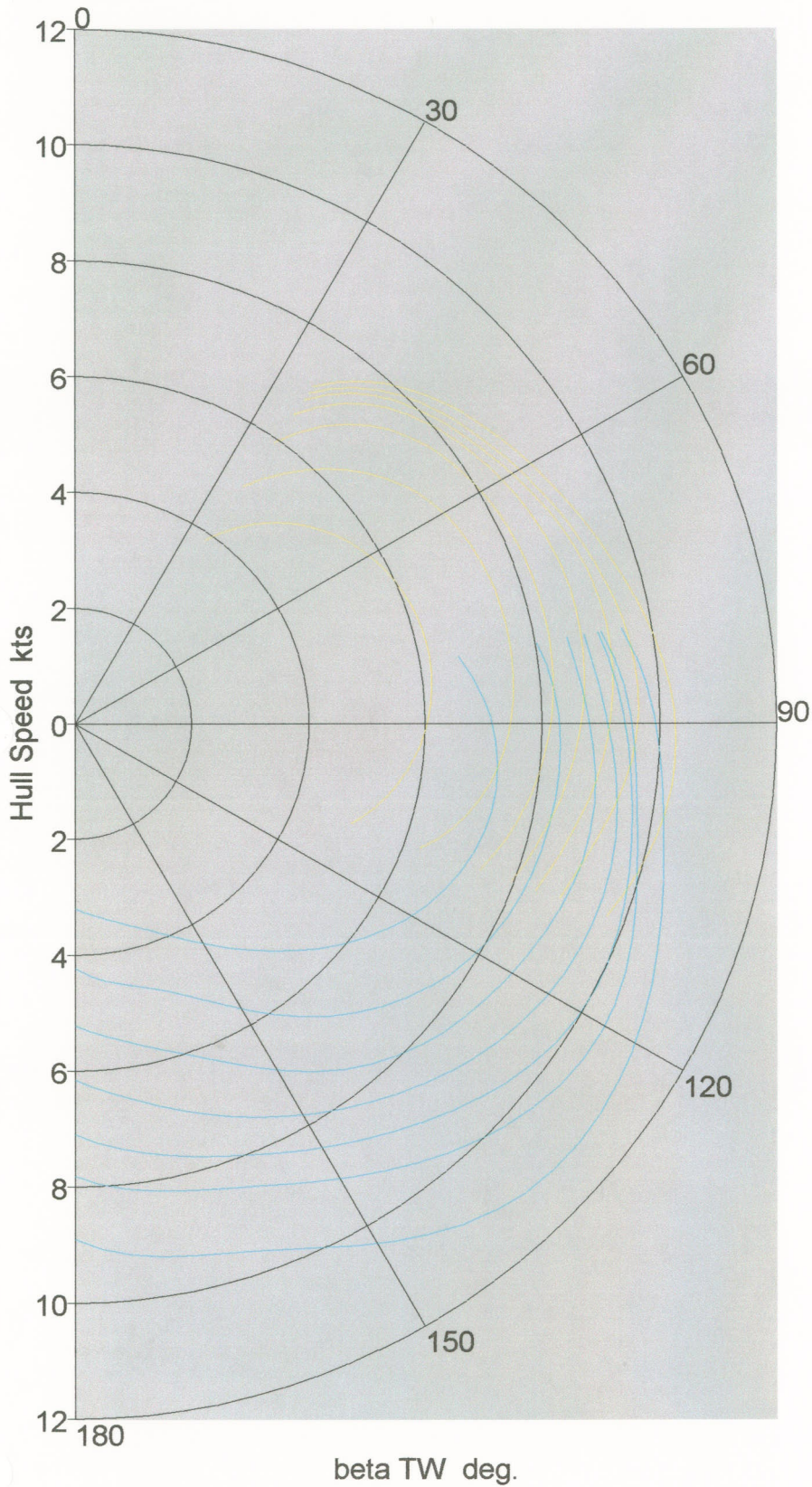
	Heel to Starboard degrees	0	5	10	15	20	25
1	Displacement kg	10180	10180	10179	10179	10179	10179
2	Draft at FP m	0.466	0.469	0.474	0.479	0.480	0.474
3	Draft at AP m	0.471	0.462	0.434	0.382	0.308	0.212
4	WL Length m	12.800	12.985	13.214	13.339	13.374	13.350
5	Immersed Depth m	2.872	2.863	2.832	2.769	2.676	2.552
6	WL Beam m	3.656	3.623	3.481	3.244	3.024	2.861
7	Wetted Area m ²	43.832	43.564	42.614	41.207	39.816	38.602
8	Waterpl. Area m ²	32.295	31.859	30.475	28.583	26.849	25.450
9	Prismatic Coeff.	0.469	0.462	0.454	0.449	0.446	0.443
10	Block Coeff.	0.074	0.074	0.076	0.083	0.092	0.102
11	LCB from Amidsh. (+ve fwd) m	-0.627	-0.627	-0.627	-0.627	-0.625	-0.623
12	VCB from DWL m	0.249	0.254	0.267	0.282	0.296	0.306
13	GZ m	0.000	0.216	0.410	0.567	0.685	0.776
14	LCF from Amidsh. (+ve fwd) m	-1.005	-0.982	-0.917	-0.844	-0.782	-0.725
15	TCF to zero pt. m	0.000	0.098	0.224	0.366	0.496	0.607
16	Max deck inclination deg	0.0	5.0	10.0	15.0	20.0	25.0
17	Trim angle (+ve by stern) deg	0.0	0.0	-0.2	-0.4	-0.8	-1.2

	30	35	40	45	50	55	60	65
--	----	----	----	----	----	----	----	----

	10179	10179	10179	10179	10179	10179	10179	10179
1	10179	10179	10179	10179	10179	10179	10179	10179
2	0.462	0.440	0.408	0.365	0.311	0.241	0.144	0.012
3	0.091	-0.058	-0.241	-0.465	-0.737	-1.074	-1.508	-2.102
4	13.288	13.198	13.073	12.702	12.344	12.035	11.783	11.595
5	2.400	2.220	2.016	1.790	1.548	1.292	1.025	0.967
6	2.753	2.692	2.641	2.552	2.589	2.899	3.297	3.105
7	37.616	36.806	36.156	35.649	34.953	33.954	32.798	31.719
8	24.418	23.720	23.268	22.450	21.483	20.438	19.571	18.822
9	0.440	0.438	0.435	0.442	0.456	0.472	0.490	0.510
10	0.113	0.126	0.143	0.171	0.204	0.265	0.354	0.391
11	-0.619	-0.614	-0.607	-0.600	-0.591	-0.582	-0.572	-0.562
12	0.314	0.318	0.318	0.316	0.317	0.319	0.323	0.327
13	0.846	0.902	0.947	0.979	0.996	0.996	0.984	0.960
14	-0.679	-0.642	-0.611	-0.576	-0.549	-0.545	-0.534	-0.500
15	0.703	0.787	0.859	0.866	0.847	0.823	0.786	0.746
16	30.0	35.0	40.1	45.1	50.1	55.1	60.1	65.1
17	-1.7	-2.2	-2.9	-3.7	-4.7	-5.9	-7.4	-9.4

	70	75	80	85	90	100	110	120
1	10179	10179	10179	10179	10179	10181	10181	10181
2	-0.183	-0.484	-1.148	-3.201	N/A	-3.014	-2.007	-1.690
3	-2.975	-4.386	-7.182	-15.497	N/A	-9.175	-4.946	-3.472
4	11.457	11.409	11.381	11.578	12.045	12.899	13.591	13.680
5	0.964	0.965	0.962	0.974	1.041	1.149	1.217	1.241
6	3.573	4.251	1.688	1.660	1.643	1.643	1.688	1.777
7	30.710	28.931	28.429	28.561	28.718	29.124	29.604	30.179
8	18.276	18.088	17.302	17.097	16.996	17.109	17.573	18.342
9	0.535	0.576	0.589	0.583	0.565	0.538	0.524	0.538
10	0.402	0.410	0.537	0.531	0.482	0.408	0.356	0.329
11	-0.551	-0.540	-0.531	-0.523	-0.516	-0.508	-0.509	-0.521
12	0.333	0.346	0.355	0.361	0.366	0.371	0.369	0.362
13	0.926	0.915	0.863	0.789	0.707	0.528	0.336	0.139
14	-0.478	-0.448	-0.448	-0.439	-0.427	-0.408	-0.373	-0.368
15	0.689	0.592	0.622	0.561	0.495	0.356	0.210	0.064
16	70.1	75.0	80.0	85.0	90.0	100.0	109.9	119.9
17	-12.3	-17.0	-25.2	-43.8	-90.0	-25.7	-12.9	-7.9

	130	140	150	160	170	180
1	10181	10181	10181	10181	10181	10181
2	-1.538	-1.454	-1.408	-1.389	-1.395	-1.401
3	-2.697	-2.208	-1.871	-1.636	-1.497	-1.485
4	13.670	13.661	13.650	13.629	13.586	13.486
5	1.219	1.149	1.024	0.840	0.586	0.467
6	1.906	2.048	2.210	2.522	3.371	3.973
7	30.899	31.938	33.552	36.512	43.305	47.693
8	19.354	20.693	22.729	26.472	34.662	39.361
9	0.562	0.594	0.635	0.685	0.740	0.746
10	0.313	0.309	0.322	0.344	0.370	0.397
11	-0.537	-0.558	-0.581	-0.601	-0.616	-0.618
12	0.349	0.328	0.296	0.249	0.184	0.131
13	-0.053	-0.229	-0.379	-0.474	-0.421	0.000
14	-0.412	-0.481	-0.573	-0.717	-1.037	-1.296
15	-0.074	-0.179	-0.237	-0.224	-0.033	0.000
16	129.9	139.9	150.0	160.0	170.0	179.6
17	-5.2	-3.4	-2.1	-1.1	-0.5	-0.4



Polar Graph View

P-1

	V TW kts	beta TW deg.	Spinnaker	V AW kts	beta AW deg.	Hull Speed kts	VMG kts	Heel Angle	Fwd Force kN	Sideforce kN	Reef	Flat	Form Drag kN	Ind. Drag kN
1	6.00	35	down	9.41	21.31	3.87	3.17	3.48	0.38	2.15	1	1	0.32	0.06
2	6.00	39	down	9.74	22.66	4.34	3.37	3.73	0.46	2.32	1	1	0.41	0.05
3	6.00	42	down	9.92	23.7	4.65	3.45	3.88	0.52	2.41	1	1	0.47	0.05
4	6.00	45	down	10.06	24.76	4.91	3.47	3.99	0.59	2.48	1	1	0.54	0.05
5	6.00	50	down	10.20	26.58	5.28	3.40	4.09	0.68	2.54	1	1	0.64	0.04
6	6.00	60	down	10.20	30.4	5.81	2.90	4.05	0.84	2.50	1	1	0.80	0.03
7	6.00	75	down	9.62	36.77	6.16	1.59	3.53	0.95	2.15	1	1	0.92	0.02
8	6.00	90	down	8.48	44.74	6.02	0.00	2.68	0.89	1.55	1	1	0.88	0.01
9	6.00	100	down	7.47	51.89	5.65	-0.98	2.01	0.76	1.09	1	1	0.75	0.01
10	6.00	110	down	6.36	62.03	5.02	-1.72	1.32	0.57	0.65	1	1	0.57	0.00
11	6.00	80	up	9.72	37.57	6.66	1.16	5.7	1.14	3.02	1	1	1.10	0.04
12	6.00	90	up	9.33	40.08	7.14	0.00	6.57	1.35	3.28	1	1	1.31	0.04
13	6.00	100	up	8.60	43.55	7.28	-1.26	6.03	1.42	3.11	1	1	1.39	0.03
14	6.00	110	up	7.60	48.27	7.13	-2.44	4.59	1.33	2.52	1	1	1.30	0.02
15	6.00	120	up	6.37	55.28	6.65	-3.33	3.27	1.11	1.75	1	1	1.10	0.01
16	6.00	130	up	5.05	66.61	5.90	-3.79	2.13	0.84	1.04	1	1	0.83	0.01
17	6.00	140	up	3.92	82.53	5.15	-3.94	1.26	0.60	0.55	1	1	0.60	0.00
18	6.00	150	up	3.15	106.18	4.37	-3.78	0.57	0.41	0.22	1	1	0.41	0.00
19	6.00	165	up	2.74	145.06	3.61	-3.48	0.16	0.28	0.06	1	1	0.27	0.00
20	6.00	175	up	2.77	169.01	3.31	-3.30	0.05	0.23	0.02	1	1	0.23	0.00
21	6.00	180	up	2.86	180	3.19	-3.19	-0.02	0.21	-0.01	1	1	0.21	0.00
22	8.00	35	down	12.39	21.48	5.01	4.10	6.59	0.66	3.73	1	1	0.56	0.10
23	8.00	39	down	12.74	22.96	5.54	4.31	7.36	0.81	3.97	1	1	0.72	0.09
24	8.00	42	down	12.93	24.08	5.89	4.38	7.79	0.92	4.10	1	1	0.83	0.09
25	8.00	45	down	13.08	25.19	6.21	4.39	8.12	1.02	4.19	1	1	0.94	0.08
26	8.00	50	down	13.25	27.05	6.69	4.30	8.47	1.18	4.28	1	1	1.11	0.07
27	8.00	60	down	13.16	31.21	7.28	3.64	8.14	1.45	4.15	1	1	1.39	0.06
28	8.00	75	down	12.29	38.48	7.56	1.96	6.02	1.62	3.46	1	1	1.58	0.04
29	8.00	90	down	10.89	46.86	7.45	0.00	4.07	1.52	2.50	1	1	1.50	0.02
30	8.00	100	down	9.69	53.94	7.09	-1.23	3.01	1.30	1.77	1	1	1.28	0.01
31	8.00	110	down	8.28	64.58	6.28	-2.15	1.98	0.97	1.06	1	1	0.97	0.01
32	8.00	80	up	12.13	39.12	8.02	1.39	14.65	2.09	5.25	1	1	2.01	0.08
33	8.00	90	up	11.33	43.09	8.28	0.00	15.37	2.42	5.36	1	1	2.34	0.08
34	8.00	100	up	10.39	48.19	8.32	-1.45	12.2	2.48	4.72	1	1	2.42	0.06
35	8.00	110	up	9.26	54.03	8.20	-2.80	8.27	2.29	3.73	1	1	2.26	0.04
36	8.00	120	up	7.96	60.96	7.90	-3.95	4.92	1.92	2.67	1	1	1.90	0.02
37	8.00	130	up	6.56	70.2	7.41	-4.76	3.25	1.48	1.73	1	1	1.47	0.01
38	8.00	140	up	5.20	85.4	6.60	-5.06	1.94	1.08	0.93	1	1	1.08	0.00
39	8.00	150	up	4.25	108.44	5.65	-4.89	0.93	0.75	0.38	1	1	0.75	0.00
40	8.00	165	up	3.69	145.56	4.75	-4.59	0.29	0.50	0.10	1	1	0.50	0.00
41	8.00	175	up	3.73	169.12	4.38	-4.36	0.1	0.42	0.03	1	1	0.42	0.00
42	8.00	180	up	3.85	180	4.22	-4.22	-0.04	0.39	-0.01	1	1	0.39	0.00
43	10.00	35	down	15.11	21.56	5.92	4.85	12.77	1.00	5.55	1	1	0.84	0.16
44	10.00	39	down	15.49	22.98	6.56	5.09	14.29	1.20	5.87	1	1	1.05	0.15

	Aero Heel Moment kg.m	Hydro Heel Moment kg.m	Hull Flight Moment kg.m	Craw Flight Moment kg.m	Force Err kg	Moment Err kg.m
1	2100.67	271.05	1461.57	910.11	0.00	0.04
2	2263.18	292.21	1554.62	1000.70	0.00	0.06
3	2355.09	304.12	1607.54	1051.62	0.00	0.06
4	2421.35	312.66	1645.54	1088.30	0.00	0.16
5	2478.93	320.01	1677.47	1121.34	0.00	0.13
6	2439.99	315.05	1647.40	1107.54	0.00	0.09
7	2091.04	270.69	1433.33	928.39	0.00	0.01
8	1505.58	195.70	1093.86	607.42	0.00	0.00
9	1057.45	137.64	826.89	368.19	0.00	0.00
10	636.16	82.45	550.07	168.25	0.00	0.28
11	3323.60	380.51	2262.20	1441.90	0.00	0.00
12	3607.10	413.19	2571.42	1448.75	0.00	0.12
13	3423.65	392.28	2365.68	1450.26	0.00	0.00
14	2772.44	317.73	1825.19	1264.93	0.00	0.05
15	1928.68	221.08	1318.74	830.89	0.00	0.13
16	1146.31	131.37	870.67	406.87	0.00	0.14
17	603.67	69.19	520.87	151.98	0.00	0.01
18	243.57	28.06	239.38	32.25	0.00	0.00
19	63.98	7.39	68.71	2.62	0.00	0.05
20	20.54	2.38	22.44	0.28	0.00	0.20
21	-7.85	-0.90	8.71	0.04	0.00	-17.50
22	3642.93	470.10	2664.19	1448.68	0.00	0.15
23	3875.72	500.45	2929.86	1446.31	0.00	0.00
24	4000.60	516.61	3072.34	1444.85	0.00	0.01
25	4091.07	528.23	3175.62	1443.69	0.00	0.00
26	4177.23	539.22	3274.03	1442.41	0.00	0.00
27	4050.73	523.13	3130.24	1443.62	0.00	0.01
28	3366.93	436.26	2352.91	1450.27	0.00	0.00
29	2417.42	314.47	1616.62	1115.26	0.00	0.01
30	1716.74	223.38	1207.58	732.53	0.00	0.01
31	1031.41	133.41	806.78	358.04	0.00	0.00
32	5771.45	661.02	5021.56	1410.90	0.00	0.00
33	5896.70	675.63	5166.17	1406.16	0.00	0.00
34	5185.71	594.30	4354.63	1425.37	0.00	0.00
35	4100.96	470.07	3127.70	1443.17	0.00	0.17
36	2931.21	336.00	1927.51	1339.40	0.00	0.30
37	1897.70	217.46	1293.77	821.30	0.00	0.08
38	1017.78	116.67	788.28	346.17	0.00	0.00
39	419.82	48.39	383.32	84.82	0.00	0.07
40	114.50	13.23	119.51	8.17	0.00	0.04
41	37.00	4.28	40.36	0.92	0.00	0.00
42	-14.21	-1.62	15.72	0.14	0.00	-31.69
43	5421.01	699.59	4698.27	1422.24	0.00	0.09
44	5732.52	740.21	5059.53	1413.20	0.00	0.00

Results

	V TW kts	beta TW deg.	Spinmaker	V AW kts	beta AW deg.	Hull Speed kts	VMG kts	Heel Angle	Fwd Force kN	Sideforce kN	Reel	Flat	Form Drag kN	Ind. Drag kN
45	10.00	42	down	15.69	24.06	6.97	5.18	15.19	1.35	6.04	1	1	1.21	0.14
46	10.00	45	down	15.79	25.28	7.27	5.14	15.65	1.50	6.10	1	1	1.37	0.13
47	10.00	50	down	15.79	27.58	7.63	4.90	15.58	1.73	6.06	1	1	1.62	0.12
48	10.00	60	down	15.43	32.72	8.02	4.01	13.83	2.12	5.66	1	1	2.02	0.09
49	10.00	75	down	14.37	41.17	8.24	2.13	9.81	2.37	4.62	1	1	2.31	0.06
50	10.00	90	down	12.82	50.61	8.13	0.00	5.55	2.21	3.28	1	1	2.18	0.03
51	10.00	100	down	11.54	57.93	7.86	-1.36	3.85	1.87	2.34	1	1	1.86	0.02
52	10.00	110	down	10.15	67.01	7.37	-2.52	2.68	1.46	1.52	1	1	1.45	0.01
53	10.00	80	up	13.69	41.41	8.54	1.48	22.77	2.78	6.23	1	0.84	2.68	0.10
54	10.00	90	up	12.71	46.19	8.80	0.00	23.11	3.17	6.22	1	0.9	3.08	0.09
55	10.00	100	up	11.72	51.77	8.99	-1.56	20.64	3.49	6.01	1	1	3.41	0.08
56	10.00	110	up	10.71	59.23	8.92	-3.05	13.05	3.38	4.87	1	1	3.33	0.05
57	10.00	120	up	9.36	67.44	8.63	-4.32	7.76	2.92	3.57	1	1	2.89	0.03
58	10.00	130	up	7.90	77.17	8.24	-5.30	4.36	2.33	2.37	1	1	2.32	0.02
59	10.00	140	up	6.48	90.09	7.72	-5.91	2.62	1.73	1.33	1	1	1.72	0.01
60	10.00	150	up	5.37	110.17	6.89	-5.96	1.34	1.19	0.59	1	1	1.19	0.00
61	10.00	165	up	4.71	146.33	5.83	-5.63	0.44	0.81	0.17	1	1	0.81	0.00
62	10.00	175	up	4.74	169.31	5.40	-5.37	0.15	0.67	0.05	1	1	0.67	0.00
63	10.00	180	up	4.88	180	5.21	-5.21	-0.06	0.62	-0.02	1	1	0.62	0.00
64	12.00	35	down	17.44	21.5	6.52	5.34	19.79	1.24	6.86	1	0.93	1.03	0.20
65	12.00	39	down	17.73	23.08	7.12	5.53	21	1.45	6.94	1	0.9	1.27	0.17
66	12.00	42	down	17.81	24.4	7.43	5.52	21.59	1.62	6.96	1	0.9	1.46	0.16
67	12.00	45	down	17.81	25.79	7.68	5.43	22.05	1.79	6.98	1	0.9	1.64	0.15
68	12.00	50	down	17.67	28.19	7.98	5.13	22.67	2.09	6.99	1	0.92	1.95	0.14
69	12.00	60	down	17.15	33.22	8.45	4.22	23.2	2.67	6.98	1	1	2.54	0.12
70	12.00	75	down	16.25	43.17	8.77	2.27	14.62	3.17	5.80	1	1	3.09	0.08
71	12.00	90	down	14.65	53.79	8.65	0.00	7.96	2.96	4.06	1	1	2.92	0.04
72	12.00	100	down	13.30	61.81	8.36	-1.45	4.76	2.50	2.88	1	1	2.48	0.02
73	12.00	110	down	11.86	70.98	7.95	-2.72	3.28	1.97	1.93	1	1	1.96	0.01
74	12.00	80	up	15.24	44.42	8.83	1.53	23.77	3.23	6.64	0.93	0.79	3.12	0.10
75	12.00	90	up	14.16	49.88	9.12	0.00	24.06	3.69	6.54	0.94	0.85	3.60	0.09
76	12.00	100	up	12.94	55.6	9.37	-1.63	24.33	4.10	6.37	0.97	0.94	4.02	0.08
77	12.00	110	up	11.91	62.83	9.54	-3.26	20.07	4.42	5.90	1	1	4.35	0.07
78	12.00	120	up	10.75	72.15	9.33	-4.67	11.84	4.08	4.57	1	1	4.03	0.04
79	12.00	130	up	9.29	82.87	8.93	-5.74	6.02	3.39	3.06	1	1	3.37	0.02
80	12.00	140	up	7.82	96.37	8.41	-6.44	3.24	2.56	1.71	1	1	2.55	0.01
81	12.00	150	up	6.62	114.01	7.79	-6.75	1.76	1.79	0.81	1	1	1.79	0.00
82	12.00	165	up	5.73	146.87	6.90	-6.66	0.63	1.20	0.24	1	1	1.20	0.00
83	12.00	175	up	5.78	169.49	6.38	-6.35	0.23	1.00	0.08	1	1	1.00	0.00
84	12.00	180	up	5.96	180	6.15	-6.15	-0.09	0.92	-0.03	1	1	0.92	0.00
85	14.00	35	down	19.56	22.08	6.83	5.59	21.7	1.33	7.04	1	0.75	1.14	0.19
86	14.00	39	down	19.76	23.93	7.35	5.71	22.44	1.57	7.06	1	0.74	1.40	0.17
87	14.00	42	down	19.76	25.43	7.63	5.67	22.66	1.76	7.14	0.98	0.78	1.60	0.16
88	14.00	45	down	19.69	26.97	7.85	5.55	22.9	1.96	7.21	0.96	0.82	1.81	0.15

Results

	Aero Heel Moment kg.m	Hydro Heel Moment kg.m	Hull Right Moment kg.m	Crew Right Moment kg.m	Force Err kN	Moment Err kg.m
45	5891.54	760.80	5244.92	1407.38	0.00	0.04
46	5958.02	769.28	5323.04	1404.27	0.00	0.00
47	5916.12	763.66	5275.04	1404.71	0.00	0.03
48	5519.66	713.19	4816.72	1416.05	0.00	0.08
49	4491.04	582.77	3636.81	1437.00	0.00	0.00
50	3174.00	413.16	2156.06	1431.09	0.00	0.00
51	2264.92	294.26	1519.10	1040.07	0.00	0.01
52	1484.01	191.56	1070.03	605.54	0.00	0.01
53	6849.58	785.22	6290.11	1344.70	0.00	-0.02
54	6840.51	784.19	6283.36	1341.34	0.00	0.00
55	6612.94	757.96	6006.22	1364.68	0.00	0.00
56	5348.92	613.15	4541.37	1420.66	0.00	0.04
57	3925.92	449.92	2930.86	1444.98	0.00	0.00
58	2607.18	298.75	1704.65	1201.01	0.00	0.27
59	1457.83	167.16	1041.30	583.57	0.00	0.13
60	641.74	74.00	542.80	172.88	0.00	0.05
61	180.85	20.89	182.16	19.54	0.00	0.04
62	59.07	6.83	63.55	2.36	0.00	0.00
63	-22.84	-2.60	25.10	0.37	0.00	-50.91
64	6697.72	864.33	6189.88	1372.17	0.00	0.00
65	6773.08	874.59	6286.21	1361.47	0.00	0.00
66	6796.04	877.59	6317.62	1356.01	0.00	0.00
67	6809.45	879.16	6336.98	1351.64	0.00	0.00
68	6822.60	880.68	6357.67	1345.61	0.00	0.00
69	6801.78	879.03	6340.39	1340.41	0.00	0.00
70	5626.99	730.90	4946.78	1411.11	0.00	0.00
71	3932.17	511.67	2999.56	1444.27	0.00	0.00
72	2797.62	362.63	1854.62	1305.53	0.00	0.10
73	1889.39	242.95	1297.35	834.99	0.00	0.00
74	6828.49	836.18	6330.00	1334.66	0.00	0.00
75	6816.57	823.59	6308.54	1331.62	0.00	0.00
76	6814.81	803.10	6289.17	1328.75	0.00	-0.01
77	6491.49	744.07	5865.77	1369.78	0.00	0.00
78	5030.13	576.38	4179.21	1427.29	0.00	0.00
79	3367.36	385.96	2302.98	1450.28	0.00	0.06
80	1876.16	215.47	1272.20	819.31	0.00	0.13
81	886.35	102.30	700.78	287.87	0.00	0.00
82	262.45	30.32	253.78	38.98	0.00	0.01
83	86.92	10.05	91.91	5.07	0.00	0.00
84	-34.00	-3.88	37.01	0.82	0.00	-75.70
85	6876.83	887.75	6409.59	1354.99	0.00	0.00
86	6879.13	889.66	6420.89	1347.90	0.00	0.00
87	6850.61	900.15	6405.05	1345.71	0.00	0.00
88	6830.53	909.10	6396.21	1343.42	0.00	0.00

Results

	V TW kts	beta TW deg.	Spinnaker	V AW kts	beta AW deg.	Hull Speed kts	V/MG kts	Heel Angle	Fwd Force kN	Sideforce kN	Reef	Flat	Form Drag kN	Ind. Drag kN
89	14.00	50	down	19.48	29.59	8.15	5.24	23.24	2.29	7.31	0.94	0.89	2.15	0.15
90	14.00	60	down	18.86	34.99	8.63	4.31	23.75	2.94	7.34	0.94	1	2.81	0.13
91	14.00	75	down	17.74	43.99	9.19	2.38	22.32	3.83	6.85	1	1	3.73	0.10
92	14.00	90	down	16.43	56.19	9.15	0.00	10.92	3.77	4.89	1	1	3.72	0.05
93	14.00	100	down	15.06	64.87	8.82	-1.53	6.23	3.21	3.48	1	1	3.18	0.03
94	14.00	110	down	13.56	74.49	8.39	-2.87	3.97	2.55	2.37	1	1	2.53	0.01
95	14.00	80	up	16.77	47	9.07	1.58	24.07	3.62	7.09	0.84	0.82	3.51	0.11
96	14.00	90	up	15.59	52.94	9.40	0.00	24.35	4.16	6.99	0.85	0.9	4.06	0.10
97	14.00	100	up	14.28	59.25	9.68	-1.68	24.68	4.65	6.80	0.88	1	4.56	0.09
98	14.00	110	up	12.89	66.36	9.91	-3.39	24.98	5.06	6.35	0.96	1	4.99	0.07
99	14.00	120	up	11.98	75.65	9.99	-4.99	17.27	5.27	5.53	1	1	5.22	0.06
100	14.00	130	up	10.69	86.94	9.64	-6.19	8.81	4.62	3.82	1	1	4.60	0.03
101	14.00	140	up	9.23	101.09	9.04	-6.93	3.98	3.58	2.15	1	1	3.57	0.01
102	14.00	150	up	8.02	118.35	8.43	-7.30	2.2	2.58	1.07	1	1	2.58	0.00
103	14.00	165	up	6.95	148.24	7.74	-7.48	0.84	1.74	0.33	1	1	1.74	0.00
104	14.00	175	up	6.87	169.68	7.31	-7.28	0.31	1.41	0.11	1	1	1.41	0.00
105	14.00	180	up	7.04	180	7.09	-7.09	-0.13	1.29	-0.04	1	1	1.29	0.00
106	16.00	35	down	21.47	22.77	6.97	5.71	22.27	1.40	7.33	0.95	0.71	1.20	0.20
107	16.00	39	down	21.58	24.8	7.48	5.82	22.61	1.67	7.47	0.92	0.76	1.49	0.18
108	16.00	42	down	21.55	26.39	7.76	5.77	22.87	1.89	7.55	0.91	0.81	1.71	0.17
109	16.00	45	down	21.46	28.02	7.98	5.64	23.12	2.11	7.63	0.89	0.85	1.94	0.17
110	16.00	50	down	21.21	30.8	8.28	5.32	23.46	2.47	7.73	0.87	0.93	2.31	0.16
111	16.00	60	down	20.55	36.53	8.78	4.39	24.01	3.18	7.66	0.88	1	3.04	0.14
112	16.00	75	down	19.21	45.61	9.40	2.43	24.45	4.17	7.20	0.95	1	4.06	0.11
113	16.00	90	down	18.11	57.9	9.62	0.00	14.7	4.61	5.75	1	1	4.54	0.07
114	16.00	100	down	16.81	67.21	9.28	-1.61	8.45	3.99	4.15	1	1	3.95	0.04
115	16.00	110	down	15.29	77.28	8.81	-3.01	4.86	3.20	2.88	1	1	3.18	0.02
116	16.00	80	up	16.63	44.85	9.12	1.58	39.33	3.67	7.53	0.89	0.8	3.54	0.12
117	16.00	90	up	15.31	51.69	9.49	0.00	38.83	4.27	7.33	0.9	0.89	4.16	0.11
118	16.00	100	up	13.93	59.21	9.82	-1.71	38.28	4.84	7.04	0.92	1	4.74	0.09
119	16.00	110	up	12.61	67.93	10.09	-3.45	37.37	5.33	6.46	1	1	5.25	0.07
120	16.00	120	up	12.78	78.73	10.46	-5.23	24.69	6.19	6.10	1	1	6.13	0.06
121	16.00	130	up	12.05	90.16	10.31	-6.63	12.14	5.97	4.58	1	1	5.94	0.04
122	16.00	140	up	10.67	104.38	9.71	-7.44	4.98	4.77	2.66	1	1	4.75	0.01
123	16.00	150	up	9.46	121.54	9.03	-7.82	2.71	3.55	1.37	1	1	3.55	0.00
124	16.00	165	up	8.35	149.98	8.36	-8.08	1.09	2.49	0.45	1	1	2.49	0.00
125	16.00	175	up	8.22	170.14	7.99	-7.96	0.43	2.00	0.15	1	1	2.00	0.00
126	16.00	180	up	8.34	180	7.81	-7.81	-0.18	1.81	-0.06	1	1	1.81	0.00
127	20.00	35	down	25.03	24.02	7.11	5.82	22.54	1.50	8.06	0.83	0.74	1.26	0.23
128	20.00	39	down	25.10	26.23	7.64	5.93	22.96	1.81	8.20	0.81	0.8	1.60	0.21
129	20.00	42	down	25.03	27.97	7.91	5.88	23.27	2.07	8.29	0.79	0.85	1.87	0.20
130	20.00	45	down	24.90	29.75	8.14	5.76	23.53	2.32	8.36	0.78	0.9	2.13	0.19
131	20.00	50	down	24.59	32.77	8.46	5.44	23.87	2.75	8.46	0.76	0.99	2.56	0.18
132	20.00	60	down	23.86	39.01	9.01	4.50	24.51	3.56	8.24	0.79	1	3.40	0.15

Results

	Aero Heel Moment kg.m	Hydro Heel Moment kg.m	Hull Right Moment kg.m	Crew Right Moment kg.m	Force Err kN	Moment Err kg.m
89	6803.51	921.48	6385.02	1339.97	0.00	0.00
90	6768.17	924.68	6358.07	1334.77	0.00	0.00
91	6645.26	863.49	6159.65	1349.09	0.00	0.00
92	4740.62	616.39	3925.03	1431.90	0.00	0.08
93	3393.08	438.80	2382.16	1449.71	0.00	0.00
94	2333.66	298.92	1552.30	1080.28	0.00	0.00
95	6754.19	893.71	6316.35	1331.55	0.00	0.00
96	6734.16	881.30	6286.90	1328.56	0.00	0.00
97	6731.81	857.13	6263.82	1325.13	0.00	0.00
98	6767.38	799.78	6245.29	1321.87	0.00	0.00
99	6078.36	696.48	5382.24	1392.60	0.00	0.00
100	4193.91	480.82	3233.60	1441.13	0.00	0.00
101	2355.21	270.87	1541.36	1084.36	0.00	0.36
102	1165.59	134.61	867.38	432.62	0.00	0.20
103	364.99	42.17	336.92	69.98	0.00	0.26
104	121.18	14.02	125.48	9.71	0.00	0.00
105	-47.46	-5.41	51.32	1.62	0.00	-105.82
106	6880.76	923.50	6454.75	1349.51	0.00	0.00
107	6824.59	941.30	6419.63	1346.26	0.00	0.00
108	6798.45	951.93	6406.67	1343.72	0.00	0.00
109	6779.11	961.21	6399.15	1341.17	0.00	0.00
110	6748.66	973.78	6384.66	1337.78	0.00	0.00
111	6721.16	965.51	6354.51	1332.17	0.00	0.00
112	6712.90	907.52	6292.93	1327.50	0.00	0.00
113	5575.94	724.45	4889.70	1410.61	0.00	0.08
114	4053.36	523.13	3133.99	1442.50	0.00	0.00
115	2841.28	362.73	1877.36	1326.65	0.00	0.00
116	7514.72	948.57	7335.23	1128.04	0.00	0.02
117	7353.73	923.38	7140.99	1136.09	0.00	0.03
118	7221.16	886.91	6963.35	1144.72	0.00	-0.01
119	7104.24	814.14	6759.40	1159.04	0.00	-0.07
120	6705.22	768.37	6148.63	1324.95	0.00	0.00
121	5038.10	577.71	4190.08	1425.73	0.00	0.00
122	2913.28	335.39	1896.84	1351.82	0.00	0.00
123	1498.35	173.09	1054.61	616.67	0.00	0.16
124	491.79	56.83	432.39	116.24	0.00	0.00
125	167.86	19.41	169.26	18.00	0.00	0.00
126	-66.65	-7.60	71.17	3.18	0.00	-148.60
127	6795.36	1015.29	6463.70	1346.95	0.00	0.00
128	6742.04	1033.15	6432.42	1342.78	0.00	0.00
129	6716.63	1044.15	6421.07	1339.71	0.00	0.00
130	6693.87	1053.58	6410.35	1337.10	0.00	0.00
131	6657.92	1066.09	6390.44	1333.58	0.00	-0.01
132	6642.58	1038.64	6354.35	1326.87	0.00	0.00

Results

	V TW kts	beta TW deg.	Spinnaker	V AW kts	beta AW deg.	Hull Speed kts	VWG kts	Heel Angle	Fwd Force kN	Sideforce kN	Reef	Flat	Form Drag kN	Ind. Drag kN
133	20.00	75	down	22.36	48.93	9.71	2.51	24.96	4.72	7.70	0.86	1	4.60	0.12
134	20.00	90	down	20.44	59.87	10.26	0.00	25.54	5.77	6.92	0.99	1	5.68	0.08
135	20.00	100	down	20.08	70.45	10.16	-1.76	14.32	5.65	5.58	1	1	5.60	0.06
136	20.00	110	down	18.71	81.15	9.68	-3.31	8.39	4.71	4.06	1	1	4.68	0.03
137	20.00	80	up	19.41	48.84	9.48	1.65	38.54	4.27	8.19	0.76	0.85	4.14	0.14
138	20.00	90	up	17.94	56.48	9.90	0.00	38.01	5.02	8.01	0.76	0.98	4.90	0.12
139	20.00	100	up	16.48	65.08	10.26	-1.78	37.43	5.70	7.51	0.81	1	5.60	0.10
140	20.00	110	up	14.98	74.55	10.59	-3.62	37.24	6.40	6.95	0.89	1	6.32	0.08
141	20.00	120	up	13.52	84.95	10.97	-5.49	37.35	7.30	6.30	1	1	7.24	0.06
142	20.00	130	up	14.34	95.82	11.39	-7.32	21.19	8.61	5.82	1	1	8.56	0.05
143	20.00	140	up	13.54	109.2	10.98	-8.41	8.98	7.60	3.82	1	1	7.58	0.02
144	20.00	150	up	12.36	125.46	10.31	-8.92	3.97	5.97	2.13	1	1	5.96	0.01
145	20.00	165	up	11.24	152.32	9.54	-9.22	1.66	4.44	0.74	1	1	4.44	0.00
146	20.00	175	up	11.15	170.92	9.09	-9.06	0.71	3.65	0.27	1	1	3.65	0.00
147	20.00	180	up	11.29	180	8.89	-8.89	-0.32	3.31	-0.11	1	1	3.31	0.00

	Aero Heel Moment kg.m	Hydro Heel Moment kg.m	Hull Right Moment kg.m	Crow Right Moment kg.m	Force Err kN	Moment Err kg.m
133	6626.09	970.82	6274.78	1322.13	0.00	-0.01
134	6661.08	871.79	6216.99	1315.88	0.00	0.00
135	5465.09	703.13	4755.17	1413.01	0.00	0.04
136	4025.08	511.27	3093.63	1442.72	0.00	0.00
137	7196.83	1031.85	7087.96	1140.71	0.00	0.00
138	7037.47	1009.06	6897.47	1149.07	0.00	-0.01
139	6941.73	946.00	6729.74	1158.01	0.00	-0.02
140	6915.34	875.61	6629.97	1160.97	0.00	0.00
141	6923.78	793.68	6558.21	1159.30	0.00	-0.06
142	6389.50	733.70	5763.46	1359.73	0.00	0.00
143	4175.95	481.42	3216.92	1440.45	0.00	0.00
144	2318.75	267.88	1506.41	1080.22	0.00	0.00
145	807.03	93.29	642.71	257.49	0.00	0.12
146	292.62	33.83	276.73	49.43	0.00	0.29
147	-122.21	-13.94	125.89	10.26	0.00	-272.30

P-9