

**Corbin 39 - Cross-check of the hydrostatics data – as for 23 04 2020**

With reference to the same linesplan and its data

	<b>Gene-Hull</b> (Proxi 39 output)	<b>Multisurf</b> (Data in annex)	<b>Delfship</b> (Rev6 / DS 18-04-20)
Lwl (m)	9,716	9,707	9,743
Loa (m)	Not relevant (aft overhang cut)	11,695	11,826
Bwl (m)	3,421		3,408
Boa (m)	3,710	3,63	3,658
Hull body alone : volume (m3) at X,Z position	9,52691 at X 4,516 m Z – 0,259 m	9,45600 at X 4,505 m Z – 0,262 m	
Total volume (under H0) : (m3)	10,580	10,630	11,084
>> Displacement (kg) (with 1025 kg/m3)	10844	10896	11361
LCB total (m)	4,518	4,547	4,543
, in % Lwl	46,50	46,84	46,63
ZCB total (m)	-0,344	-0,350	-0,361
Max cross sectional area (m2) Hull body	1,7046		1,803
Max cross sectional area (m2) Hull+Keel	2,0087	2,007	2,152
Waterplane area (m2)	22,859	21,950	22,916
, at X (m)	4,461	4,472	4,454
Cp Hull Body alone	0,575	0,565	
Cp overall by : Vol./Lwl/S(hull+keel)	0,542	0,530	0,529
Wetted surface hull only (m2)	26,090	25,240	
Wetted surface keel (m2)	8,950	8,940	
Wetted surface Skeg- rudder (m2)	2,440	2,321	
Wetted surface total (m2)	34,888	33,510	39,879
Projected surface / Y	3,530	3,960	

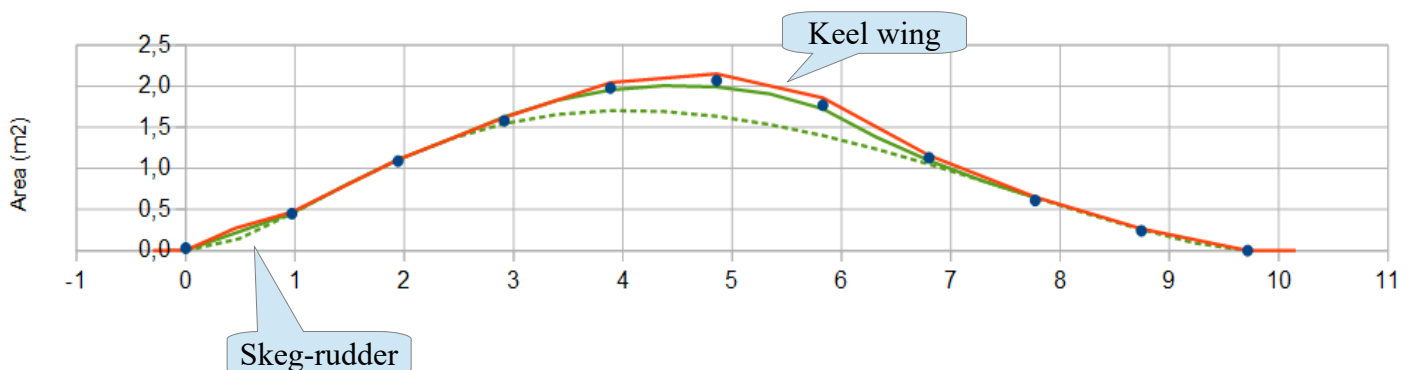
keel (m2)			
Projected surface / Y Skeg-rudder(m2)	1,170	1,142	
Draft overall (m)	1,676	1,682	1,676
Hull body alone surface (m2) at X, Z (m)	Not relevant (aft overhang cut)		61,31 at X 4,756 m Z 0,204 m
Deck surface (m2) at X, Z (m)	Not relevant (aft overhang cut)		32,736 at X 4,848 m Z 1,344 m

### Sectional areas

#### Corbin 39 - data sectional areas (m2)

Stations	X (m)	Multisurf	Proxi 39 Hull only	Proxi 39 Hull-Keel-Rudder	X (m)	Delftship Rev 6	
<b>Aft PP 0</b>	0	0,0300	0,0000	0,0047	-0,300	0,000	
0,5	0,486		0,1433	0,2279	-0,150	0,003	
1	0,972	0,4500	0,4509	0,4556	<b>Aft PP 0</b>	0,004	
1,5	1,457		0,7938	0,7938	0,450	0,271	
2	1,943	1,0900	1,1076	1,1076	0,972	0,470	
2,5	2,429		1,3621	1,3621	1,943	1,108	
3	2,915	1,5800	1,5459	1,6287	2,915	1,620	
3,5	3,401		1,6582	1,8301	3,886	2,046	
4	3,886	1,9800	1,7046	1,9559	4,858	2,152	
4,5	4,372		1,6940	2,0087	5,829	1,860	
5	4,858	2,0700	1,6353	1,9924	6,801	1,159	
5,5	5,344		1,5356	1,9080	7,772	0,653	
6	5,830	1,7700	1,4010	1,7260	8,744	0,266	
6,5	6,315		1,2374	1,3836	<b>Fore PP 10</b>	9,716	0,001
7	6,801	1,1300	1,0515	1,0958	10,156	0,000	
7,5	7,287		0,8510	0,8510			
8	7,773	0,6100	0,6453	0,6453			
8,5	8,259		0,4446	0,4446			
9	8,744	0,2400	0,2571	0,2571			
9,5	9,230		0,0925	0,0925			
<b>Fore PP 10</b>	9,716	0,0000	0,0000	0,0000			

Blue points : Multisurf ; Red line : Delftship / Rev6  
 Green : Gene-Hull / Proxi 39 dashed line (Hull only) , continue line (Hull, Keel, Rudder))



## Annex :

### Hydrostatics from Multisurf (as for 13 04 2020)

#### Hull complete

LOA 11.695 m 38.37' ~ 38' 4"

BOA 3.626m 11.9' ~ 11' 11"

Sink 0.000 m Spec. Wt. 1025.0 kg/m<sup>3</sup>

Trim, deg. 0.00 Z c.g. 0.000 m

Heel, deg. 0.00

#### Dimensions

W.L. Length 9.707 m W.L. Beam 3.345 m

W.L. Fwd. X 0.000 m Draft 1.682 m

W.L. Aft X 9.707 m

#### Displacement

Volume 10.630 m<sup>3</sup> Ctr.Buoy. X 4.547 m

Displ't. 10895.9 kg Ctr.Buoy. Y -0.000 m

LCB (% w.l.) 46.8 Ctr.Buoy. Z -0.350 m

#### Waterplane

W.P. Area 21.95 m<sup>2</sup> Ctr.Fltn. X 4.472 m

LCF (% w.l.) 46.1

#### Wetted Surface

Wetd.Area 33.51 m<sup>2</sup> Ctr. W.S. X 4.322 m

Ctr. W.S. Z -0.609 m

#### Lateral Plane

L.P. Area 10.31 m<sup>2</sup> Ctr. L.P. X 4.386 m

Ctr. L.P. Z -0.675 m

#### Initial Stability

Trans. GM 1.021 m Trans.RMPD 194.1 m-kG

Longl. GM 9.621 m Longl.RMPD 1829.5 m-kG

#### Coefficients

Waterplane 0.676

Prismatic 0.530

Block 0.195

Midsection 0.367

Disp/length 332.0

#### Hull alone

12 stations, 1984 points

#### Inputs

Sink 0.000 m Spec. Wt. 1025.0 kg/m<sup>3</sup>

Trim, deg. 0.00 Z c.g. 0.000 m

Heel, deg. 0.00

#### Dimensions

W.L. Length 9.697 m W.L. Beam 3.345 m

W.L. Fwd. X 0.010 m Draft 0.752 m

W.L. Aft X 9.707 m

### Displacement

Volume 9.456 m<sup>3</sup>      Ctr.Buoy. X 4.505 m  
Displ't. 9692.2 kg      Ctr.Buoy. Y -0.000 m  
LCB (% w.l.) 46.4      Ctr.Buoy. Z -0.262 m

### Waterplane

W.P. Area 21.95 m<sup>2</sup>      Ctr.Fltn. X 4.472 m  
LCF (% w.l.) 46.0

### Wetted Surface

Wetd.Area 25.24 m<sup>2</sup>      Ctr. W.S. X 4.573 m  
Ctr. W.S. Z -0.408 m

### Lateral Plane

L.P. Area 5.54 m<sup>2</sup>      Ctr. L.P. X 4.923 m  
Ctr. L.P. Z -0.327 m

### Initial Stability

Trans. GM 1.279 m      Trans.RMPD 216.3 m-kg  
Longl. GM 10.947 m      Longl.RMPD 1851.6 m-kg

### Coefficients

Waterplane 0.677  
Prismatic 0.565  
Block 0.388  
Midsection 0.686  
Disp/length 296.3

surfaces et volumes :

surfaces mouillées

aileron 4.47 (sm = 2 x 4.47 = 8.94 m<sup>2</sup>)

skeg 0.424 (sm = 2 x 0.424 = 0.848 m<sup>2</sup>)

+ sup\_skeg 0.0625 (sm = 2 x 0.0625 = 0.1250 m<sup>2</sup>)

->> sm skeg : 0.973

safran 0.674 (sm = 2 x 0.674 = 1.348)

volumes

vol skeg 0.01762 x 2 = 0.03524 m<sup>3</sup>

vol safran 0.011941 x 2 = 0.023882 m<sup>3</sup>

vol aileron 0.642 x 2 = 1.284 m<sup>3</sup>

surface projetées sur Y

aileron 3.96 m<sup>2</sup>

skeg 0.409+0.062 = 0.471 m<sup>2</sup>

safran 0.671 m<sup>2</sup>

total skeg + safran + mini skeg 5.102 m<sup>2</sup>