

Trim- och stabilitetsbok Havscatten, SJVX



LÖA:	13,12	m
L _{LL} :	11,65	m
Bredd:	4,95	m
Mallat djup:	1,25	m
Djupgående:	0,81	m
Max displacement:	14.00	ton

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1 ALLMÄN INFORMATION

Fartyget uppfyller krav på intakt- och skadestabilitet enligt TSFS 2009:114, som ett nybyggt fartyg i område B. Fartyget överlever skador i ett utrymme, vilket som helst. Fartyget uppfyller passagerarfartygsdirektivets krav för ett nybyggt fartyg i fartområde B.

Maximalt passagerarantal är 30.

Maximal däckslast är 200 kg, och utgörs av fiskeutrustning och proviant.

2 INSTRUKTIONER TILL BEFÄLHAVAREN

Det är befälhavarens ansvar att försäkra sig om att fartyget är lastat på ett ur stabilitetssynpunkt betryggande sätt. Att fartyget uppfyller krav på stabilitet garanterar inte att fartyget inte kan förlora sin stabilitet. Ett litet fartyg har större känslighet för förändringar i vikt.

Fartyget har 12 vattentäta sektioner, 6 i varje skrov. Fartyget överlever en skada i vilken som helst av dessa sektioner. Det finns inga öppningar mellan sektionerna.

Fartyget har öppningar i däck som skyddas av vattentäta luckor. Dessa måste alltid vara stängda till sjöss.

Däckslast ska placeras med sin tyngdpunkt i centerlinjen så att fartyget inte har slagsida vid avgång.

Fartyget förväntas inte trafikera områden där risk för nedisning föreligger. Is på däck och överbyggnader försämrar fartygets stabilitet. Förväntas risk för nedisning, exempelvis vid minusgrader i kombination med stark vind och grov sjö ska lämpliga åtgärder vidtas för att förhindra att is samlas.

Summary of intact stability

Description	Density	Draft (m)	Trim (m)	List (Degr.)	Displ. (tonnes)	VCG' (m)	GM' (m)	Complies
Light ship	1,0250	0,695	0,414	0,0 (CL)	9,810	0,990	7,560	YES
30 PASS 100% BUNKER & FÖRRÅD	1,0250	0,819	0,318	-0,2 (SB)	14,021	1,282	5,248	YES
30 PASS 10% BUNKER & FÖRRÅD	1,0250	0,806	0,451	0,6 (PS)	13,386	1,304	5,518	YES

Components of deadweight

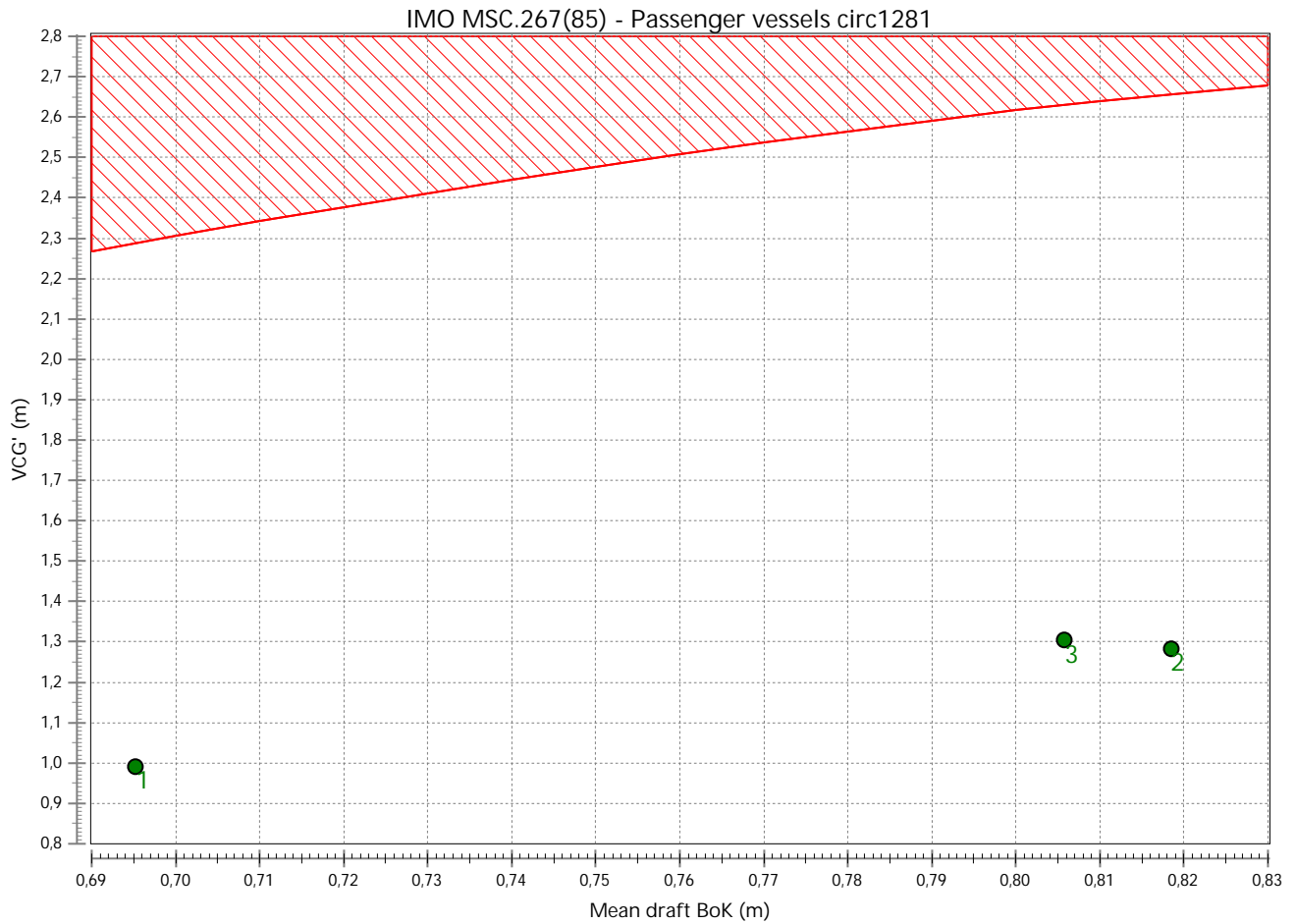
Loading condition	Deadweight	TANKS (tonnes)	Stores (tonnes)	Passengers (tonnes)
Light ship	0,000	0,000	0,000	0,000
30 PASS 100% BUNKER & FÖRRÅD	4,211	1,236	0,350	2,625
30 PASS 10% BUNKER & FÖRRÅD	3,576	0,601	0,350	2,625

Maximum VCG' envelope

Criteria : IMO MSC.267(85) - Passenger vessels circ1281

Initial trim : 0,000

Wind silhouette : Silhouette 1



Loading conditions:

1. Light ship
2. 30 PASS 100% BUNKER & FÖRRÅD
3. 30 PASS 10% BUNKER & FÖRRÅD

Light ship

14236 Havscatten

Designer

Dynalift Powerboats

Created by

Comment

Filename

C-43 .fbm

Design length

11,650 (m)

Midship location

5,825 (m)

Length over all

13,117 (m)

Relative water density

1,0250

Design beam

4,950 (m)

Mean shell thickness

0,0000 (m)

Maximum beam

4,891 (m)

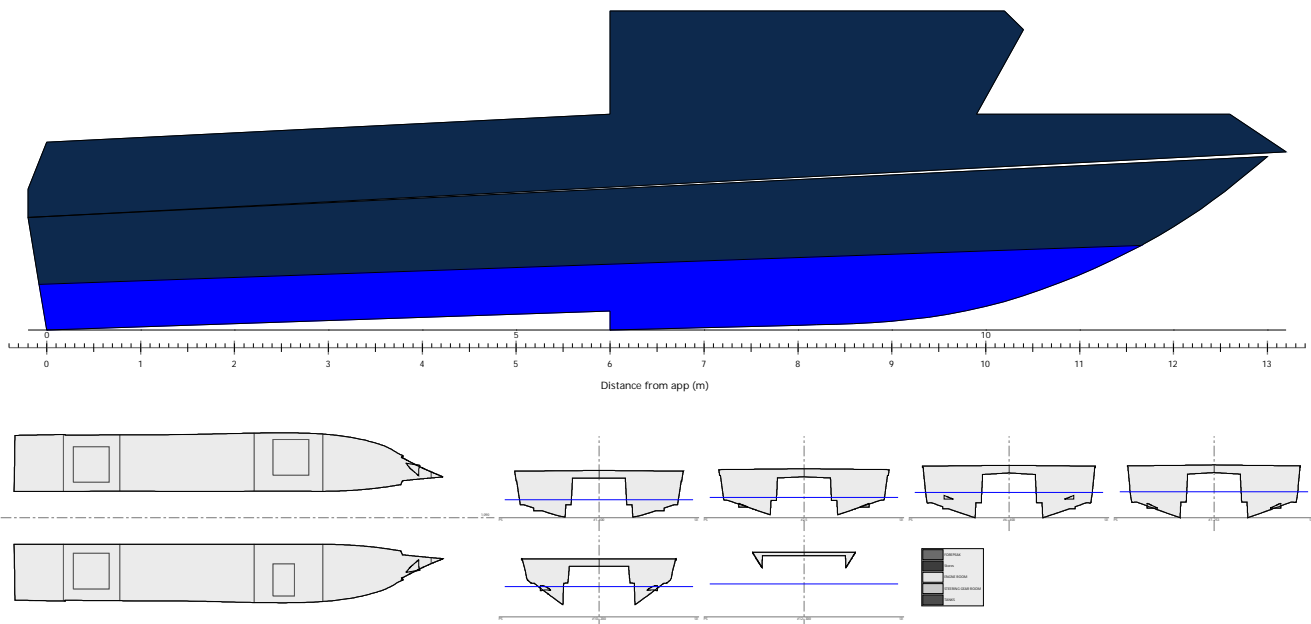
Appendage coefficient

1,0000

Design draft

0,740 (m)

Silhouette 1



Hydrostatic particulars

List	0,0 (CL) (Degr.)	GG'	0,000 (m)
Draft aft pp	0,488 (m)	VCG'	0,990 (m)
Mean moulded draft	0,695 (m)	Max VCG'	2,253 (m)
Draft forward pp	0,902 (m)	GM solid	7,560 (m)
Trim	0,414 (m)	G'M liquid	7,560 (m)
KM	8,550 (m)	Immersion rate	0,319 (t/cm)
VCG	0,990 (m)	MCT	0,246 (t*m/cm)

Draft at draft marks

FP	0,902 (m)
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Summary

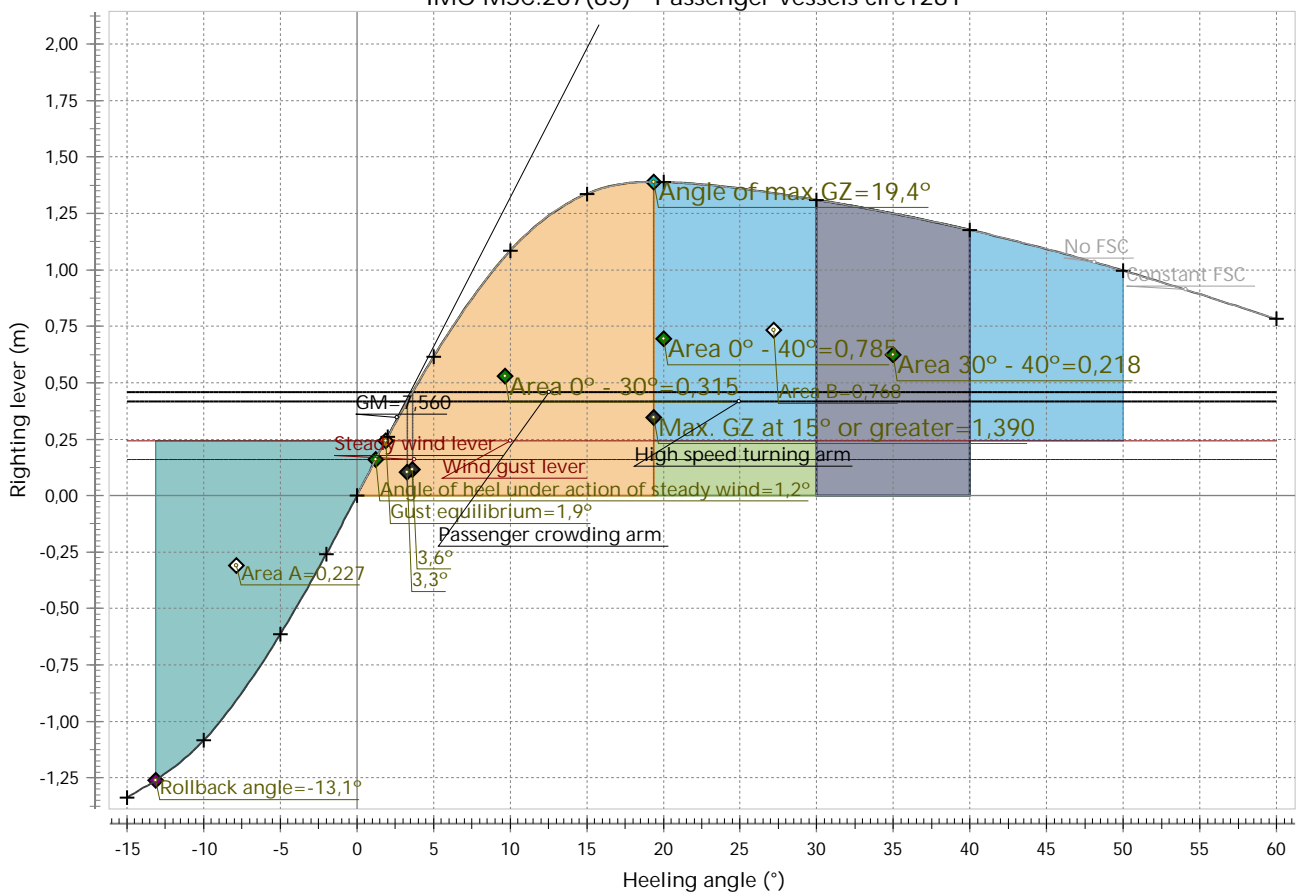
Description	Weight (tonnes)	LCG (m)	TCG (m)	VCG (m)	FSM (t*m)
Lightship	9,810	5,450	0,000 (CL)	0,990	
Deadweight	0,000	0,000	0,000 (CL)	0,000	0,000
Displacement	9,810	5,450	0,000 (CL)	0,990	0,000

Description	Density <i>(t/m³)</i>	Fill%	Weight <i>(tonnes)</i>	LCG <i>(m)</i>	TCG <i>(m)</i>	VCG <i>(m)</i>	FSM <i>(t*m)</i>
Lightship			9,810	5,450	0,000 (CL)	0,990	
Deadweight			0,000	0,000	0,000 (CL)	0,000	0,000
Displacement			9,810	5,450	0,000 (CL)	0,990	0,000

Righting levers

Heeling angle (Degr.)	Draft (m)	Trim (m)	Displacement (tonnes)	KN sin(θ) (m)	VCG sin(θ) (m)	GG' sin(θ) (m)	TCG cos(θ) (m)	GZ (m)	Area (mrad)
0,0° (CL)	0,695	0,414	9,810	0,000	0,000	0,000	0,000	0,000	0,000
2,0° (PS)	0,693	0,412	9,810	0,294	0,035	0,000	0,000	0,259	0,005
5,0° (PS)	0,683	0,410	9,810	0,701	0,086	0,000	0,000	0,614	0,028
10,0° (PS)	0,642	0,419	9,810	1,257	0,172	0,000	0,000	1,085	0,103
15,0° (PS)	0,557	0,447	9,810	1,593	0,256	0,000	0,000	1,337	0,210
20,0° (PS)	0,427	0,489	9,810	1,728	0,339	0,000	0,000	1,389	0,330
30,0° (PS)	0,092	0,514	9,810	1,805	0,495	0,000	0,000	1,310	0,567
40,0° (PS)	-0,315	0,564	9,810	1,813	0,636	0,000	0,000	1,177	0,785
50,0° (PS)	-0,837	0,601	9,810	1,755	0,758	0,000	0,000	0,997	0,975
60,0° (PS)	-1,607	0,668	9,810	1,640	0,857	0,000	0,000	0,782	1,131

Stability curve
IMO MSC.267(85) - Passenger vessels circ1281



Critical points

Description	Type	X coordinate (m)	Y coordinate (m)	Z coordinate (m)	Dist. to wl (m)	Submersion angle (Degr.)
ENGINE AIR INTAKE SB ENGINE	Downflooding	6,000	-1,600 (SB)	3,400	2,697	-
ENGINE AIR INTAKE PS ENGINE	Downflooding	6,000	1,600 (PS)	3,400	2,697	-

Evaluation of criteria

IMO MSC.267(85) - Passenger vessels circ1281

International Code on Intact Stability (2008), Part A, §3.1

Description	Attained value	Criterion	Required value	Complies
Area 0° - 30°	0,3151 (mrad)	>=	0,0700 (mrad)	YES
Area 0° - 40°	0,7850 (mrad)	>=	0,0900 (mrad)	YES
Area 30° - 40°	0,2177 (mrad)	>=	0,0300 (mrad)	YES
Max. GZ at 15° or greater	1,390 (m)	>=	0,200 (m)	YES
Lower angle	15,0 (Degr.)			
Upper angle	90,0 (Degr.)			
Angle of max GZ	19,4 (Degr.)	>=	15,0 (Degr.)	YES
Initial metacentric height	7,560 (m)	>=	0,150 (m)	YES
Severe wind and rolling criterion (weather criterion)				YES
Wind silhouette:	Silhouette 1			
Wind pressure	51,4 (kg/m ²)			
Wind area	23,60 (m ²)			
Steady wind lever	0,161 (m)			
Deck immersion angle	25,47 (Degr.)			
Wind gust lever	0,242 (m)			
Ratio of areaA/areaB	0,295	<=	1,000	YES
Maximum allowed static heeling angle	1,2 (Degr.)	<=	16,0 (Degr.)	YES
Max allowed ratio static angle/deck immersion angle	0,048	<=	0,800	YES
Angle of equilibrium due to passenger crowding	3,6 (Degr.)	<	10,0 (Degr.)	YES
Calculated heeling moment	4,500 (t*m)			
Turning angle	3,3 (Degr.)	<	10,0 (Degr.)	YES
Calculated heeling moment	4,089 (t*m)			

The condition complies with the stability criteria

30 PASS 100% BUNKER & FÖRRÅD

14236 Havscatten

Designer

Dynamlift Powerboats

Created by

Comment

Filename

C-43 .fbm

Design length

11,650 (m)

Midship location

5,825 (m)

Length over all

13,117 (m)

Relative water density

1,0250

Design beam

4,950 (m)

Mean shell thickness

0,0000 (m)

Maximum beam

4,891 (m)

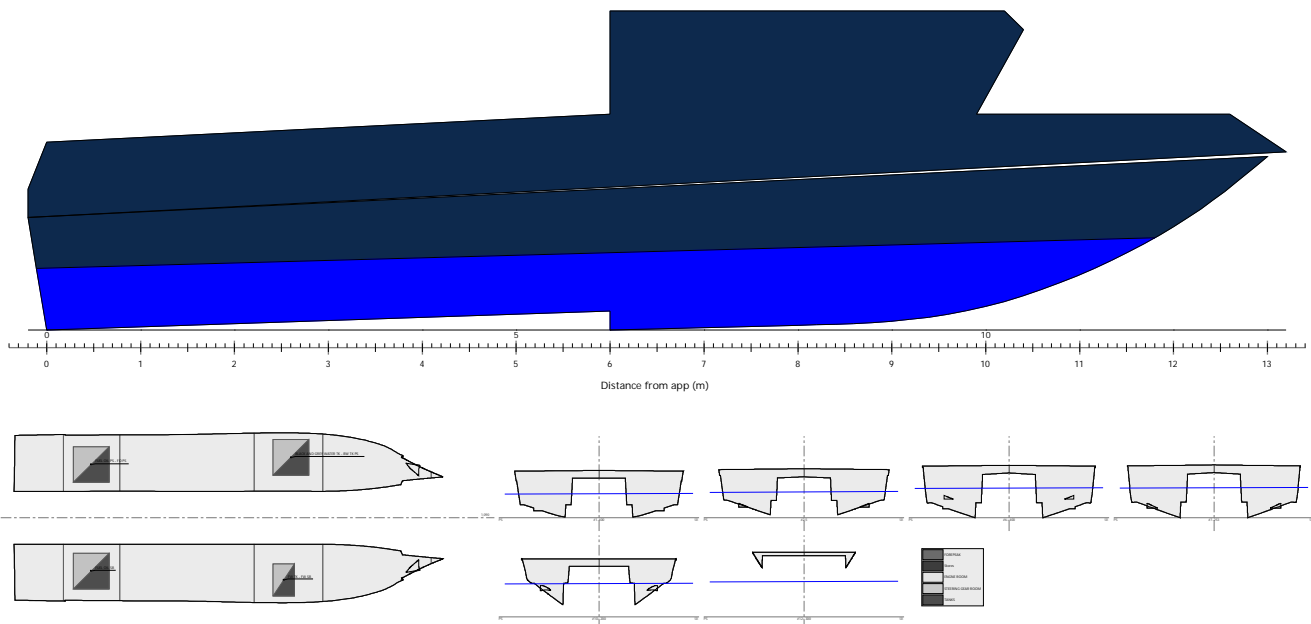
Appendage coefficient

1,0000

Design draft

0,740 (m)

Silhouette 1



Hydrostatic particulars

List	-0,2 (SB) (Degr.)	GG'	0,013 (m)
Draft aft pp	0,659 (m)	VCG'	1,282 (m)
Mean moulded draft	0,819 (m)	Max VCG'	2,625 (m)
Draft forward pp	0,978 (m)	GM solid	5,261 (m)
Trim	0,318 (m)	G'M liquid	5,248 (m)
KM	6,530 (m)	Immersion rate	0,334 (t/cm)
VCG	1,269 (m)	MCT	0,261 (t*m/cm)

Draft at draft marks

FP	0,978 (m)
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Summary

Description	Weight (tonnes)	LCG (m)	TCG (m)	VCG (m)	FSM (t*m)
Stores	0,350	6,857	0,000	1,886	0,000
Passengers	2,625	5,000	0,000	2,400	0,000
TANKS	1,236	3,120	-0,226	0,904	0,187
Lightship	9,810	5,450	0,000 (CL)	0,990	
Deadweight	4,211	4,603	-0,066 (SB)	1,918	0,187

Summary

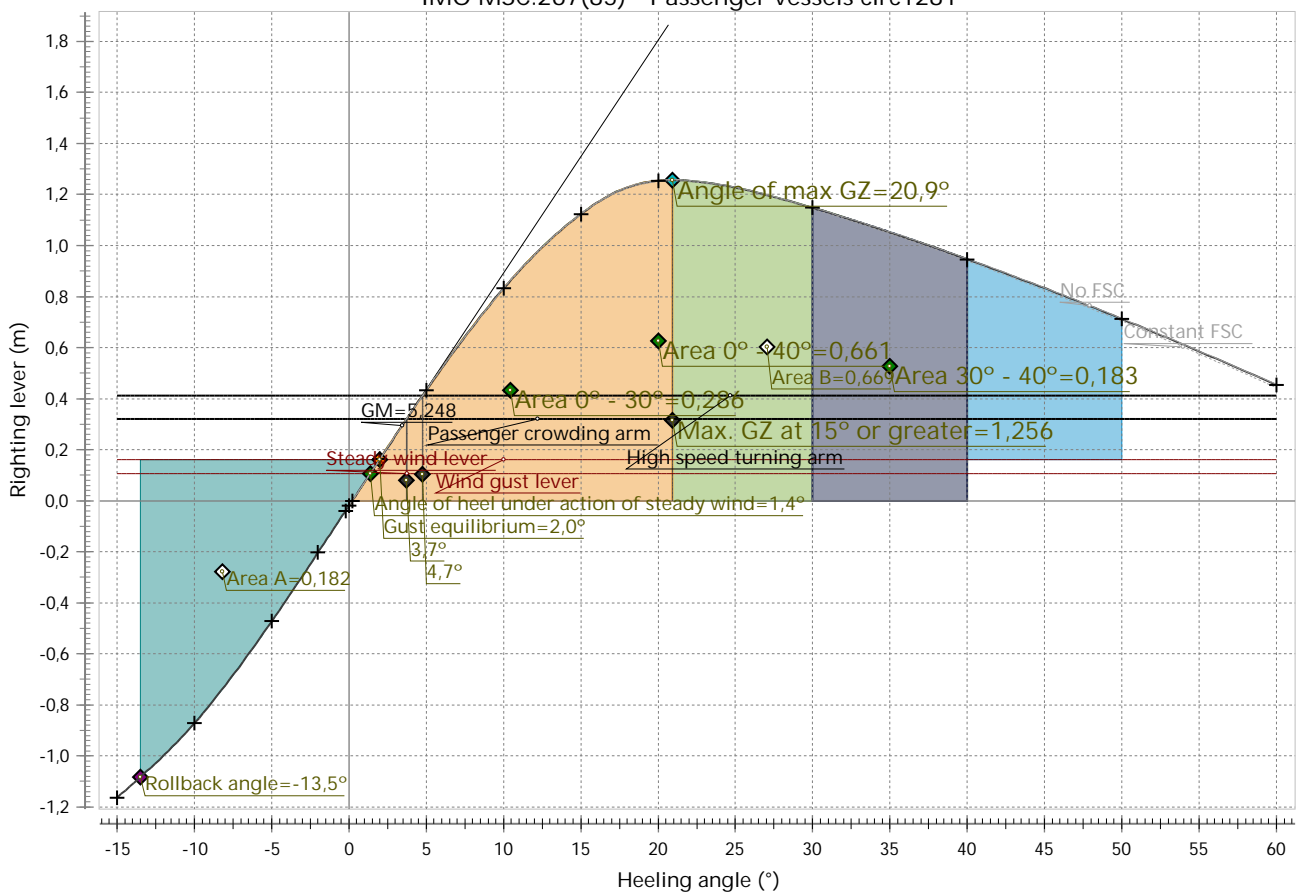
Description	Weight <i>(tonnes)</i>	LCG <i>(m)</i>	TCG <i>(m)</i>	VCG <i>(m)</i>	FSM <i>(t*m)</i>
Displacement	14,021	5,196	-0,020 (SB)	1,269	0,187

Description	Density (t/m^3)	Fill%	Weight (tonnes)	LCG (m)	TCG (m)	VCG (m)	FSM (t^*m)
Stores							
Fiskeutrustning & Prov			0,200	6,000	0,000 (CL)	1,500	0,000
Besättning			0,150	8,000	0,000 (CL)	2,400	0,000
Totals for Stores			0,350	6,857	0,000 (CL)	1,886	0,000
Passengers							
Passengers			2,625	5,000	0,000 (CL)	2,400	0,000
TANKS							
FUEL OIL PS - FO PS	0,8500	98,0	0,490	1,990	1,500 (PS)	0,894	0,000
BLACK AND GREY WATER TK - BW TK PS	1,0000	10,0	0,049	7,600	1,700 (PS)	0,725	0,082
FW TK - FW SB	1,0000	98,0	0,207	7,400	-1,750 (SB)	0,996	0,036
FUEL OIL SB	0,8500	98,0	0,490	1,990	-1,500 (SB)	0,894	0,069
Totals for TANKS			1,236	3,120	-0,226 (SB)	0,904	0,187
Lightship			9,810	5,450	0,000 (CL)	0,990	
Deadweight			4,211	4,603	-0,066 (SB)	1,918	0,187
Displacement			14,021	5,196	-0,020 (SB)	1,269	0,187

Righting levers

Heeling angle (Degr.)	Draft (m)	Trim (m)	Displacement (tonnes)	KN sin(ø) (m)	VCG sin(ø) (m)	GG' sin(ø) (m)	TCG cos(ø) (m)	GZ (m)	Area (mrad)
0,0° (CL)	0,819	0,318	14,021	0,000	0,000	0,000	0,020	-0,020	0,000
-0,2° (SB)	0,819	0,318	14,021	0,025	0,005	0,000	0,020	0,000	0,000
-2,0° (SB)	0,818	0,317	14,021	0,228	0,044	0,001	0,020	0,163	0,003
-5,0° (SB)	0,814	0,309	14,021	0,564	0,111	0,001	0,020	0,433	0,018
-10,0° (SB)	0,791	0,289	14,021	1,073	0,220	0,002	0,020	0,832	0,074
-15,0° (SB)	0,737	0,272	14,021	1,473	0,328	0,002	0,019	1,123	0,160
-20,0° (SB)	0,641	0,267	14,021	1,708	0,434	0,002	0,019	1,254	0,265
-30,0° (SB)	0,358	0,255	14,021	1,801	0,634	0,002	0,017	1,148	0,478
-40,0° (SB)	0,017	0,207	14,021	1,779	0,816	0,002	0,015	0,946	0,661
-50,0° (SB)	-0,422	0,124	14,021	1,699	0,972	0,002	0,013	0,712	0,807
-60,0° (SB)	-1,074	-0,018	14,021	1,565	1,099	0,002	0,010	0,454	0,909

Stability curve
IMO MSC.267(85) - Passenger vessels circ1281



Critical points

Description	Type	X coordinate (m)	Y coordinate (m)	Z coordinate (m)	Dist. to wl (m)	Submersion angle (Degr.)
ENGINE AIR INTAKE SB ENGINE	Downflooding	6,000	-1,600 (SB)	3,400	2,570	-
ENGINE AIR INTAKE PS ENGINE	Downflooding	6,000	1,600 (PS)	3,400	2,582	-

Evaluation of criteria

IMO MSC.267(85) - Passenger vessels circ1281

International Code on Intact Stability (2008), Part A, §3.1

Description	Attained value	Criterion	Required value	Complies
Area 0° - 30°	0,2858 (mrad)	>=	0,0700 (mrad)	YES
Area 0° - 40°	0,6614 (mrad)	>=	0,0900 (mrad)	YES
Area 30° - 40°	0,1834 (mrad)	>=	0,0300 (mrad)	YES
Max. GZ at 15° or greater	1,256 (m)	>=	0,200 (m)	YES
Lower angle	15,0 (Degr.)			
Upper angle	90,0 (Degr.)			
Angle of max GZ	20,9 (Degr.)	>=	15,0 (Degr.)	YES
Initial metacentric height	5,248 (m)	>=	0,150 (m)	YES
Severe wind and rolling criterion (weather criterion)				YES
Wind silhouette:	Silhouette 1			
Wind pressure	51,4 (kg/m ²)			
Wind area	22,14 (m ²)			
Steady wind lever	0,107 (m)			
Deck immersion angle	16,74 (Degr.)			
Wind gust lever	0,161 (m)			
Ratio of areaA/areaB	0,272	<=	1,000	YES
Maximum allowed static heeling angle	1,4 (Degr.)	<=	16,0 (Degr.)	YES
Max allowed ratio static angle/deck immersion angle	0,083	<=	0,800	YES
Angle of equilibrium due to passenger crowding	3,7 (Degr.)	<	10,0 (Degr.)	YES
Calculated heeling moment	4,500 (t*m)			
Turning angle	4,7 (Degr.)	<	10,0 (Degr.)	YES
Calculated heeling moment	5,761 (t*m)			

The condition complies with the stability criteria

30 PASS 10% BUNKER & FÖRRÅD

14236 Havscatten

Designer

Dynamlift Powerboats

Created by

Comment

Filename

C-43 .fbm

Design length

11,650 (m)

Midship location

5,825 (m)

Length over all

13,117 (m)

Relative water density

1,0250

Design beam

4,950 (m)

Mean shell thickness

0,0000 (m)

Maximum beam

4,891 (m)

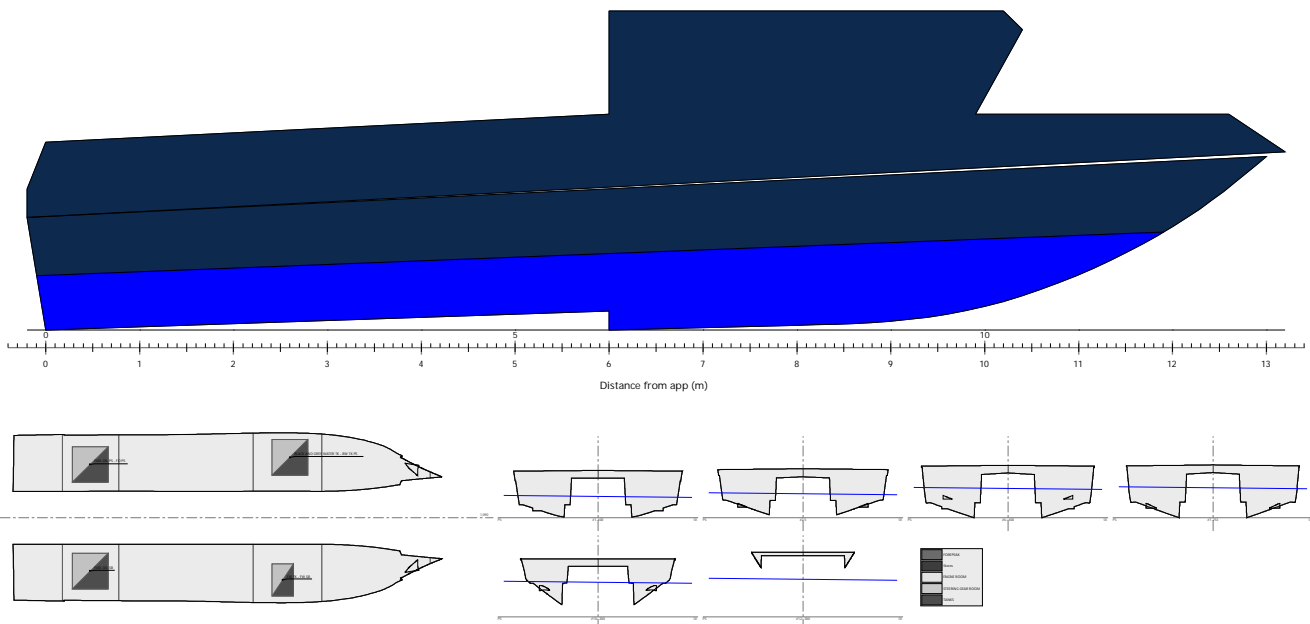
Appendage coefficient

1,0000

Design draft

0,740 (m)

Silhouette 1



Hydrostatic particulars

List	0,6 (PS) (Degr.)	GG'	0,019 (m)
Draft aft pp	0,580 (m)	VCG'	1,304 (m)
Mean moulded draft	0,806 (m)	Max VCG'	2,479 (m)
Draft forward pp	1,031 (m)	GM solid	5,538 (m)
Trim	0,451 (m)	G'M liquid	5,518 (m)
KM	6,823 (m)	Immersion rate	0,336 (t/cm)
VCG	1,285 (m)	MCT	0,266 (t*m/cm)

Draft at draft marks

FP	1,031 (m)
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Summary

Description	Weight (tonnes)	LCG (m)	TCG (m)	VCG (m)	FSM (t*m)
Stores	0,350	6,857	0,000	1,886	0,000
Passengers	2,625	5,000	0,000	2,400	0,000
TANKS	0,601	6,660	1,296	0,888	0,256
Lightship	9,810	5,450	0,000 (CL)	0,990	
Deadweight	3,576	5,461	0,218 (PS)	2,095	0,256

Summary

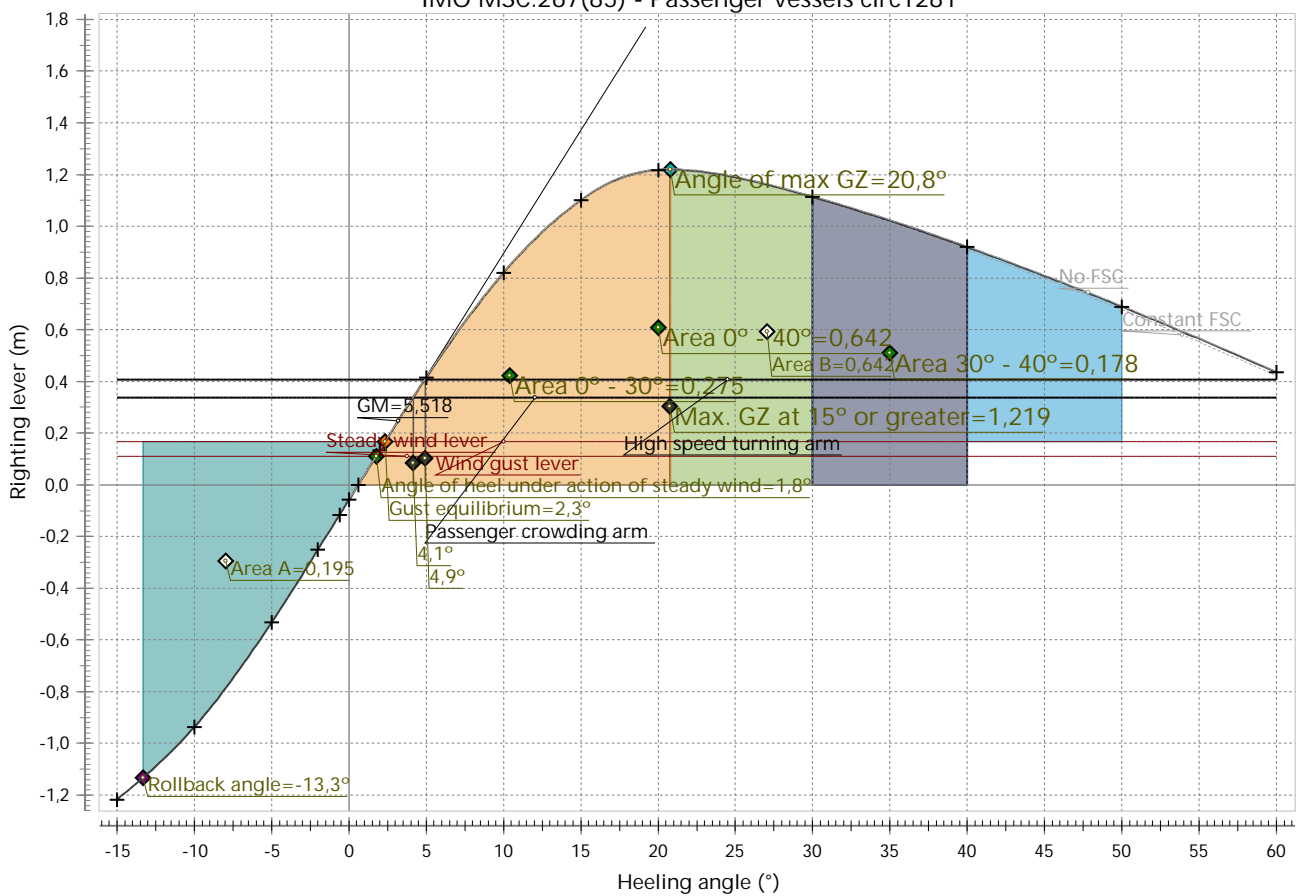
Description	Weight <i>(tonnes)</i>	LCG <i>(m)</i>	TCG <i>(m)</i>	VCG <i>(m)</i>	FSM <i>(t*m)</i>
Displacement	13,386	5,453	0,058 (PS)	1,285	0,256

Description	Density (t/m^3)	Fill%	Weight (tonnes)	LCG (m)	TCG (m)	VCG (m)	FSM (t^*m)
Stores							
Fiskeutrustning & Prov			0,200	6,000	0,000 (CL)	1,500	0,000
Besättning			0,150	8,000	0,000 (CL)	2,400	0,000
Totals for Stores			0,350	6,857	0,000 (CL)	1,886	0,000
Passengers							
Passengers			2,625	5,000	0,000 (CL)	2,400	0,000
TANKS							
FUEL OIL PS - FO PS	0,8500	10,0	0,050	1,990	1,500 (PS)	0,630	0,069
BLACK AND GREY WATER TK - BW TK PS	1,0000	98,0	0,480	7,600	1,700 (PS)	0,945	0,082
FW TK - FW SB	1,0000	10,0	0,021	7,400	-1,750 (SB)	0,820	0,036
FUEL OIL SB	0,8500	10,0	0,050	1,990	-1,500 (SB)	0,630	0,069
Totals for TANKS			0,601	6,660	1,296 (PS)	0,888	0,256
Lightship			9,810	5,450	0,000 (CL)	0,990	
Deadweight			3,576	5,461	0,218 (PS)	2,095	0,256
Displacement			13,386	5,453	0,058 (PS)	1,285	0,256

Righting levers

Heeling angle (Degr.)	Draft (m)	Trim (m)	Displacement (tonnes)	KN sin(θ) (m)	VCG sin(θ) (m)	GG' sin(θ) (m)	TCG cos(θ) (m)	GZ (m)	Area (mrad)
0,0° (CL)	0,806	0,451	13,386	0,000	0,000	0,000	0,058	-0,058	0,000
0,6° (PS)	0,806	0,451	13,386	0,072	0,014	0,000	0,058	0,000	0,000
2,0° (PS)	0,805	0,450	13,386	0,238	0,045	0,001	0,058	0,134	0,002
5,0° (PS)	0,801	0,443	13,386	0,587	0,112	0,001	0,058	0,415	0,016
10,0° (PS)	0,776	0,439	13,386	1,103	0,223	0,002	0,057	0,820	0,071
15,0° (PS)	0,718	0,452	13,386	1,492	0,333	0,003	0,056	1,101	0,156
20,0° (PS)	0,614	0,488	13,386	1,715	0,440	0,003	0,055	1,218	0,258
30,0° (PS)	0,320	0,557	13,386	1,810	0,643	0,003	0,050	1,113	0,464
40,0° (PS)	-0,031	0,581	13,386	1,793	0,826	0,003	0,045	0,919	0,642
50,0° (PS)	-0,487	0,613	13,386	1,714	0,985	0,003	0,037	0,689	0,783
60,0° (PS)	-1,163	0,631	13,386	1,581	1,113	0,003	0,029	0,436	0,882

Stability curve
IMO MSC.267(85) - Passenger vessels circ1281



Critical points

Description	Type	X coordinate (m)	Y coordinate (m)	Z coordinate (m)	Dist. to wl (m)	Submersion angle (Degr.)
ENGINE AIR INTAKE SB ENGINE	Downflooding	6,000	-1,600 (SB)	3,400	2,602	-
ENGINE AIR INTAKE PS ENGINE	Downflooding	6,000	1,600 (PS)	3,400	2,568	-

Evaluation of criteria

IMO MSC.267(85) - Passenger vessels circ1281

International Code on Intact Stability (2008), Part A, §3.1

Description	Attained value	Criterion	Required value	Complies
Area 0° - 30°	0,2747 (mrad)	>=	0,0700 (mrad)	YES
Area 0° - 40°	0,6424 (mrad)	>=	0,0900 (mrad)	YES
Area 30° - 40°	0,1780 (mrad)	>=	0,0300 (mrad)	YES
Max. GZ at 15° or greater	1,219 (m)	>=	0,200 (m)	YES
Lower angle	15,0 (Degr.)			
Upper angle	90,0 (Degr.)			
Angle of max GZ	20,8 (Degr.)	>=	15,0 (Degr.)	YES
Initial metacentric height	5,518 (m)	>=	0,150 (m)	YES
Severe wind and rolling criterion (weather criterion)				YES
Wind silhouette:	Silhouette 1			
Wind pressure	51,4 (kg/m ²)			
Wind area	22,29 (m ²)			
Steady wind lever	0,111 (m)			
Deck immersion angle	16,75 (Degr.)			
Wind gust lever	0,166 (m)			
Ratio of areaA/areaB	0,303	<=	1,000	YES
Maximum allowed static heeling angle	1,8 (Degr.)	<=	16,0 (Degr.)	YES
Max allowed ratio static angle/deck immersion angle	0,105	<=	0,800	YES
Angle of equilibrium due to passenger crowding	4,1 (Degr.)	<	10,0 (Degr.)	YES
Calculated heeling moment	4,500 (t*m)			
Turning angle	4,9 (Degr.)	<	10,0 (Degr.)	YES
Calculated heeling moment	5,454 (t*m)			

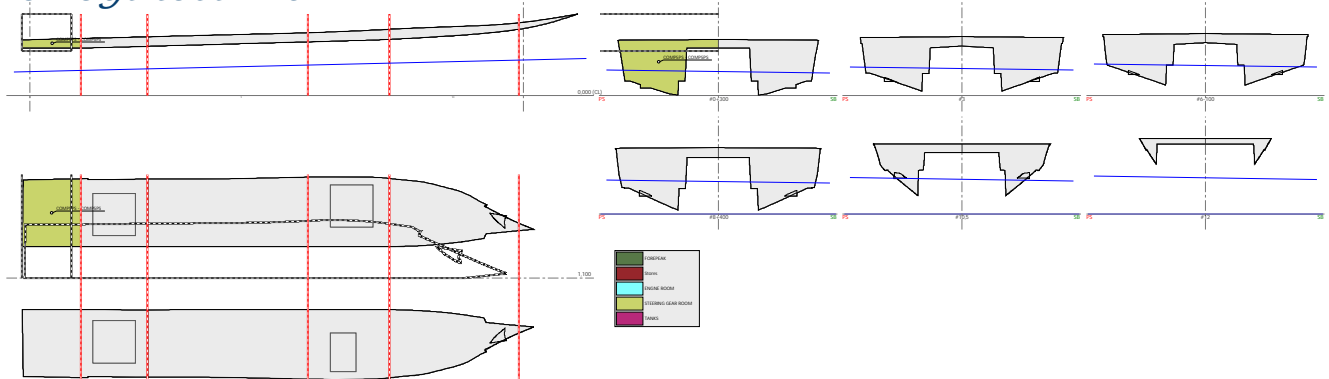
The condition complies with the stability criteria

Damage cases

Damage extents	
Damage length	1,165 (m)
Damage penetration	1,000 (m)
Damage height	1000,000 (m)

Loading condition : Light ship

Damage case : PS.1



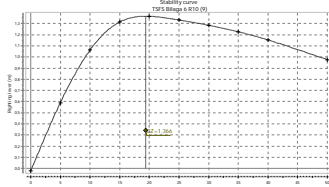
Damaged spaces

COMP5PS - COMP5PS

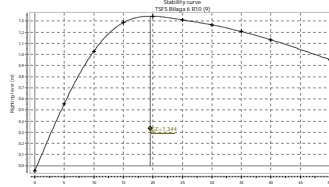
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	9,630	5,440	0,000 (CL)	0,990
Damaged condition	9,630	5,440	0,000 (CL)	0,990

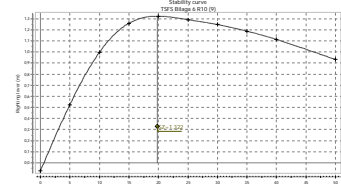
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,693	0,376	9,805	-0,023	0,697	0,342	9,981	-0,049	0,700	0,309	10,156	-0,074
5,0 (PS)	0,681	0,369	9,805	0,590	0,685	0,333	9,981	0,557	0,689	0,298	10,156	0,525
10,0 (PS)	0,641	0,371	9,805	1,062	0,646	0,328	9,981	1,029	0,651	0,286	10,156	0,996
15,0 (PS)	0,556	0,391	9,805	1,314	0,562	0,339	9,981	1,287	0,569	0,288	10,156	1,259
20,0 (PS)	0,425	0,427	9,805	1,365	0,433	0,369	9,981	1,344	0,440	0,311	10,156	1,322
25,0 (PS)	0,267	0,437	9,805	1,331	0,274	0,379	9,981	1,311	0,281	0,320	10,156	1,291
30,0 (PS)	0,090	0,448	9,805	1,285	0,098	0,387	9,981	1,266	0,106	0,327	10,156	1,247
35,0 (PS)	-0,103	0,469	9,805	1,225	-0,094	0,401	9,981	1,206	-0,085	0,332	10,156	1,187
40,0 (PS)	-0,317	0,488	9,805	1,153	-0,306	0,413	9,981	1,132	-0,296	0,336	10,156	1,112
50,0 (PS)	-0,839	0,510	9,805	0,975	-0,826	0,420	9,981	0,953	-0,813	0,327	10,156	0,931



Equilibrium angle 0,2 (PS)
Max GZ 1,366
Range 49,8
Max VCG' 7,454



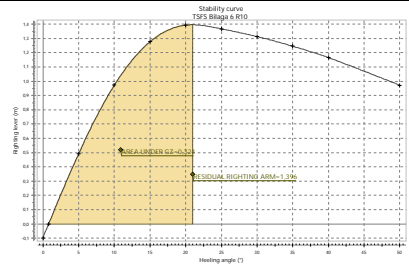
Equilibrium angle 0,4 (PS)
Max GZ 1,344
Range 49,6
Max VCG' 7,373



Equilibrium angle 0,6 (PS)
Max GZ 1,322
Range 49,4
Max VCG' 7,287

Results for : Final stage of flooding

Draft	0,703 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,276 (m)	0,0 (CL)	0,703	0,285	9,630	-0,098
Max VCG'	4,824 (m)	0,8 (PS)	0,703	0,276	9,630	0,000
		5,0 (PS)	0,699	0,213	9,630	0,493
RESIDUAL RIGHTING ARM	1,396 (m)	10,0 (PS)	0,669	0,124	9,630	0,973
		15,0 (PS)	0,600	0,023	9,630	1,278
		20,0 (PS)	0,483	-0,048	9,630	1,394
		25,0 (PS)	0,328	-0,069	9,630	1,368
		30,0 (PS)	0,159	-0,095	9,630	1,314
		35,0 (PS)	-0,022	-0,139	9,630	1,246
		40,0 (PS)	-0,223	-0,196	9,630	1,165
		50,0 (PS)	-0,718	-0,350	9,630	0,972



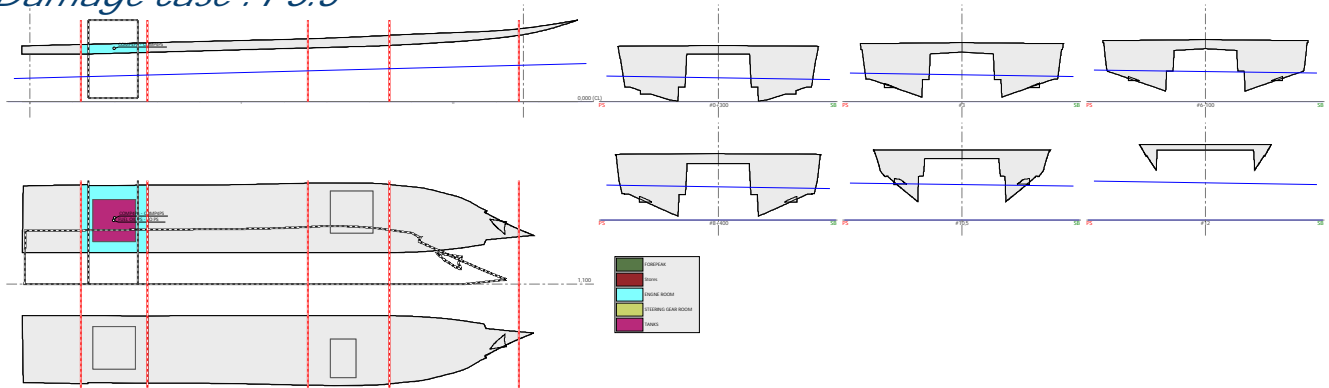
Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,3239 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	49,2 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,396 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,581 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

Damage case : PS.3



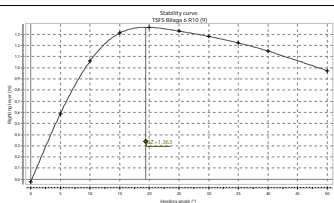
Damaged spaces

COMP4PS - COMP4PS FUEL OIL PS - FO PS

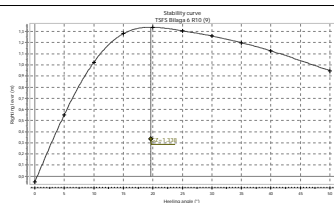
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	9,630	5,440	0,000 (CL)	0,990
Damaged condition	9,630	5,440	0,000 (CL)	0,990

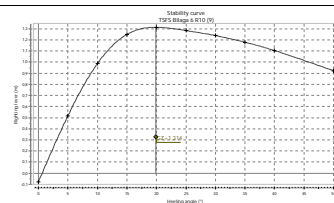
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,694	0,383	9,824	-0,025	0,699	0,358	10,017	-0,052	0,703	0,333	10,211	-0,080
5,0 (PS)	0,682	0,377	9,824	0,588	0,688	0,350	10,017	0,552	0,693	0,323	10,211	0,517
10,0 (PS)	0,642	0,380	9,824	1,059	0,648	0,347	10,017	1,023	0,654	0,314	10,211	0,987
15,0 (PS)	0,557	0,402	9,824	1,311	0,565	0,362	10,017	1,281	0,573	0,322	10,211	1,251
20,0 (PS)	0,427	0,440	9,824	1,362	0,436	0,394	10,017	1,338	0,445	0,349	10,211	1,314
25,0 (PS)	0,268	0,450	9,824	1,328	0,277	0,405	10,017	1,306	0,286	0,360	10,211	1,285
30,0 (PS)	0,092	0,461	9,824	1,281	0,101	0,414	10,017	1,260	0,111	0,368	10,211	1,240
35,0 (PS)	-0,102	0,484	9,824	1,222	-0,091	0,431	10,017	1,199	-0,080	0,378	10,211	1,180
40,0 (PS)	-0,315	0,504	9,824	1,150	-0,303	0,446	10,017	1,126	-0,290	0,387	10,211	1,104
50,0 (PS)	-0,836	0,529	9,824	0,972	-0,822	0,460	10,017	0,947	-0,807	0,388	10,211	0,923



Equilibrium angle 0,2 (PS)
 Max GZ 1,363
 Range 49,8
 Max VCG' 7,448



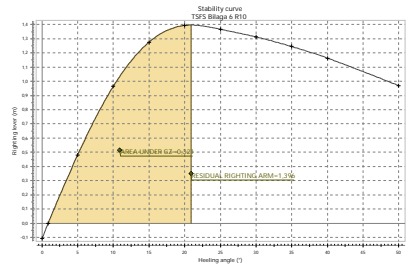
Equilibrium angle 0,4 (PS)
 Max GZ 1,338
 Range 49,6
 Max VCG' 7,361



Equilibrium angle 0,7 (PS)
 Max GZ 1,314
 Range 49,3
 Max VCG' 7,272

Results for : Final stage of flooding

Draft	0,708 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,308 (m)	0,0 (CL)	0,706	0,316	9,630	-0,106
Max VCG'	4,800 (m)	0,9 (PS)	0,708	0,308	9,630	0,000
		5,0 (PS)	0,705	0,258	9,630	0,481
RESIDUAL RIGHTING ARM	1,396 (m)	10,0 (PS)	0,678	0,192	9,630	0,965
		15,0 (PS)	0,611	0,126	9,630	1,276
		20,0 (PS)	0,496	0,093	9,630	1,394
		25,0 (PS)	0,339	0,090	9,630	1,367
		30,0 (PS)	0,171	0,076	9,630	1,313
		35,0 (PS)	-0,011	0,048	9,630	1,245
		40,0 (PS)	-0,212	0,013	9,630	1,164
		50,0 (PS)	-0,707	-0,090	9,630	0,970

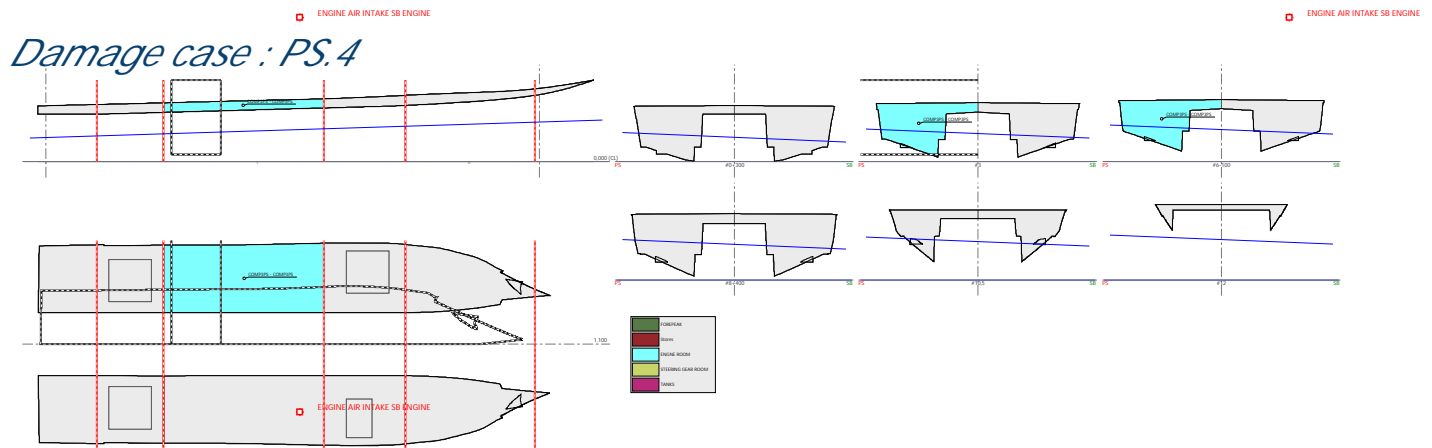


Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,3212 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	49,1 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,396 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,566 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria



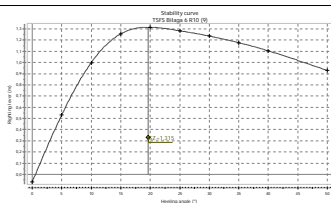
Damaged spaces

COMP3PS - COMP3PS

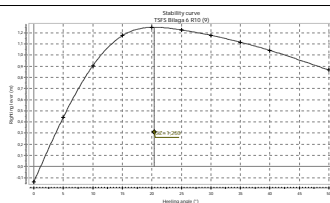
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	9,630	5,440	0,000 (CL)	0,990
Damaged condition	9,630	5,440	0,000 (CL)	0,990

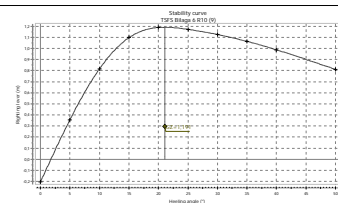
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,706	0,406	10,170	-0,069	0,722	0,398	10,709	-0,139	0,738	0,386	11,248	-0,205
5,0 (PS)	0,695	0,401	10,170	0,531	0,713	0,389	10,709	0,442	0,730	0,377	11,248	0,356
10,0 (PS)	0,657	0,407	10,170	0,998	0,677	0,388	10,709	0,904	0,697	0,372	11,248	0,814
15,0 (PS)	0,575	0,434	10,170	1,257	0,600	0,409	10,709	1,175	0,624	0,386	11,248	1,097
20,0 (PS)	0,447	0,477	10,170	1,315	0,475	0,449	10,709	1,249	0,503	0,421	11,248	1,189
25,0 (PS)	0,289	0,491	10,170	1,284	0,319	0,465	10,709	1,225	0,348	0,440	11,248	1,171
30,0 (PS)	0,114	0,504	10,170	1,237	0,146	0,479	10,709	1,178	0,178	0,453	11,248	1,125
35,0 (PS)	-0,077	0,527	10,170	1,177	-0,042	0,499	10,709	1,115	-0,006	0,465	11,248	1,063
40,0 (PS)	-0,288	0,549	10,170	1,104	-0,249	0,519	10,709	1,042	-0,208	0,481	11,248	0,987
50,0 (PS)	-0,804	0,578	10,170	0,928	-0,757	0,540	10,709	0,866	-0,707	0,494	11,248	0,811



Equilibrium angle 0,6 (PS)
 Max GZ 1,315
 Range 49,4
 Max VCG' 7,304



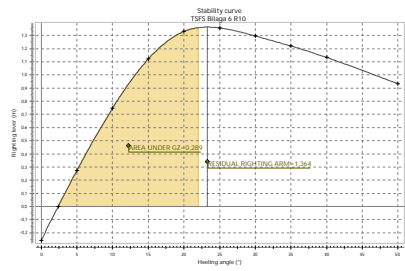
Equilibrium angle 1,2 (PS)
 Max GZ 1,250
 Range 48,8
 Max VCG' 7,087



Equilibrium angle 1,8 (PS)
 Max GZ 1,191
 Range 48,2
 Max VCG' 6,881

Results for : Final stage of flooding

	Draft	Angle	Draft	Trim	Displacement	GZ
Draft	0,753 (m)					
Trim	0,372 (m)	0,0 (CL)	0,741	0,384	9,630	-0,256
Max VCG'	4,102 (m)	2,4 (PS)	0,753	0,372	9,630	0,000
		5,0 (PS)	0,761	0,355	9,630	0,274
RESIDUAL RIGHTING ARM	1,364 (m)	10,0 (PS)	0,761	0,323	9,630	0,748
		15,0 (PS)	0,728	0,294	9,630	1,121
		20,0 (PS)	0,649	0,276	9,630	1,331
		25,0 (PS)	0,528	0,268	9,630	1,357
		30,0 (PS)	0,378	0,256	9,630	1,296
		35,0 (PS)	0,216	0,237	9,630	1,220
		40,0 (PS)	0,038	0,212	9,630	1,133
		50,0 (PS)	-0,396	0,135	9,630	0,933



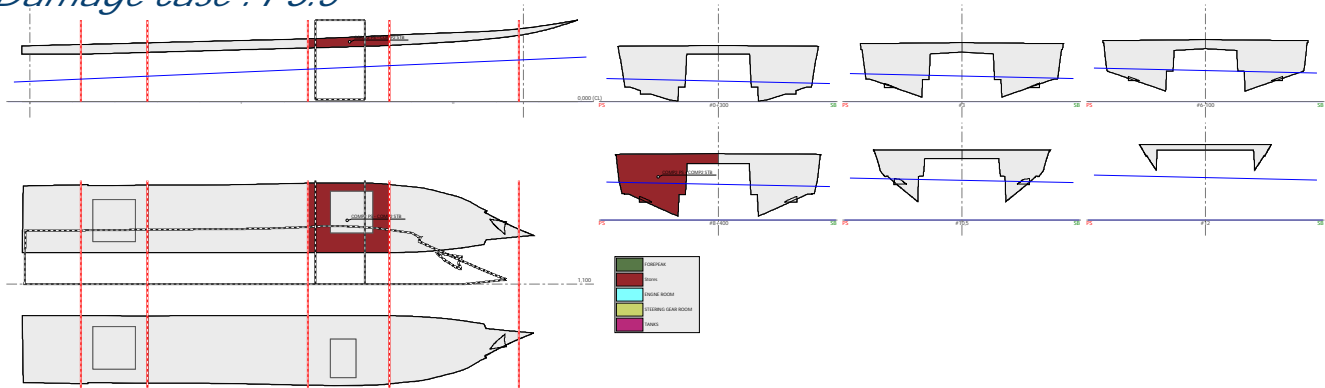
Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,2893 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	47,6 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,364 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,443 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

Damage case : PS.5



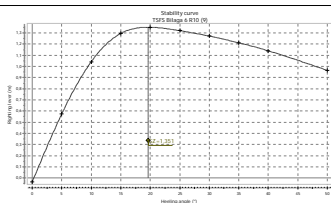
Damaged spaces

COMP2 PS - COMP2 STB

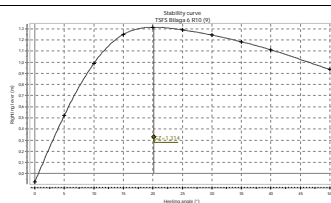
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	9,630	5,440	0,000 (CL)	0,990
Damaged condition	9,630	5,440	0,000 (CL)	0,990

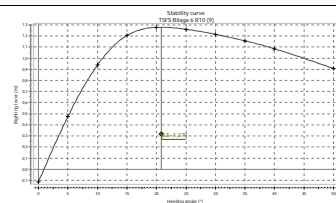
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,700	0,435	9,907	-0,036	0,710	0,460	10,183	-0,076	0,719	0,485	10,461	-0,115
5,0 (PS)	0,688	0,432	9,907	0,574	0,698	0,458	10,183	0,523	0,709	0,483	10,461	0,475
10,0 (PS)	0,647	0,444	9,907	1,042	0,659	0,472	10,183	0,988	0,671	0,500	10,461	0,938
15,0 (PS)	0,563	0,477	9,907	1,296	0,578	0,510	10,183	1,249	0,592	0,542	10,461	1,205
20,0 (PS)	0,434	0,523	9,907	1,351	0,450	0,560	10,183	1,314	0,466	0,595	10,461	1,278
25,0 (PS)	0,276	0,535	9,907	1,321	0,293	0,575	10,183	1,290	0,310	0,613	10,461	1,261
30,0 (PS)	0,100	0,550	9,907	1,272	0,118	0,592	10,184	1,244	0,137	0,633	10,461	1,216
35,0 (PS)	-0,092	0,580	9,907	1,212	-0,073	0,625	10,183	1,183	-0,052	0,670	10,461	1,156
40,0 (PS)	-0,305	0,609	9,907	1,140	-0,283	0,658	10,183	1,111	-0,260	0,708	10,461	1,085
50,0 (PS)	-0,825	0,655	9,907	0,965	-0,798	0,714	10,183	0,934	-0,771	0,774	10,461	0,908



Equilibrium angle 0,3 (PS)
 Max GZ 1,351
 Range 49,7
 Max VCG' 7,412



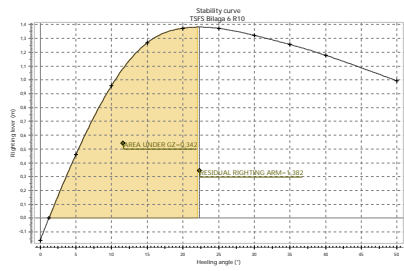
Equilibrium angle 0,6 (PS)
 Max GZ 1,314
 Range 49,4
 Max VCG' 7,295



Equilibrium angle 1,0 (PS)
 Max GZ 1,279
 Range 49,0
 Max VCG' 7,184

Results for : Final stage of flooding

	Draft	Angle	Draft	Trim	Displacement	GZ
Draft	0,729 (m)		0,727	0,504	9,630	-0,160
Trim	0,508 (m)	0,0 (CL)	0,729	0,508	9,630	0,000
Max VCG'	4,789 (m)	1,2 (PS)	0,725	0,521	9,630	0,459
RESIDUAL RIGHTING ARM	1,382 (m)	10,0 (PS)	0,696	0,557	9,630	0,959
		15,0 (PS)	0,629	0,625	9,630	1,270
		20,0 (PS)	0,514	0,701	9,630	1,374
		25,0 (PS)	0,366	0,740	9,630	1,373
		30,0 (PS)	0,198	0,770	9,630	1,322
		35,0 (PS)	0,014	0,816	9,630	1,256
		40,0 (PS)	-0,188	0,865	9,630	1,179
		50,0 (PS)	-0,685	0,963	9,630	0,993



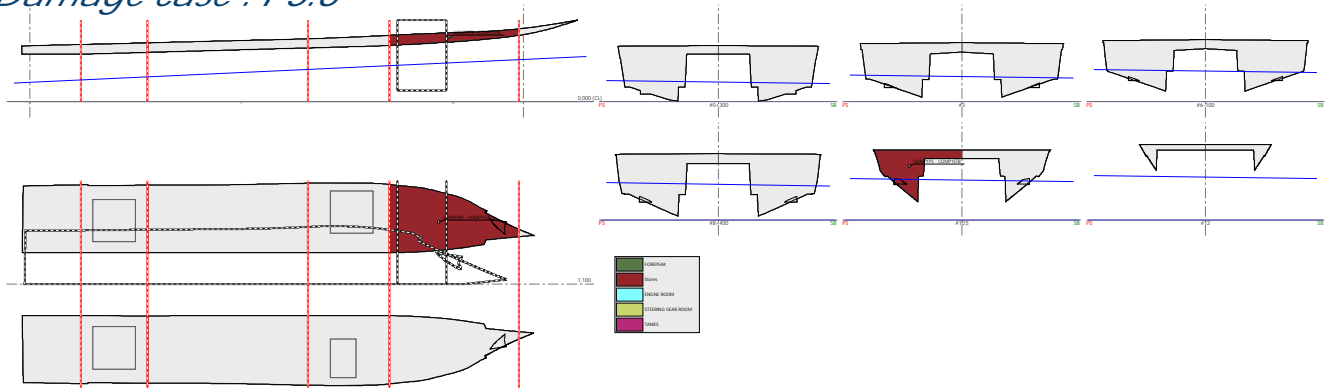
Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,3420 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	48,8 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,382 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,483 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

Damage case : PS.6



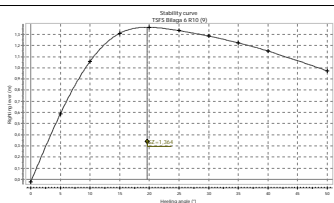
Damaged spaces

COMP1PS - COMP1STB

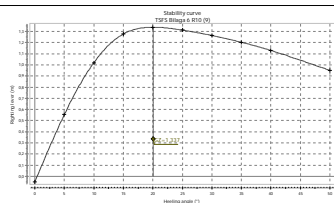
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	9,630	5,440	0,000 (CL)	0,990
Damaged condition	9,630	5,440	0,000 (CL)	0,990

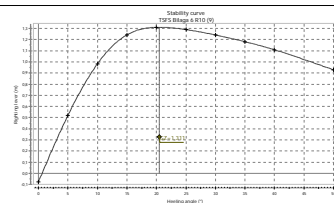
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,698	0,441	9,827	-0,025	0,705	0,475	10,025	-0,051	0,713	0,508	10,223	-0,078
5,0 (PS)	0,685	0,439	9,827	0,588	0,694	0,474	10,025	0,554	0,702	0,509	10,223	0,519
10,0 (PS)	0,644	0,453	9,828	1,057	0,654	0,492	10,025	1,020	0,662	0,532	10,223	0,982
15,0 (PS)	0,560	0,488	9,828	1,310	0,571	0,533	10,025	1,276	0,581	0,580	10,223	1,243
20,0 (PS)	0,430	0,534	9,827	1,364	0,442	0,585	10,025	1,337	0,454	0,636	10,223	1,310
25,0 (PS)	0,272	0,546	9,828	1,333	0,285	0,599	10,025	1,312	0,298	0,653	10,223	1,290
30,0 (PS)	0,096	0,562	9,828	1,285	0,110	0,617	10,025	1,263	0,124	0,676	10,223	1,242
35,0 (PS)	-0,097	0,590	9,828	1,224	-0,082	0,650	10,025	1,202	-0,067	0,712	10,223	1,181
40,0 (PS)	-0,310	0,620	9,828	1,150	-0,293	0,685	10,025	1,129	-0,276	0,752	10,223	1,108
50,0 (PS)	-0,831	0,669	9,828	0,973	-0,811	0,747	10,025	0,950	-0,790	0,828	10,223	0,929



Equilibrium angle 0,2 (PS)
 Max GZ 1,364
 Range 49,8
 Max VCG' 7,445



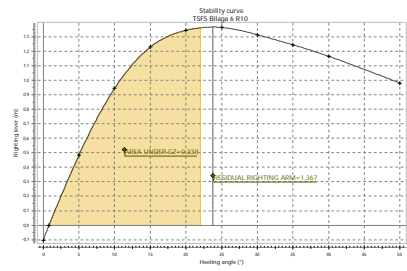
Equilibrium angle 0,4 (PS)
 Max GZ 1,337
 Range 49,6
 Max VCG' 7,356



Equilibrium angle 0,6 (PS)
 Max GZ 1,311
 Range 49,4
 Max VCG' 7,270

Results for : Final stage of flooding

	Draft	Angle	Draft	Trim	Displacement	GZ
Draft	0,721 (m)		0,719	0,531	9,630	-0,103
Trim	0,540 (m)	0,0 (CL)	0,721	0,540	9,630	0,000
Max VCG'	4,643 (m)	0,8 (PS)	0,722	0,600	9,630	0,483
RESIDUAL RIGHTING ARM	1,367 (m)	10,0 (PS)	0,701	0,713	9,630	0,943
		15,0 (PS)	0,643	0,876	9,630	1,229
		20,0 (PS)	0,542	1,034	9,630	1,344
		25,0 (PS)	0,415	1,161	9,630	1,364
		30,0 (PS)	0,259	1,243	9,630	1,314
		35,0 (PS)	0,085	1,329	9,630	1,244
		40,0 (PS)	-0,107	1,433	9,630	1,165
		50,0 (PS)	-0,572	1,725	9,630	0,980



Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,3380 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	49,2 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,367 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,493 (m)	>=	0,076 (m)	YES

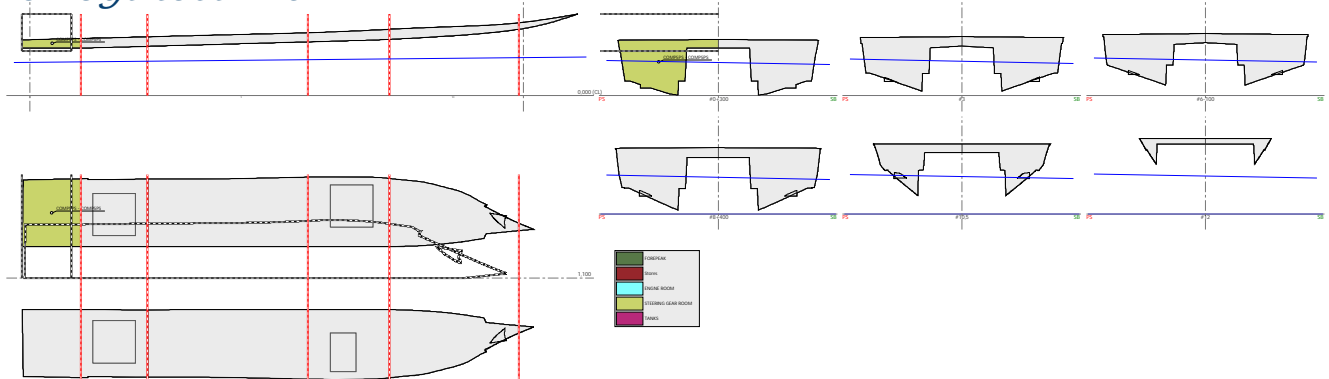
The condition complies with the stability criteria

Summary for loading condition Light ship

Damage case	Summary for loading condition:Light ship			Final stage	Complies
	Intermediate stage 25%	Intermediate stage 50%	Intermediate stage 75%		
PS.1	Pass	Pass	Pass	Pass	YES
PS.3	Pass	Pass	Pass	Pass	YES
PS.4	Pass	Pass	Pass	Pass	YES
PS.5	Pass	Pass	Pass	Pass	YES
PS.6	Pass	Pass	Pass	Pass	YES

Loading condition : 30 PASS 100% BUNKER & FÖRRÅD

Damage case : PS.1



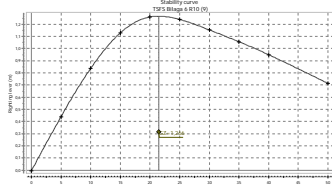
Damaged spaces

COMP5PS - COMP5PS

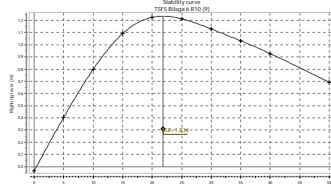
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,841	5,185	-0,020 (SB)	1,272
Damaged condition	13,841	5,185	-0,020 (SB)	1,286

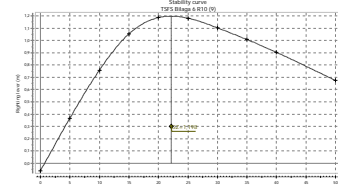
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,819	0,264	14,119	-0,007	0,825	0,214	14,397	-0,036	0,830	0,164	14,674	-0,063
5,0 (PS)	0,814	0,254	14,119	0,440	0,820	0,203	14,397	0,403	0,825	0,153	14,674	0,367
10,0 (PS)	0,792	0,230	14,119	0,837	0,798	0,176	14,397	0,797	0,804	0,122	14,674	0,758
15,0 (PS)	0,739	0,204	14,119	1,129	0,746	0,142	14,397	1,092	0,753	0,081	14,674	1,053
20,0 (PS)	0,644	0,179	14,119	1,260	0,657	0,089	14,397	1,225	0,670	-0,004	14,674	1,187
25,0 (PS)	0,517	0,152	14,119	1,240	0,536	0,025	14,397	1,213	0,557	-0,108	14,674	1,182
30,0 (PS)	0,366	0,125	14,119	1,154	0,389	-0,019	14,397	1,129	0,415	-0,185	14,674	1,103
35,0 (PS)	0,204	0,092	14,119	1,056	0,230	-0,070	14,397	1,033	0,259	-0,256	14,674	1,008
40,0 (PS)	0,027	0,047	14,119	0,950	0,055	-0,133	14,397	0,926	0,088	-0,341	14,674	0,903
50,0 (PS)	-0,408	-0,076	14,119	0,714	-0,373	-0,301	14,397	0,692	-0,331	-0,563	14,674	0,674



Equilibrium angle 0,1 (PS)
 Max GZ 1,266
 Range 49,9
 Max VCG' 5,914



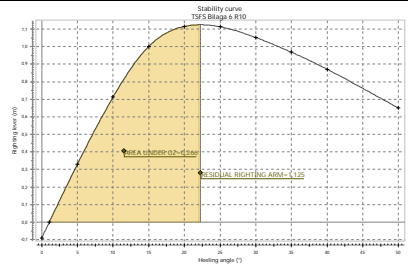
Equilibrium angle 0,4 (PS)
 Max GZ 1,234
 Range 49,6
 Max VCG' 5,822



Equilibrium angle 0,7 (PS)
 Max GZ 1,198
 Range 49,3
 Max VCG' 5,732

Results for : Final stage of flooding

Draft	0,836 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,113 (m)	0,0 (CL)	0,834	0,127	13,841	-0,090
Max VCG'	3,761 (m)	1,1 (PS)	0,836	0,113	13,841	0,001
		5,0 (PS)	0,836	0,053	13,841	0,330
RESIDUAL RIGHTING ARM	1,125 (m)	10,0 (PS)	0,822	-0,051	13,841	0,713
		15,0 (PS)	0,784	-0,204	13,841	1,001
		20,0 (PS)	0,731	-0,469	13,841	1,115
		25,0 (PS)	0,666	-0,819	13,841	1,113
		30,0 (PS)	0,589	-1,227	13,841	1,052
		35,0 (PS)	0,503	-1,671	13,841	0,968
		40,0 (PS)	0,405	-2,165	13,841	0,871
		50,0 (PS)	0,164	-3,425	13,841	0,650



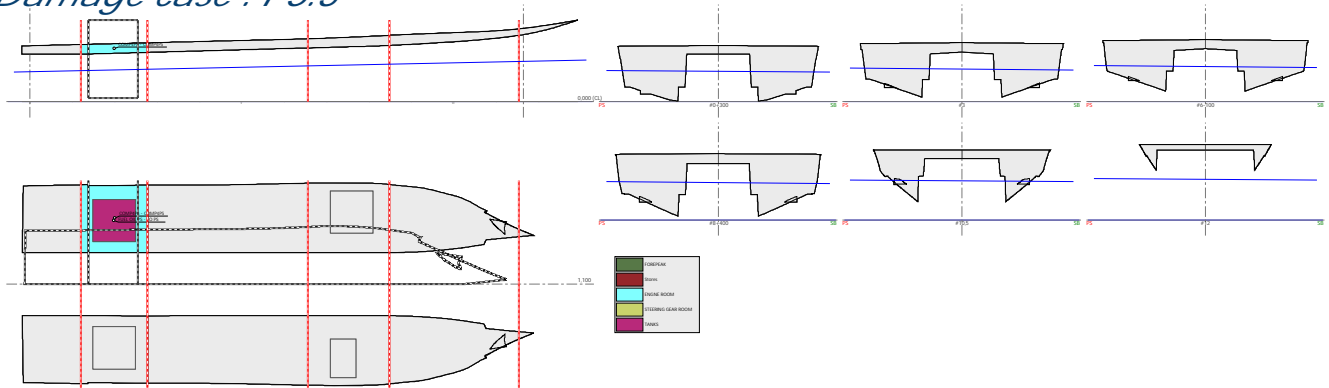
Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,2658 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	48,9 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,125 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,383 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

Damage case : PS.3



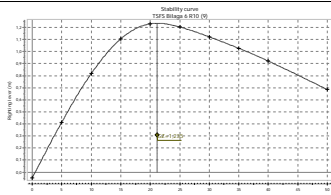
Damaged spaces

COMP4PS - COMP4PS FUEL OIL PS - FO PS

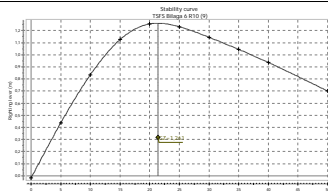
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,841	5,185	-0,020 (SB)	1,272
Damaged condition	13,351	5,302	-0,076 (SB)	1,300

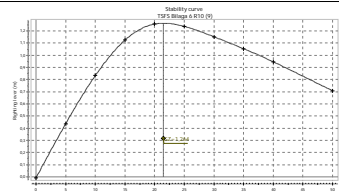
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,808	0,342	13,620	-0,049	0,814	0,308	13,889	-0,019	0,821	0,274	14,158	-0,010
-5,0 (SB)	0,803	0,332	13,620	0,415	0,809	0,298	13,889	0,435	0,816	0,264	14,158	0,436
-10,0 (SB)	0,779	0,315	13,620	0,817	0,787	0,278	13,889	0,835	0,794	0,241	14,158	0,833
-15,0 (SB)	0,723	0,305	13,620	1,105	0,732	0,261	13,889	1,126	0,741	0,217	14,158	1,125
-20,0 (SB)	0,622	0,312	13,620	1,231	0,635	0,254	13,889	1,255	0,647	0,194	14,158	1,257
-25,0 (SB)	0,486	0,328	13,620	1,204	0,502	0,253	13,889	1,231	0,520	0,172	14,158	1,238
-30,0 (SB)	0,331	0,323	13,620	1,122	0,349	0,238	13,889	1,144	0,369	0,148	14,158	1,152
-35,0 (SB)	0,165	0,311	13,620	1,027	0,186	0,217	13,889	1,044	0,208	0,115	14,158	1,054
-40,0 (SB)	-0,016	0,292	13,620	0,921	0,006	0,188	13,889	0,937	0,031	0,075	14,158	0,946
-50,0 (SB)	-0,464	0,232	13,620	0,685	-0,434	0,101	13,889	0,700	-0,404	-0,042	14,158	0,707



Equilibrium angle -0,5 (SB)
 Max GZ 1,235
 Range 49,5
 Max VCG' 6,083



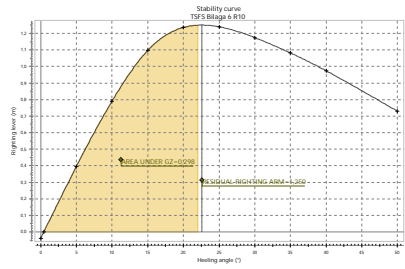
Equilibrium angle -0,2 (SB)
 Max GZ 1,261
 Range 49,8
 Max VCG' 5,994



Equilibrium angle 0,1 (PS)
 Max GZ 1,264
 Range 49,9
 Max VCG' 5,908

Results for : Final stage of flooding

Draft	0,827 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,241 (m)	0,0 (CL)	0,826	0,245	13,351	-0,038
Max VCG'	3,737 (m)	0,4 (PS)	0,827	0,241	13,351	0,000
		5,0 (PS)	0,830	0,188	13,351	0,396
RESIDUAL RIGHTING ARM	1,250 (m)	10,0 (PS)	0,818	0,112	13,351	0,791
		15,0 (PS)	0,780	0,017	13,351	1,098
		20,0 (PS)	0,720	-0,161	13,351	1,236
		25,0 (PS)	0,646	-0,415	13,351	1,240
		30,0 (PS)	0,553	-0,710	13,351	1,174
		35,0 (PS)	0,448	-1,021	13,351	1,082
		40,0 (PS)	0,327	-1,347	13,351	0,974
		50,0 (PS)	0,014	-2,081	13,351	0,730

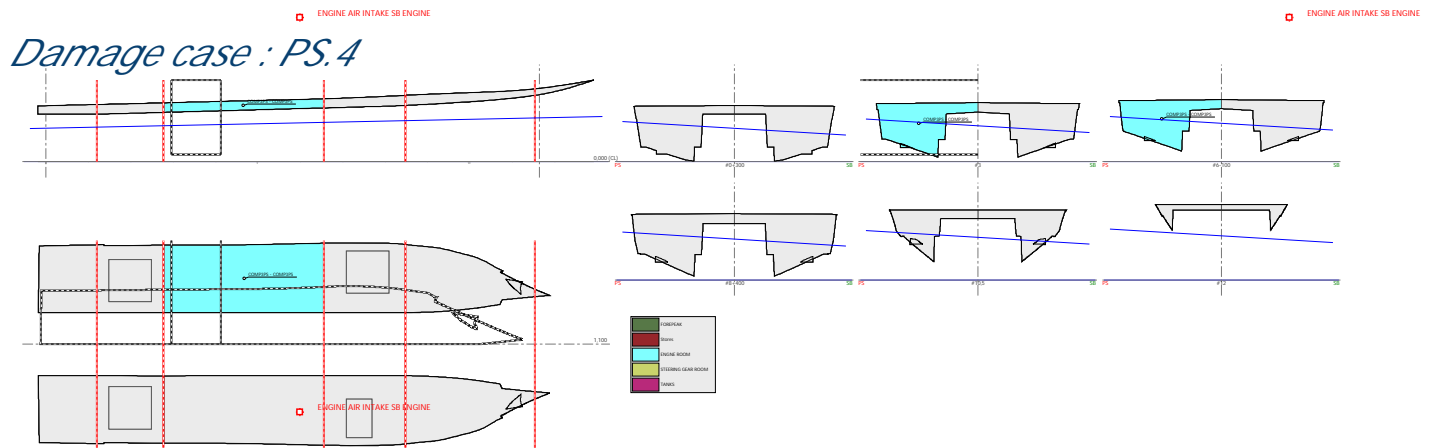


Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,2979 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	49,6 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,250 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,480 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria



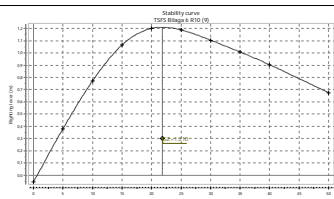
Damaged spaces

COMP3PS - COMP3PS

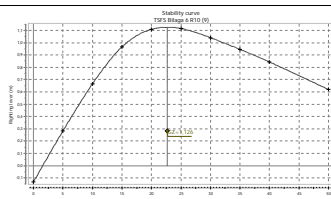
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,841	5,185	-0,020 (SB)	1,272
Damaged condition	13,841	5,185	-0,020 (SB)	1,286

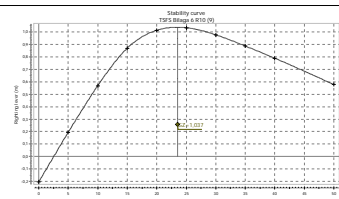
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,837	0,305	14,663	-0,056	0,861	0,287	15,486	-0,134	0,884	0,269	16,309	-0,204
5,0 (PS)	0,833	0,296	14,663	0,380	0,857	0,278	15,486	0,282	0,881	0,261	16,309	0,194
10,0 (PS)	0,812	0,274	14,663	0,770	0,838	0,255	15,486	0,664	0,864	0,237	16,309	0,568
15,0 (PS)	0,762	0,253	14,663	1,065	0,792	0,232	15,486	0,966	0,822	0,209	16,309	0,869
20,0 (PS)	0,675	0,233	14,663	1,201	0,718	0,184	15,486	1,108	0,762	0,134	16,309	1,013
25,0 (PS)	0,555	0,212	14,663	1,189	0,616	0,124	15,486	1,115	0,682	0,025	16,309	1,033
30,0 (PS)	0,409	0,192	14,663	1,105	0,481	0,083	15,486	1,040	0,568	-0,080	16,309	0,976
35,0 (PS)	0,252	0,163	14,663	1,008	0,331	0,036	15,486	0,946	0,429	-0,155	16,309	0,887
40,0 (PS)	0,079	0,123	14,663	0,903	0,166	-0,016	15,486	0,843	0,274	-0,238	16,309	0,789
50,0 (PS)	-0,344	0,006	14,663	0,674	-0,237	-0,167	15,486	0,619	-0,104	-0,455	16,309	0,578



Equilibrium angle 0,6 (PS)
 Max GZ 1,210
 Range 49,4
 Max VCG' 5,786



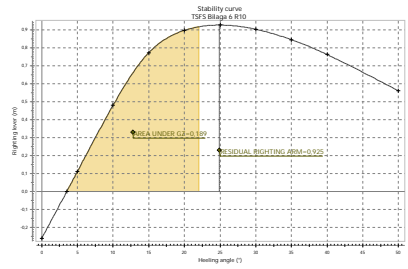
Equilibrium angle 1,6 (PS)
 Max GZ 1,126
 Range 48,4
 Max VCG' 5,580



Equilibrium angle 2,6 (PS)
 Max GZ 1,037
 Range 47,4
 Max VCG' 5,399

Results for : Final stage of flooding

Draft	0,906 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,247 (m)	0,0 (CL)	0,889	0,265	13,841	-0,259
Max VCG'	2,922 (m)	3,5 (PS)	0,906	0,247	13,841	-0,001
		5,0 (PS)	0,912	0,238	13,841	0,111
RESIDUAL RIGHTING ARM	0,925 (m)	10,0 (PS)	0,924	0,196	13,841	0,479
		15,0 (PS)	0,926	0,113	13,841	0,772
		20,0 (PS)	0,940	-0,062	13,841	0,896
		25,0 (PS)	0,958	-0,283	13,841	0,925
		30,0 (PS)	0,973	-0,553	13,841	0,902
		35,0 (PS)	0,979	-0,885	13,841	0,844
		40,0 (PS)	0,969	-1,293	13,841	0,762
		50,0 (PS)	0,917	-2,348	13,841	0,560



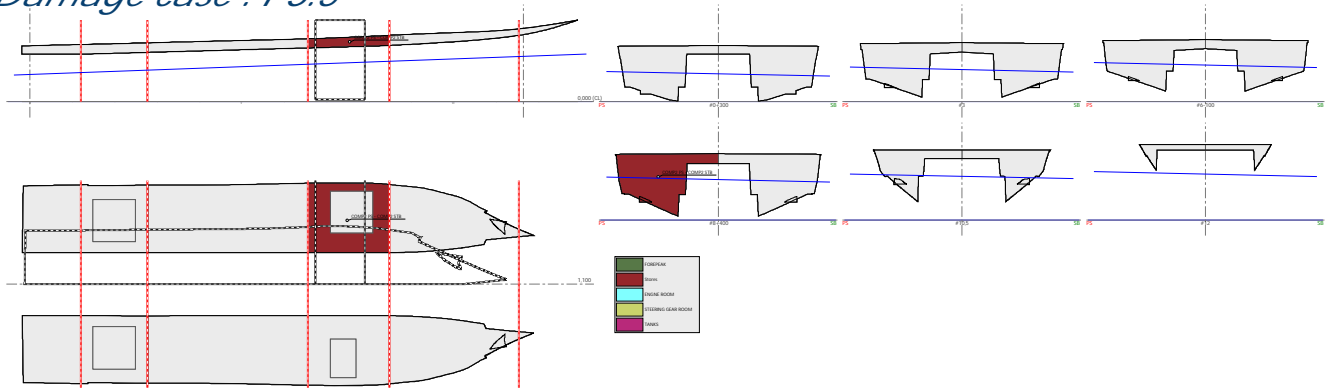
Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,1885 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	46,5 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	0,925 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,271 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

Damage case : PS.5



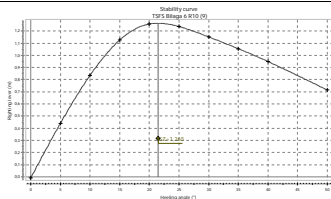
Damaged spaces

COMP2 PS - COMP2 STB

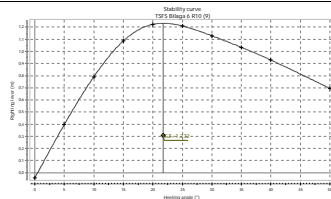
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,841	5,185	-0,020 (SB)	1,272
Damaged condition	13,841	5,185	-0,020 (SB)	1,286

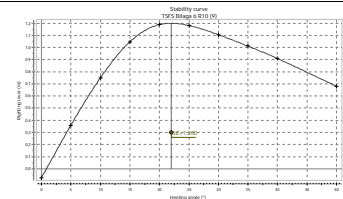
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,824	0,342	14,165	-0,011	0,835	0,369	14,488	-0,044	0,846	0,395	14,812	-0,077
5,0 (PS)	0,820	0,333	14,165	0,439	0,831	0,360	14,488	0,398	0,842	0,388	14,811	0,360
10,0 (PS)	0,798	0,315	14,165	0,835	0,810	0,345	14,488	0,791	0,822	0,374	14,811	0,750
15,0 (PS)	0,745	0,302	14,165	1,127	0,759	0,336	14,488	1,086	0,773	0,368	14,811	1,047
20,0 (PS)	0,650	0,304	14,165	1,258	0,668	0,343	14,488	1,224	0,686	0,382	14,811	1,189
25,0 (PS)	0,522	0,313	14,165	1,237	0,544	0,361	14,488	1,210	0,568	0,408	14,811	1,181
30,0 (PS)	0,371	0,305	14,165	1,152	0,397	0,359	14,488	1,129	0,424	0,414	14,811	1,105
35,0 (PS)	0,210	0,290	14,165	1,055	0,238	0,350	14,488	1,033	0,267	0,410	14,811	1,011
40,0 (PS)	0,032	0,268	14,165	0,949	0,063	0,334	14,488	0,928	0,095	0,400	14,811	0,908
50,0 (PS)	-0,402	0,198	14,165	0,715	-0,364	0,276	14,488	0,695	-0,324	0,358	14,811	0,679



Equilibrium angle 0,1 (PS)
 Max GZ 1,265
 Range 49,9
 Max VCG' 5,930



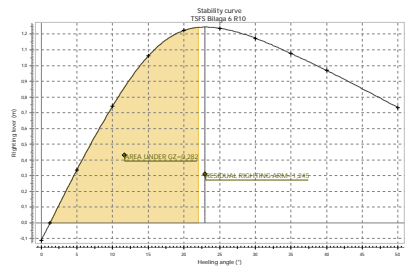
Equilibrium angle 0,5 (PS)
 Max GZ 1,232
 Range 49,5
 Max VCG' 5,851



Equilibrium angle 0,9 (PS)
 Max GZ 1,200
 Range 49,1
 Max VCG' 5,774

Results for : Final stage of flooding

	Draft	Angle	Draft	Trim	Displacement	GZ
Draft	0,856 (m)					
Trim	0,421 (m)	0,0 (CL)	0,855	0,417	13,841	-0,111
Max VCG'	3,995 (m)	1,2 (PS)	0,856	0,421	13,841	0,000
		5,0 (PS)	0,859	0,428	13,841	0,337
RESIDUAL RIGHTING ARM	1,245 (m)	10,0 (PS)	0,848	0,437	13,841	0,742
		15,0 (PS)	0,813	0,461	13,841	1,061
		20,0 (PS)	0,750	0,518	13,841	1,223
		25,0 (PS)	0,659	0,595	13,841	1,237
		30,0 (PS)	0,540	0,659	13,841	1,174
		35,0 (PS)	0,394	0,682	13,841	1,076
		40,0 (PS)	0,234	0,700	13,841	0,969
		50,0 (PS)	-0,160	0,725	13,841	0,733



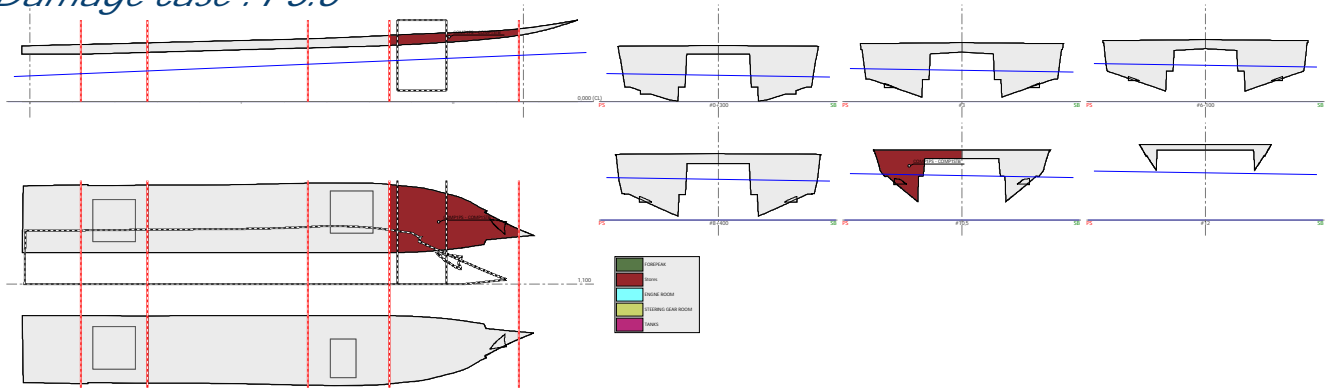
Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,2821 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	48,8 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,245 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,377 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

Damage case : PS.6



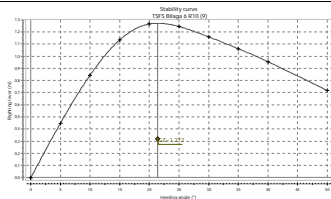
Damaged spaces

COMP1PS - COMP1STB

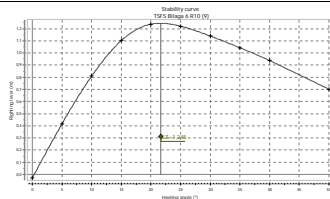
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,841	5,185	-0,020 (SB)	1,272
Damaged condition	13,841	5,185	-0,020 (SB)	1,286

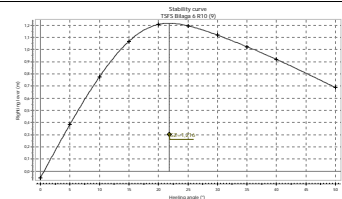
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,823	0,356	14,110	-0,004	0,833	0,398	14,378	-0,030	0,843	0,440	14,647	-0,056
5,0 (PS)	0,819	0,346	14,110	0,447	0,829	0,389	14,378	0,416	0,839	0,432	14,647	0,384
10,0 (PS)	0,797	0,330	14,110	0,844	0,808	0,377	14,378	0,809	0,818	0,423	14,647	0,775
15,0 (PS)	0,743	0,319	14,110	1,135	0,756	0,372	14,378	1,102	0,768	0,425	14,647	1,068
20,0 (PS)	0,648	0,326	14,110	1,266	0,664	0,389	14,378	1,237	0,679	0,455	14,647	1,207
25,0 (PS)	0,518	0,340	14,110	1,244	0,538	0,419	14,378	1,221	0,558	0,501	14,647	1,196
30,0 (PS)	0,367	0,335	14,110	1,160	0,390	0,424	14,378	1,140	0,413	0,519	14,647	1,119
35,0 (PS)	0,205	0,323	14,110	1,062	0,230	0,421	14,378	1,043	0,255	0,525	14,647	1,024
40,0 (PS)	0,028	0,305	14,110	0,955	0,054	0,413	14,378	0,937	0,082	0,528	14,647	0,919
50,0 (PS)	-0,408	0,244	14,110	0,718	-0,375	0,375	14,378	0,701	-0,341	0,519	14,647	0,688



Equilibrium angle 0,0 (PS)
 Max GZ 1,272
 Range 50,0
 Max VCG' 5,949



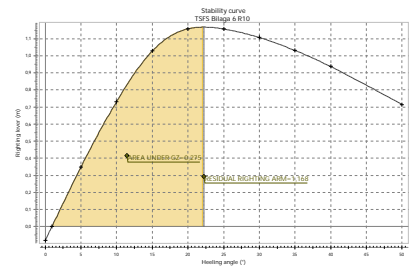
Equilibrium angle 0,3 (PS)
 Max GZ 1,245
 Range 49,7
 Max VCG' 5,889



Equilibrium angle 0,6 (PS)
 Max GZ 1,216
 Range 49,4
 Max VCG' 5,829

Results for : Final stage of flooding

Draft	0,853 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,482 (m)	0,0 (CL)	0,850	0,470	13,841	-0,080
Max VCG'	3,866 (m)	0,9 (PS)	0,853	0,482	13,841	0,000
		5,0 (PS)	0,862	0,531	13,841	0,348
RESIDUAL RIGHTING ARM	1,168 (m)	10,0 (PS)	0,858	0,603	13,841	0,732
		15,0 (PS)	0,830	0,711	13,841	1,028
		20,0 (PS)	0,789	0,929	13,841	1,158
		25,0 (PS)	0,739	1,233	13,841	1,157
		30,0 (PS)	0,685	1,569	13,841	1,107
		35,0 (PS)	0,627	1,938	13,841	1,031
		40,0 (PS)	0,558	2,339	13,841	0,937
		50,0 (PS)	0,349	3,196	13,841	0,715



Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,2751 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	49,1 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,168 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,380 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

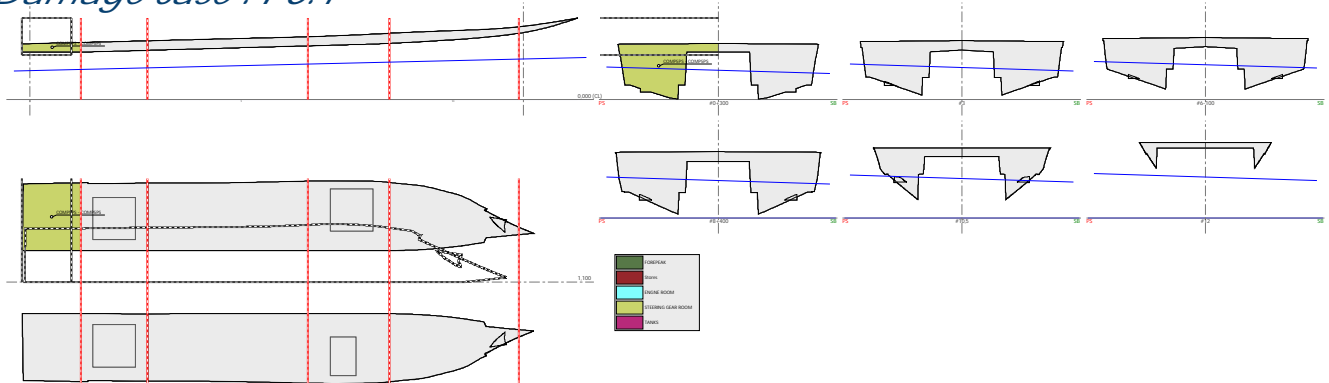
Summary for loading condition 30 PASS 100% BUNKER & FÖRRÅD

Summary for loading condition:30 PASS 100% BUNKER & FÖRRÅD

Damage case	Intermediate stage 25%	Intermediate stage 50%	Intermediate stage 75%	Final stage	Complies
PS.1	Pass	Pass	Pass	Pass	YES
PS.3	Pass	Pass	Pass	Pass	YES
PS.4	Pass	Pass	Pass	Pass	YES
PS.5	Pass	Pass	Pass	Pass	YES
PS.6	Pass	Pass	Pass	Pass	YES

Loading condition : 30 PASS 10% BUNKER & FÖRRÅD

Damage case : PS.1



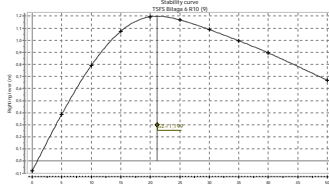
Damaged spaces

COMP5PS - COMP5PS

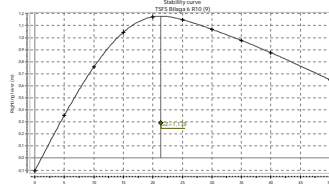
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,206	5,446	0,059 (PS)	1,289
Damaged condition	13,206	5,446	0,059 (PS)	1,309

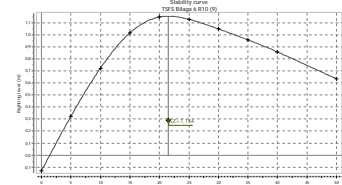
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,806	0,404	13,450	-0,082	0,811	0,360	13,695	-0,107	0,816	0,316	13,939	-0,132
5,0 (PS)	0,801	0,395	13,450	0,387	0,806	0,350	13,695	0,354	0,811	0,306	13,939	0,322
10,0 (PS)	0,777	0,385	13,450	0,791	0,783	0,336	13,695	0,756	0,789	0,287	13,939	0,722
15,0 (PS)	0,719	0,389	13,451	1,074	0,727	0,329	13,695	1,045	0,735	0,271	13,939	1,015
20,0 (PS)	0,617	0,413	13,451	1,195	0,627	0,340	13,695	1,173	0,637	0,266	13,939	1,148
25,0 (PS)	0,478	0,450	13,451	1,169	0,492	0,362	13,695	1,149	0,506	0,267	13,939	1,128
30,0 (PS)	0,322	0,459	13,451	1,088	0,337	0,360	13,695	1,069	0,353	0,254	13,939	1,049
35,0 (PS)	0,156	0,462	13,451	0,996	0,172	0,352	13,695	0,977	0,190	0,234	13,939	0,957
40,0 (PS)	-0,027	0,460	13,451	0,895	-0,009	0,337	13,695	0,875	0,011	0,206	13,939	0,857
50,0 (PS)	-0,480	0,450	13,451	0,669	-0,455	0,287	13,695	0,650	-0,429	0,124	13,939	0,633



Equilibrium angle 0,9 (PS)
 Max GZ 1,199
 Range 49,1
 Max VCG' 6,156



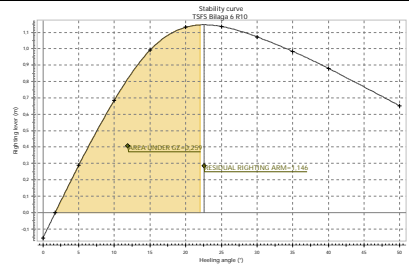
Equilibrium angle 1,2 (PS)
 Max GZ 1,178
 Range 48,8
 Max VCG' 6,068



Equilibrium angle 1,5 (PS)
 Max GZ 1,154
 Range 48,5
 Max VCG' 5,983

Results for : Final stage of flooding

Draft	0,821 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,271 (m)	0,0 (CL)	0,819	0,292	13,206	-0,155
Max VCG'	3,895 (m)	1,7 (PS)	0,821	0,271	13,206	0,000
		5,0 (PS)	0,821	0,223	13,206	0,288
RESIDUAL RIGHTING ARM	1,146 (m)	10,0 (PS)	0,807	0,131	13,206	0,686
		15,0 (PS)	0,764	0,021	13,206	0,991
		20,0 (PS)	0,696	-0,159	13,206	1,131
		25,0 (PS)	0,610	-0,401	13,206	1,136
		30,0 (PS)	0,505	-0,668	13,206	1,072
		35,0 (PS)	0,383	-0,923	13,206	0,984
		40,0 (PS)	0,237	-1,149	13,206	0,880
		50,0 (PS)	-0,124	-1,690	13,206	0,651



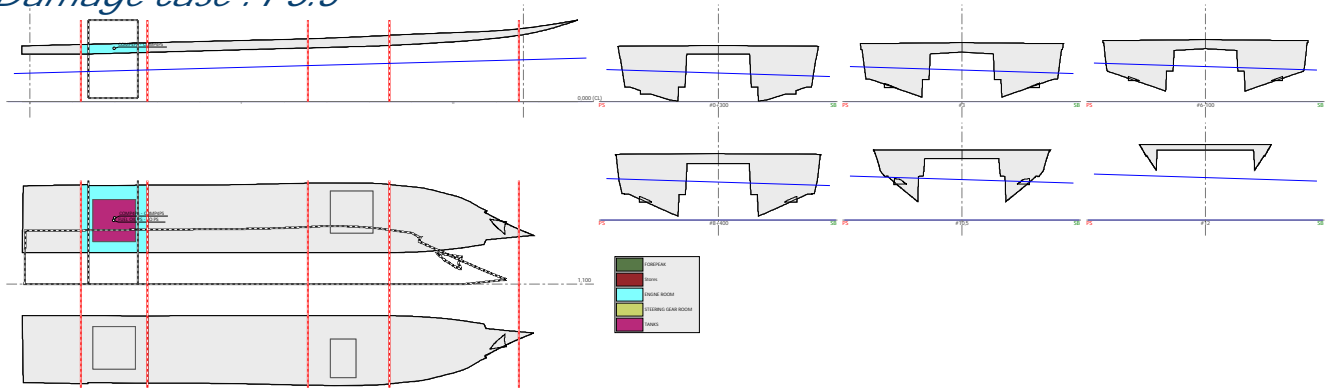
Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,2590 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	48,3 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,146 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,425 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

Damage case : PS.3



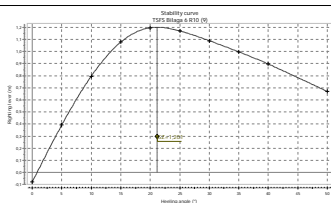
Damaged spaces

COMP4PS - COMP4PS FUEL OIL PS - FO PS

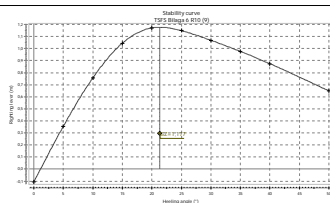
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,206	5,446	0,059 (PS)	1,289
Damaged condition	13,156	5,459	0,054 (PS)	1,306

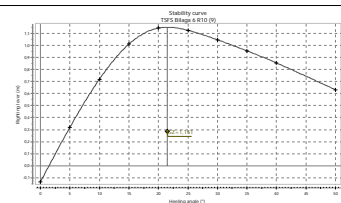
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,806	0,419	13,431	-0,079	0,813	0,385	13,706	-0,108	0,819	0,351	13,981	-0,135
5,0 (PS)	0,801	0,411	13,431	0,392	0,808	0,376	13,706	0,354	0,815	0,341	13,981	0,319
10,0 (PS)	0,777	0,403	13,431	0,795	0,784	0,364	13,706	0,756	0,792	0,325	13,981	0,719
15,0 (PS)	0,719	0,410	13,431	1,078	0,729	0,362	13,706	1,044	0,738	0,315	13,981	1,011
20,0 (PS)	0,616	0,438	13,431	1,197	0,629	0,380	13,706	1,172	0,641	0,321	13,981	1,144
25,0 (PS)	0,478	0,480	13,431	1,170	0,494	0,411	13,706	1,149	0,510	0,336	13,981	1,125
30,0 (PS)	0,322	0,493	13,431	1,090	0,339	0,415	13,706	1,069	0,358	0,331	13,981	1,046
35,0 (PS)	0,155	0,500	13,431	0,997	0,174	0,411	13,706	0,976	0,195	0,319	13,981	0,955
40,0 (PS)	-0,028	0,501	13,431	0,896	-0,007	0,403	13,706	0,874	0,016	0,301	13,981	0,854
50,0 (PS)	-0,481	0,504	13,431	0,669	-0,452	0,372	13,706	0,649	-0,423	0,240	13,981	0,631



Equilibrium angle 0,8 (PS)
Max GZ 1,201
Range 49,2
Max VCG' 6,167



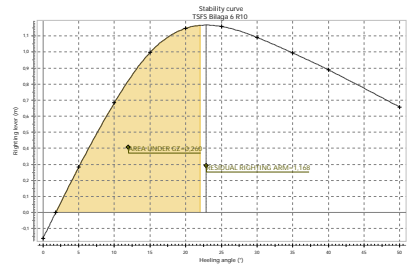
Equilibrium angle 1,2 (PS)
Max GZ 1,177
Range 48,8
Max VCG' 6,074



Equilibrium angle 1,5 (PS)
Max GZ 1,151
Range 48,5
Max VCG' 5,984

Results for : Final stage of flooding

Draft	0,825 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,315 (m)	0,0 (CL)	0,823	0,333	13,156	-0,160
Max VCG'	3,918 (m)	1,8 (PS)	0,825	0,315	13,156	0,000
		5,0 (PS)	0,827	0,278	13,156	0,282
RESIDUAL RIGHTING ARM	1,168 (m)	10,0 (PS)	0,815	0,208	13,156	0,683
		15,0 (PS)	0,775	0,131	13,156	0,997
		20,0 (PS)	0,708	0,005	13,156	1,148
		25,0 (PS)	0,619	-0,163	13,156	1,159
		30,0 (PS)	0,500	-0,320	13,156	1,091
		35,0 (PS)	0,357	-0,429	13,156	0,994
		40,0 (PS)	0,199	-0,548	13,156	0,889
		50,0 (PS)	-0,187	-0,859	13,156	0,657

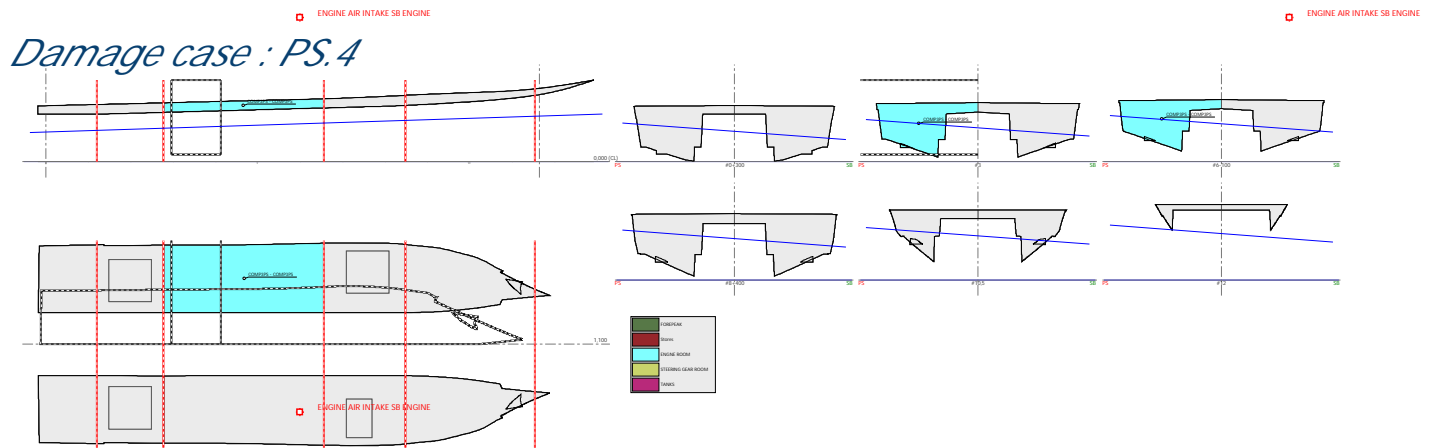


Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,2600 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	48,2 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,168 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,408 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria



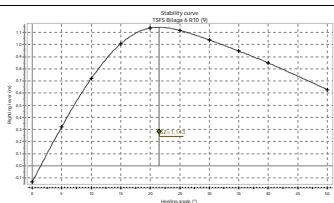
Damaged spaces

COMP3PS - COMP3PS

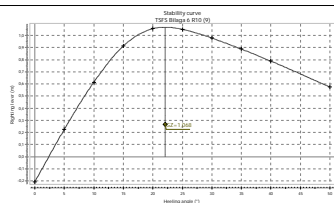
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,206	5,446	0,059 (PS)	1,289
Damaged condition	13,206	5,446	0,059 (PS)	1,309

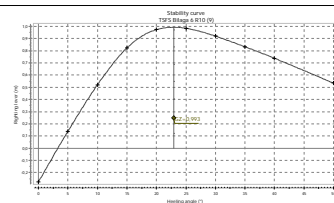
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,824	0,438	14,019	-0,134	0,848	0,420	14,832	-0,209	0,871	0,401	15,645	-0,278
5,0 (PS)	0,820	0,431	14,019	0,323	0,844	0,412	14,832	0,226	0,867	0,393	15,645	0,139
10,0 (PS)	0,798	0,424	14,019	0,720	0,824	0,401	14,832	0,615	0,849	0,379	15,645	0,520
15,0 (PS)	0,744	0,430	14,019	1,007	0,775	0,399	14,832	0,913	0,804	0,371	15,645	0,823
20,0 (PS)	0,647	0,462	14,019	1,136	0,688	0,421	14,832	1,056	0,730	0,378	15,645	0,973
25,0 (PS)	0,517	0,513	14,019	1,117	0,570	0,458	14,832	1,051	0,628	0,390	15,645	0,985
30,0 (PS)	0,366	0,531	14,019	1,038	0,427	0,472	14,832	0,978	0,495	0,400	15,645	0,920
35,0 (PS)	0,203	0,540	14,019	0,947	0,270	0,475	14,832	0,888	0,345	0,391	15,645	0,833
40,0 (PS)	0,025	0,543	14,019	0,847	0,099	0,473	14,832	0,789	0,181	0,377	15,645	0,738
50,0 (PS)	-0,414	0,540	14,019	0,628	-0,320	0,443	14,832	0,575	-0,220	0,328	15,645	0,534



Equilibrium angle 1,5 (PS)
 Max GZ 1,143
 Range 48,5
 Max VCG' 6,002



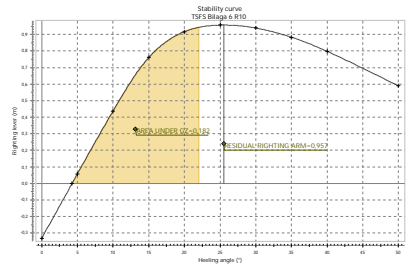
Equilibrium angle 2,4 (PS)
 Max GZ 1,068
 Range 47,6
 Max VCG' 5,775



Equilibrium angle 3,3 (PS)
 Max GZ 0,993
 Range 46,7
 Max VCG' 5,572

Results for : Final stage of flooding

Draft	0,891 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,377 (m)	0,0 (CL)	0,871	0,400	13,206	-0,331
Max VCG'	3,089 (m)	4,3 (PS)	0,891	0,377	13,206	0,000
		5,0 (PS)	0,894	0,372	13,206	0,058
RESIDUAL RIGHTING ARM	0,957 (m)	10,0 (PS)	0,906	0,333	13,206	0,438
		15,0 (PS)	0,900	0,289	13,206	0,761
		20,0 (PS)	0,901	0,184	13,206	0,917
		25,0 (PS)	0,910	0,023	13,206	0,957
		30,0 (PS)	0,917	-0,180	13,206	0,939
		35,0 (PS)	0,911	-0,449	13,206	0,883
		40,0 (PS)	0,883	-0,796	13,206	0,798
		50,0 (PS)	0,789	-1,706	13,206	0,589



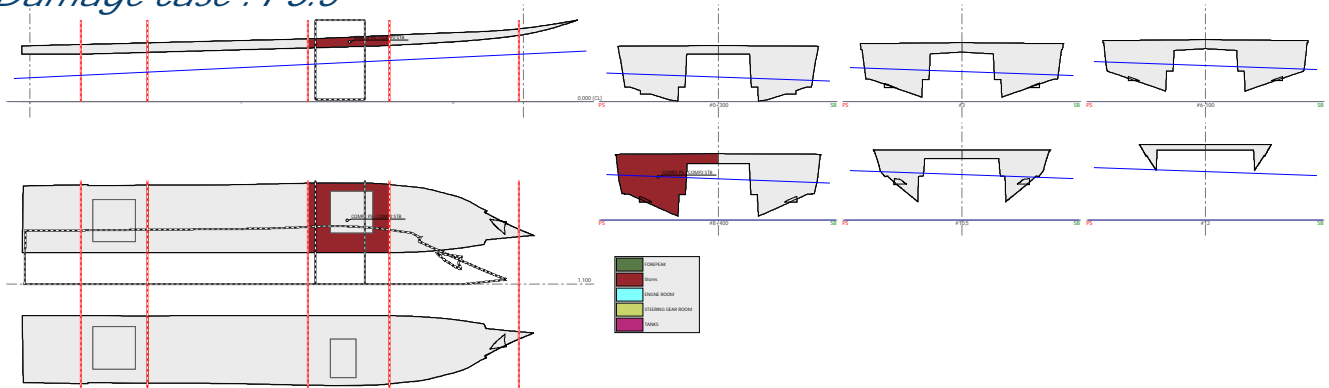
Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,1822 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	45,7 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	0,957 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,225 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

Damage case : PS.5



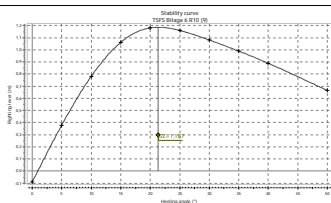
Damaged spaces

COMP2 PS - COMP2 STB

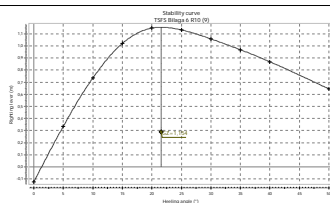
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,206	5,446	0,059 (PS)	1,289
Damaged condition	13,206	5,446	0,059 (PS)	1,309

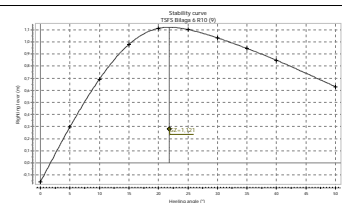
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,812	0,475	13,542	-0,090	0,823	0,502	13,877	-0,125	0,834	0,528	14,213	-0,158
5,0 (PS)	0,807	0,468	13,542	0,379	0,819	0,495	13,877	0,336	0,830	0,522	14,213	0,296
10,0 (PS)	0,783	0,465	13,542	0,781	0,796	0,495	13,877	0,735	0,808	0,524	14,213	0,692
15,0 (PS)	0,726	0,483	13,542	1,062	0,740	0,516	13,877	1,019	0,754	0,547	14,213	0,979
20,0 (PS)	0,624	0,525	13,542	1,182	0,642	0,565	13,877	1,147	0,661	0,603	14,213	1,112
25,0 (PS)	0,489	0,583	13,542	1,160	0,512	0,632	13,877	1,132	0,535	0,683	14,213	1,102
30,0 (PS)	0,334	0,608	13,542	1,081	0,360	0,665	13,877	1,058	0,388	0,725	14,213	1,033
35,0 (PS)	0,168	0,627	13,542	0,990	0,197	0,690	13,877	0,968	0,228	0,757	14,213	0,945
40,0 (PS)	-0,014	0,644	13,542	0,889	0,018	0,713	13,877	0,869	0,052	0,787	14,213	0,848
50,0 (PS)	-0,466	0,691	13,542	0,664	-0,426	0,777	13,877	0,645	-0,384	0,867	14,213	0,629



Equilibrium angle 1,0 (PS)
 Max GZ 1,187
 Range 49,0
 Max VCG' 6,151



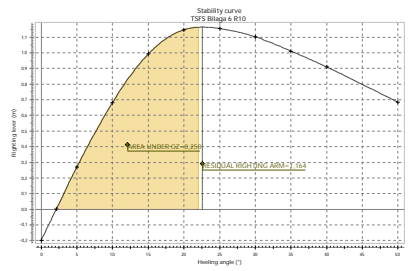
Equilibrium angle 1,4 (PS)
 Max GZ 1,154
 Range 48,6
 Max VCG' 6,060



Equilibrium angle 1,7 (PS)
 Max GZ 1,121
 Range 48,3
 Max VCG' 5,970

Results for : Final stage of flooding

	Draft	Angle	Draft	Trim	Displacement	GZ
Draft	0,844 (m)		0,842	0,547	13,206	-0,197
Trim	0,553 (m)	0,0 (CL)	0,844	0,553	13,206	0,001
Max VCG'	3,901 (m)	2,1 (PS)	0,845	0,558	13,206	0,271
RESIDUAL RIGHTING ARM	1,164 (m)	10,0 (PS)	0,832	0,581	13,206	0,682
		15,0 (PS)	0,793	0,632	13,206	0,992
		20,0 (PS)	0,723	0,737	13,206	1,147
		25,0 (PS)	0,626	0,884	13,206	1,155
		30,0 (PS)	0,509	1,013	13,206	1,102
		35,0 (PS)	0,364	1,089	13,206	1,011
		40,0 (PS)	0,203	1,163	13,206	0,909
		50,0 (PS)	-0,193	1,346	13,206	0,684



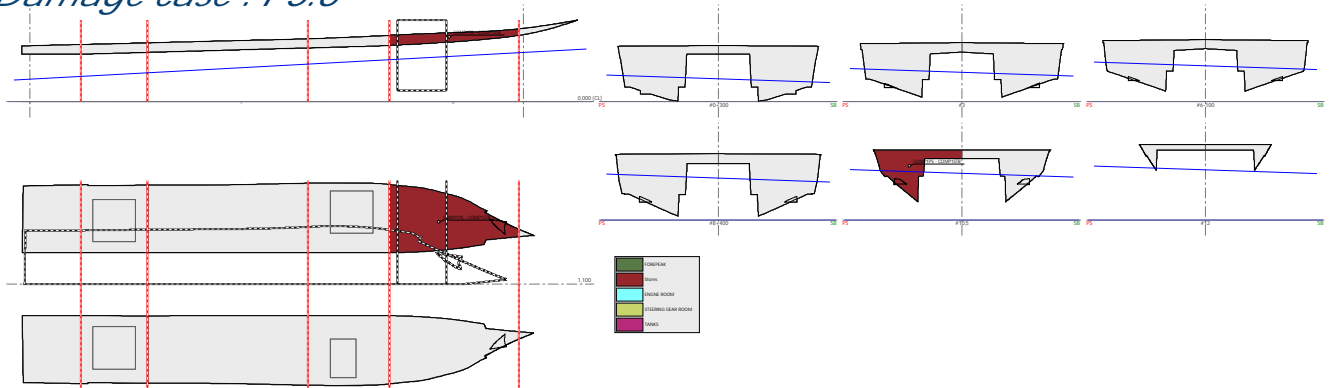
Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,2581 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	47,9 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,164 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,317 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

Damage case : PS.6



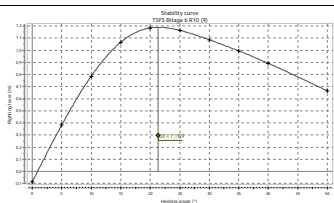
Damaged spaces

COMP1PS - COMP1STB

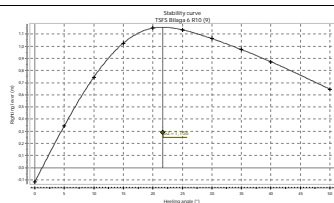
Loading condition particulars

Description	Displacement (tonnes)	LCG (m)	TCG (m)	VCG' (m)
Intact condition	13,206	5,446	0,059 (PS)	1,289
Damaged condition	13,206	5,446	0,059 (PS)	1,309

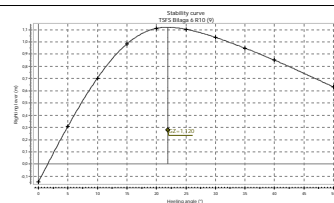
Angle (Degr.)	Intermediate stage 25%				Intermediate stage 50%				Intermediate stage 75%			
	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)	Draft (m)	Trim (m)	Displ. (tonnes)	GZ (m)
0,0 (CL)	0,812	0,495	13,521	-0,087	0,823	0,543	13,836	-0,118	0,835	0,591	14,151	-0,147
5,0 (PS)	0,807	0,487	13,521	0,383	0,819	0,536	13,836	0,346	0,830	0,586	14,151	0,309
10,0 (PS)	0,783	0,487	13,521	0,786	0,796	0,540	13,836	0,744	0,808	0,594	14,151	0,703
15,0 (PS)	0,726	0,509	13,521	1,066	0,740	0,571	13,836	1,025	0,753	0,632	14,151	0,984
20,0 (PS)	0,624	0,555	13,521	1,184	0,642	0,630	13,836	1,149	0,660	0,707	14,151	1,111
25,0 (PS)	0,489	0,616	13,521	1,164	0,512	0,707	13,836	1,135	0,537	0,804	14,151	1,104
30,0 (PS)	0,334	0,645	13,522	1,086	0,362	0,749	13,836	1,062	0,392	0,865	14,151	1,037
35,0 (PS)	0,168	0,668	13,521	0,994	0,198	0,783	13,837	0,972	0,232	0,912	14,151	0,949
40,0 (PS)	-0,014	0,690	13,522	0,892	0,019	0,817	13,837	0,872	0,056	0,961	14,151	0,851
50,0 (PS)	-0,466	0,753	13,521	0,665	-0,426	0,914	13,836	0,646	-0,381	1,095	14,151	0,631



Equilibrium angle 0,9 (PS)
 Max GZ 1,189
 Range 49,1
 Max VCG' 6,162



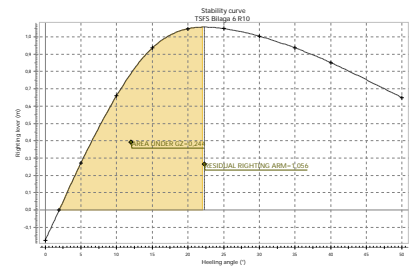
Equilibrium angle 1,3 (PS)
 Max GZ 1,156
 Range 48,7
 Max VCG' 6,081



Equilibrium angle 1,6 (PS)
 Max GZ 1,120
 Range 48,4
 Max VCG' 6,000

Results for : Final stage of flooding

Draft	0,845 (m)	Angle	Draft	Trim	Displacement	GZ
Trim	0,639 (m)	0,0 (CL)	0,840	0,614	13,206	-0,174
Max VCG'	3,680 (m)	1,9 (PS)	0,845	0,639	13,206	0,000
		5,0 (PS)	0,851	0,677	13,206	0,272
RESIDUAL RIGHTING ARM	1,056 (m)	10,0 (PS)	0,846	0,767	13,206	0,660
		15,0 (PS)	0,813	0,917	13,206	0,935
		20,0 (PS)	0,768	1,188	13,206	1,047
		25,0 (PS)	0,717	1,524	13,206	1,047
		30,0 (PS)	0,665	1,899	13,206	1,004
		35,0 (PS)	0,606	2,305	13,206	0,936
		40,0 (PS)	0,536	2,743	13,206	0,851
		50,0 (PS)	0,346	3,779	13,206	0,649



Evaluation of criteria

TSFS Bilaga 6 R10

Description	Attained value	Criterion	Required value	Complies
AREA UNDER GZ	0,2436 (mrad)	>=	0,0150 (mrad)	YES
RANGE OF STABILITY	48,1 (Degr.)	>=	15,0 (Degr.)	YES
RESIDUAL RIGHTING ARM	1,056 (m)	>=	0,320 (m)	YES
MARGIN LINE	0,288 (m)	>=	0,076 (m)	YES

The condition complies with the stability criteria

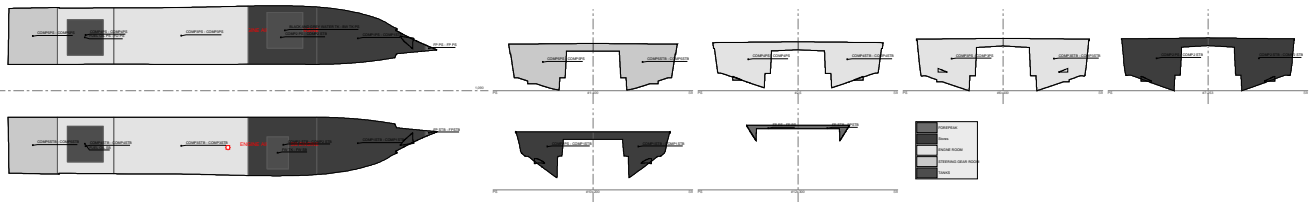
Summary for loading condition 30 PASS 10% BUNKER & FÖRRÅD

Summary for loading condition:30 PASS 10% BUNKER & FÖRRÅD

Damage case	Intermediate stage 25%	Intermediate stage 50%	Intermediate stage 75%	Final stage	Complies
PS.1	Pass	Pass	Pass	Pass	YES
PS.3	Pass	Pass	Pass	Pass	YES
PS.4	Pass	Pass	Pass	Pass	YES
PS.5	Pass	Pass	Pass	Pass	YES
PS.6	Pass	Pass	Pass	Pass	YES

Tank and compartment layout

Tank arrangement drawing



Tank and compartments

FOREPEAK

Tank description	Abbreviation	Relative density	Moulded volume	Volume	Weight	LCG	TCG	VCG	Max FSM
			(m ³)	(m ³)	(tonnes)	(m)	(m)	(m)	(t*m)
FPSTB	FPSTB	1,000	0,280	0,274	0,274	11,964	-0,928 (SB)	1,631	0,235
FPPS	FPPS	1,000	0,280	0,274	0,274	11,964	0,928 (PS)	1,631	0,235
Total				0,549	0,549	11,964	0,000 (CL)	1,631	0,471

Stores

Tank description	Abbreviation	Relative density	Moulded volume	Volume	Weight	LCG	TCG	VCG	Max FSM
			(m ³)	(m ³)	(tonnes)	(m)	(m)	(m)	(t*m)
COMP1STB	COMP1STB	1,000	4,062	3,981	3,981	9,700	-1,317 (SB)	1,161	2,515
COMP1PS	COMP1STB	1,000	4,062	3,981	3,981	9,700	1,317 (PS)	1,161	2,515
COMP2STB	COMP2STB	1,000	3,809	3,733	3,733	7,529	-1,418 (SB)	0,944	2,217
COMP2PS	COMP2STB	1,000	3,525	3,455	3,455	7,511	1,398 (PS)	0,946	2,217
Total				15,149	15,149	8,666	-0,031 (SB)	1,058	9,463

ENGINE ROOM

Tank description	Abbreviation	Relative density	Moulded volume	Volume	Weight	LCG	TCG	VCG	Max FSM
			(m ³)	(m ³)	(tonnes)	(m)	(m)	(m)	(t*m)
COMP3STB	COMP3STB	1,000	6,735	6,600	6,600	4,717	-1,402 (SB)	0,943	4,245
COMP3PS	COMP3PS	1,000	6,735	6,600	6,600	4,717	1,402 (PS)	0,943	4,245
COMP4STB	COMP4STB	1,000	2,247	2,202	2,202	1,998	-1,367 (SB)	0,853	1,738
COMP4PS	COMP4PS	1,000	2,247	2,202	2,202	1,998	1,367 (PS)	0,853	1,738
Total				17,605	17,605	4,036	0,000 (CL)	0,921	11,966

STEERING GEAR ROOM

Tank description	Abbreviation	Relative density	Moulded volume	Volume	Weight	LCG	TCG	VCG	Max FSM
			(m ³)	(m ³)	(tonnes)	(m)	(m)	(m)	(t*m)
COMP5STB	COMP5STB	1,000	2,435	2,386	2,386	0,545	-1,399 (SB)	0,819	1,490
COMP5PS	COMP5PS	1,000	2,435	2,386	2,386	0,545	1,399 (PS)	0,819	1,490
Total				4,772	4,772	0,545	0,000 (CL)	0,819	2,979

TANKS

Tank description	Abbreviation	Relative density	Moulded volume	Volume	Weight	LCG	TCG	VCG	Max FSM
			(m ³)	(m ³)	(tonnes)	(m)	(m)	(m)	(t*m)
FUELOIL PS	FOPS	0,850	0,600	0,588	0,500	1,990	1,500 (PS)	0,900	0,069
BLACKAND GREYWATERTK	BW TKPS	1,000	0,500	0,490	0,490	7,600	1,700 (PS)	0,950	0,082
FWTK	FW SB	1,000	0,216	0,212	0,212	7,400	-1,750 (SB)	1,000	0,036
FUELOIL SB		0,850	0,600	0,588	0,500	1,990	-1,500 (SB)	0,900	0,069
Total				1,878	1,701	4,279	0,272 (PS)	0,927	0,256

Tank sounding tables

TANKS

FUEL OIL PS

Abbreviation : FO PS

FUEL OIL PS							
Relative density:	0,8500		Trim:	Level trim	Heeling angle:		No Heel
Sounding	Ullage	Volume	Weight	LCG	TCG	VCG	Free surface
(m)	(m)	(l)	(kg)	(m)	(m)	(m)	(t*m)
0,000	0,600	0,0	0,0	1,493	1,125 (PS)	0,600	0,069
0,050	0,550	49,0	41,7	1,990	1,500 (PS)	0,625	0,069
0,100	0,500	98,0	83,3	1,990	1,500 (PS)	0,650	0,069
0,150	0,450	147,0	125,0	1,990	1,500 (PS)	0,675	0,069
0,200	0,400	196,0	166,6	1,990	1,500 (PS)	0,700	0,069
0,250	0,350	245,0	208,3	1,990	1,500 (PS)	0,725	0,069
0,300	0,300	294,0	249,9	1,990	1,500 (PS)	0,750	0,069
0,350	0,250	343,0	291,6	1,990	1,500 (PS)	0,775	0,069
0,400	0,200	392,0	333,2	1,990	1,500 (PS)	0,800	0,069
0,450	0,150	441,0	374,8	1,990	1,500 (PS)	0,825	0,069
0,500	0,100	490,0	416,5	1,990	1,500 (PS)	0,850	0,069
0,550	0,050	539,0	458,2	1,990	1,500 (PS)	0,875	0,069
0,600	0,000	588,0	499,8	1,990	1,500 (PS)	0,900	0,069

BLACK AND GREY WATER TK

Abbreviation : BW TK PS

BLACK AND GREY WATER TK							
Relative density:	1,0000	Trim:	Level trim	Heeling angle:		No Heel	
Sounding	Ullage	Volume	Weight	LCG	TCG	VCG	Free surface
(m)	(m)	(l)	(kg)	(m)	(m)	(m)	(t*m)
0,000	0,500	0,0	0,0	0,000	0,000 (CL)	0,000	0,082
0,050	0,450	49,0	49,0	7,600	1,700 (PS)	0,725	0,082
0,100	0,400	98,0	98,0	7,600	1,700 (PS)	0,750	0,082
0,150	0,350	147,0	147,0	7,600	1,700 (PS)	0,775	0,082
0,200	0,300	196,0	196,0	7,600	1,700 (PS)	0,800	0,082
0,250	0,250	245,0	245,0	7,600	1,700 (PS)	0,825	0,082
0,300	0,200	294,0	294,0	7,600	1,700 (PS)	0,850	0,082
0,350	0,150	343,0	343,0	7,600	1,700 (PS)	0,875	0,082
0,400	0,100	392,0	392,0	7,600	1,700 (PS)	0,900	0,082
0,450	0,050	441,0	441,0	7,600	1,700 (PS)	0,925	0,082
0,500	0,000	490,0	490,0	7,600	1,700 (PS)	0,950	0,082

FW TK

Abbreviation : FW SB

FW TK							
Relative density:	1,0000	Trim:	Level trim	Heeling angle:		No Heel	
Sounding	Ullage	Volume	Weight	LCG	TCG	VCG	Free surface
(<i>m</i>)	(<i>m</i>)	(<i>l</i>)	(<i>kg</i>)	(<i>m</i>)	(<i>m</i>)	(<i>m</i>)	(<i>t*m</i>)
0,000	0,400	0,0	0,0	0,000	0,000 (CL)	0,000	0,036
0,050	0,350	26,5	26,5	7,400	-1,750 (SB)	0,825	0,036
0,100	0,300	52,9	52,9	7,400	-1,750 (SB)	0,850	0,036
0,150	0,250	79,4	79,4	7,400	-1,750 (SB)	0,875	0,036
0,200	0,200	105,8	105,8	7,400	-1,750 (SB)	0,900	0,036
0,250	0,150	132,3	132,3	7,400	-1,750 (SB)	0,925	0,036
0,300	0,100	158,8	158,8	7,400	-1,750 (SB)	0,950	0,036
0,350	0,050	185,2	185,2	7,400	-1,750 (SB)	0,975	0,036
0,400	0,000	211,7	211,7	7,400	-1,750 (SB)	1,000	0,036

FUEL OIL SB

FUEL OIL SB							
Relative density:	0,8500		Trim:	Level trim	Heeling angle:		No Heel
Sounding	Ullage	Volume	Weight	LCG	TCG	VCG	Free surface
(m)	(m)	(l)	(kg)	(m)	(m)	(m)	(t*m)
0,000	0,600	0,0	0,0	1,493	-1,125 (SB)	0,600	0,069
0,050	0,550	49,0	41,6	1,990	-1,500 (SB)	0,625	0,069
0,100	0,500	98,0	83,3	1,990	-1,500 (SB)	0,650	0,069
0,150	0,450	147,0	124,9	1,990	-1,500 (SB)	0,675	0,069
0,200	0,400	196,0	166,6	1,990	-1,500 (SB)	0,700	0,069
0,250	0,350	245,0	208,3	1,990	-1,500 (SB)	0,725	0,069
0,300	0,300	294,0	249,9	1,990	-1,500 (SB)	0,750	0,069
0,350	0,250	343,0	291,6	1,990	-1,500 (SB)	0,775	0,069
0,400	0,200	392,0	333,2	1,990	-1,500 (SB)	0,800	0,069
0,450	0,150	441,0	374,8	1,990	-1,500 (SB)	0,825	0,069
0,500	0,100	490,0	416,5	1,990	-1,500 (SB)	0,850	0,069
0,550	0,050	539,0	458,2	1,990	-1,500 (SB)	0,875	0,069
0,600	0,000	588,0	499,8	1,990	-1,500 (SB)	0,900	0,069

Hydrostatics

Trim: 0,000 (m)

Draft (m)	Volume (m ³)	Displ. (tonnes)	LCB (m)	VCB (m)	TCB (m)	Cb	KMt (m)	KMI (m)	MCT (t*m/cm)	TpCm (t/cm)
0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,00	0,000	0,000
0,100	0,087	0,090	3,522	0,072	0,000	0,015	29,741	237,54	0,018	0,023
0,200	0,501	0,514	3,722	0,143	0,000	0,043	19,478	117,23	0,052	0,066
0,300	1,421	1,457	3,902	0,216	0,000	0,082	15,610	71,65	0,089	0,124
0,400	2,947	3,021	4,094	0,287	0,000	0,128	13,334	52,35	0,135	0,187
0,500	5,073	5,200	4,252	0,356	0,000	0,176	11,197	39,18	0,173	0,245
0,600	7,663	7,854	4,396	0,422	0,000	0,221	9,028	30,29	0,201	0,281
0,700	10,561	10,825	4,517	0,485	0,000	0,262	7,616	24,83	0,226	0,311
0,800	13,672	14,014	4,626	0,545	0,000	0,296	6,371	21,22	0,249	0,326
0,900	16,903	17,326	4,718	0,604	0,000	0,326	5,508	18,67	0,269	0,337
1,000	20,235	20,741	4,796	0,661	0,000	0,351	4,898	16,77	0,287	0,346

Trim: 0,200 (m)

Draft (m)	Volume (m ³)	Displ. (tonnes)	LCB (m)	VCB (m)	TCB (m)	Cb	KMt (m)	KMI (m)	MCT (t*m/cm)	TpCm (t/cm)
0,000	0,000	0,000	6,725	0,012	0,000	0,000	207,108	21,62	0,000	0,001
0,100	0,066	0,068	7,060	0,088	0,000	0,011	24,861	12,33	0,001	0,014
0,200	0,368	0,377	6,005	0,147	0,000	0,032	18,756	129,50	0,042	0,052
0,300	1,151	1,180	5,300	0,211	0,000	0,067	16,751	88,42	0,089	0,114
0,400	2,569	2,633	5,038	0,280	0,000	0,111	13,735	57,91	0,130	0,175
0,500	4,619	4,734	4,957	0,349	0,000	0,160	11,908	44,76	0,180	0,242
0,600	7,192	7,372	4,931	0,416	0,000	0,208	9,585	34,20	0,214	0,282
0,700	10,121	10,374	4,945	0,480	0,000	0,251	8,041	27,25	0,238	0,316
0,800	13,281	13,613	4,985	0,541	0,000	0,288	6,614	22,78	0,260	0,330
0,900	16,551	16,964	5,030	0,600	0,000	0,319	5,653	19,74	0,279	0,340
1,000	19,914	20,412	5,073	0,658	0,000	0,345	4,987	17,54	0,296	0,349

Trim: 0,400 (m)

Draft (m)	Volume (m ³)	Displ. (tonnes)	LCB (m)	VCB (m)	TCB (m)	Cb	KMt (m)	KMI (m)	MCT (t*m/cm)	TpCm (t/cm)
0,000	0,003	0,003	7,103	0,036	0,000	0,000	84,346	27,49	0,000	0,003
0,100	0,109	0,111	7,353	0,113	0,000	0,019	21,591	14,22	0,001	0,020
0,200	0,394	0,404	7,498	0,187	0,000	0,034	14,849	13,20	0,005	0,039
0,300	1,068	1,095	6,745	0,242	0,000	0,062	15,781	73,43	0,069	0,101
0,400	2,350	2,408	6,117	0,299	0,000	0,102	13,925	62,92	0,129	0,166
0,500	4,324	4,432	5,742	0,361	0,000	0,150	11,930	44,59	0,168	0,232
0,600	6,808	6,978	5,555	0,423	0,000	0,197	9,874	37,70	0,223	0,278
0,700	9,742	9,985	5,428	0,484	0,000	0,241	8,452	29,74	0,251	0,320
0,800	12,945	13,269	5,378	0,545	0,000	0,281	6,844	24,33	0,271	0,334
0,900	16,251	16,657	5,365	0,604	0,000	0,313	5,788	20,79	0,289	0,344
1,000	19,642	20,133	5,367	0,661	0,000	0,341	5,071	18,26	0,304	0,352

Trim: 0,600 (m)

Draft (m)	Volume (m ³)	Displ. (tonnes)	LCB (m)	VCB (m)	TCB (m)	Cb	KMt (m)	KMI (m)	MCT (t*m/cm)	TpCm (t/cm)
0,000	0,016	0,016	7,610	0,076	0,000	0,000	45,231	27,82	0,000	0,007
0,100	0,176	0,180	7,636	0,146	0,000	0,030	18,631	14,57	0,002	0,026
0,200	0,528	0,541	7,703	0,218	0,000	0,046	13,723	10,63	0,005	0,047
0,300	1,165	1,194	7,637	0,288	0,000	0,067	14,323	31,12	0,032	0,090
0,400	2,335	2,393	7,065	0,338	0,000	0,101	12,898	48,61	0,099	0,154
0,500	4,185	4,290	6,534	0,390	0,000	0,145	12,639	47,04	0,172	0,238
0,600	6,589	6,754	6,204	0,445	0,000	0,190	9,336	35,81	0,205	0,260
0,700	9,423	9,658	5,965	0,501	0,000	0,233	8,779	32,21	0,263	0,323
0,800	12,665	12,981	5,804	0,558	0,000	0,275	7,056	25,83	0,282	0,338
0,900	16,001	16,401	5,721	0,615	0,000	0,308	5,911	21,77	0,298	0,347
1,000	19,414	19,899	5,675	0,670	0,000	0,337	5,150	18,92	0,312	0,354

NOTE 1: Draft (and all other vertical heights) is measured above base Z=0,000

NOTE 2: All calculated coefficients based on project length, draft and beam.

Nomenclature

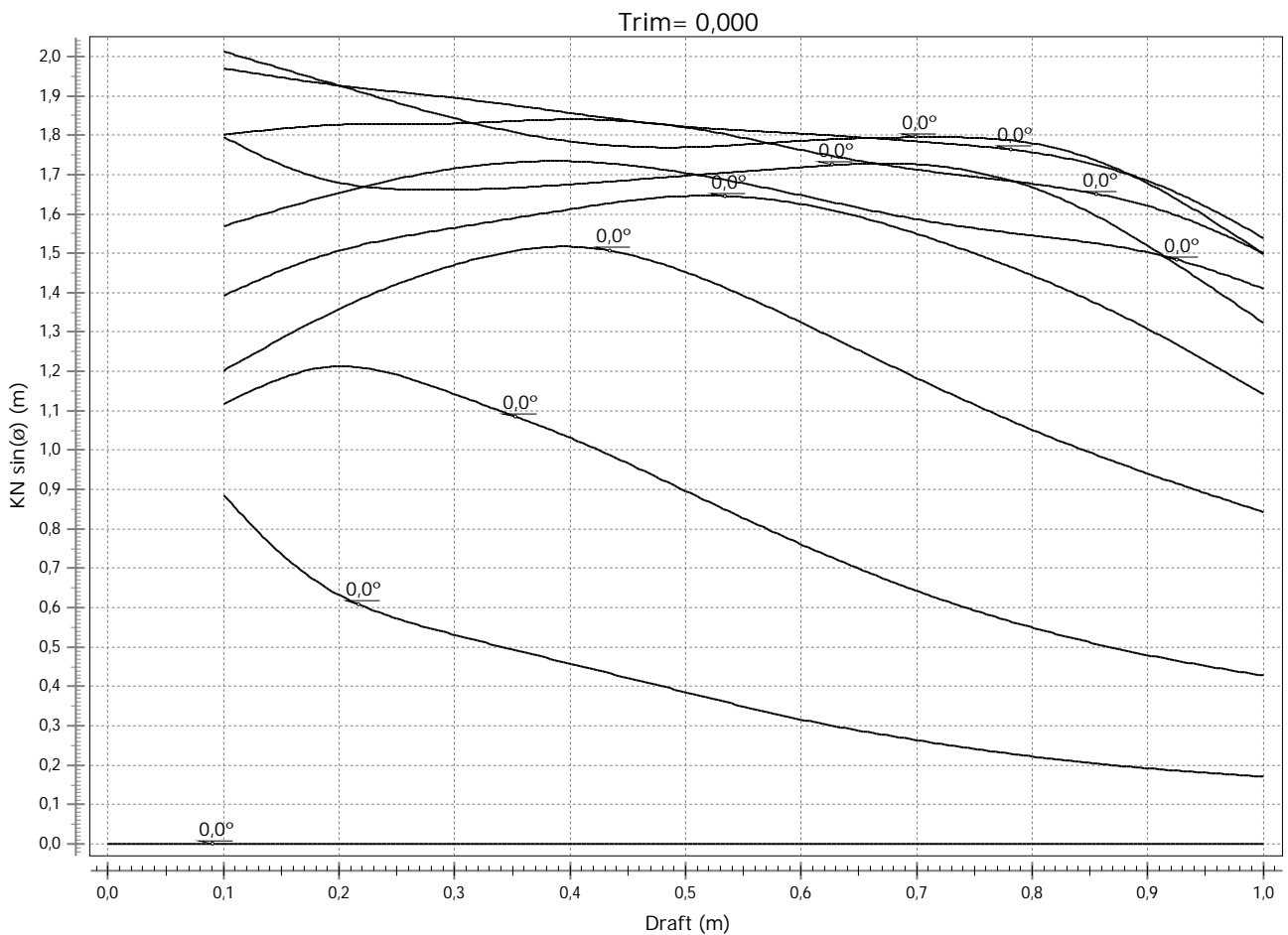
Draft	<i>Moulded draft, measured from baseline</i>
Volume	<i>Total displaced volume</i>
Displ.	<i>Displacement</i>
LCB	<i>Longitudinal center of buoyancy, measured from the aft perpendicular at X=0.0</i>
VCB	<i>Vertical center of buoyancy</i>
TCB	<i>Transverse center of buoyancy</i>
Cb	<i>Block coefficient</i>
KMt	<i>Transverse metacentric height</i>
KMI	<i>Longitudinal metacentric height</i>
MCT	<i>Moment to change trim one unit</i>
TpCm	<i>Weight to change the immersion with one unit</i>

Cross curves

Heel to: Port side
Trim settings: Free to trim

Trim= 0,000

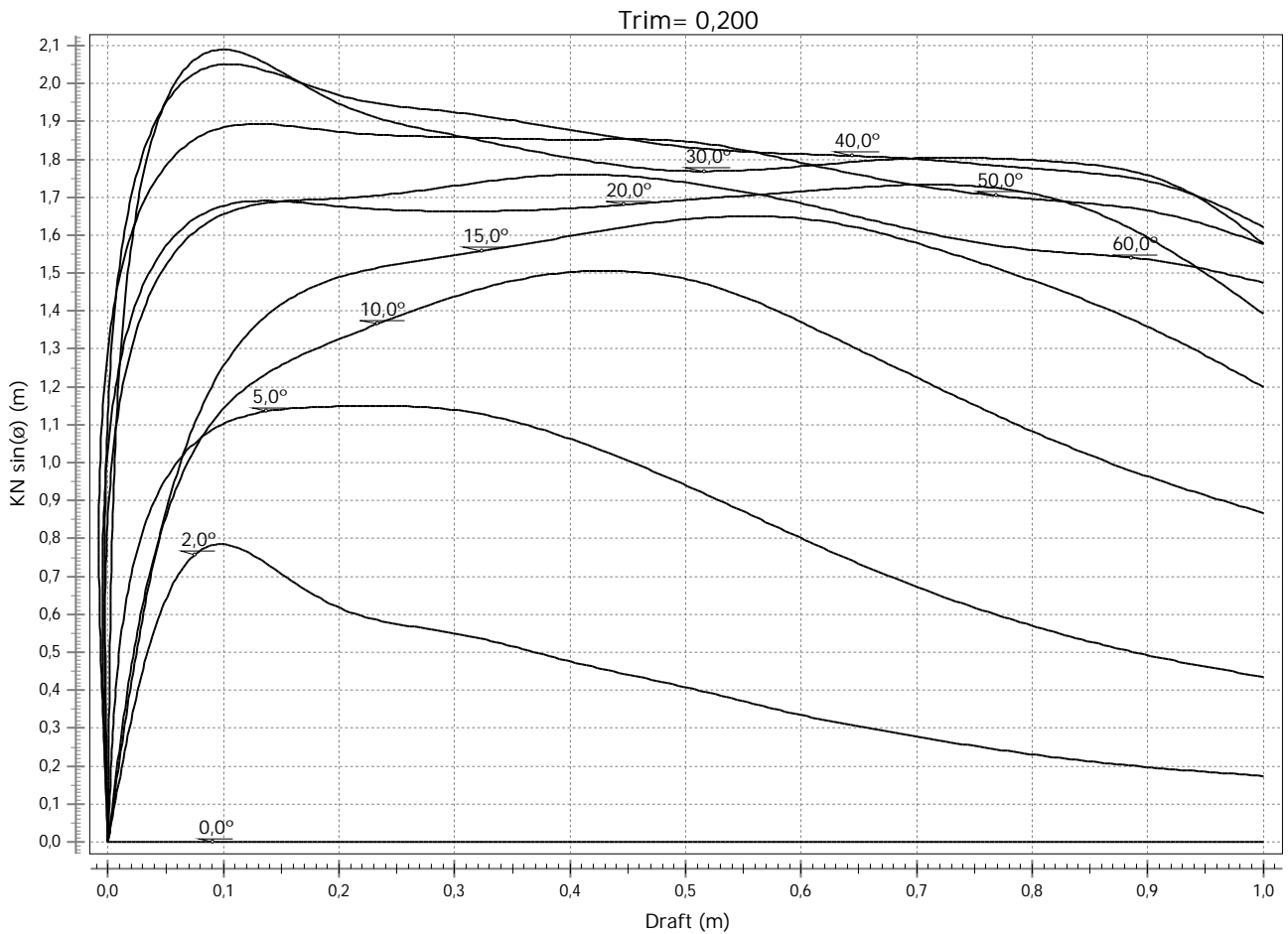
Draft	0,0°	2,0°	5,0°	10,0°	15,0°	20,0°	30,0°	40,0°	50,0°	60,0°
0,000	0,000	<->	<->	<->	<->	<->	<->	<->	<->	<->
0,100	0,000	0,886	1,116	1,201	1,393	1,796	2,012	1,969	1,801	1,569
0,200	0,000	0,632	1,213	1,358	1,506	1,679	1,926	1,926	1,827	1,654
0,300	0,000	0,531	1,142	1,471	1,565	1,661	1,842	1,895	1,830	1,715
0,400	0,000	0,458	1,031	1,517	1,612	1,675	1,784	1,856	1,840	1,734
0,500	0,000	0,385	0,897	1,452	1,645	1,697	1,769	1,822	1,820	1,704
0,600	0,000	0,316	0,761	1,324	1,625	1,719	1,786	1,804	1,763	1,647
0,700	0,000	0,264	0,642	1,183	1,549	1,726	1,795	1,784	1,712	1,586
0,800	0,000	0,222	0,550	1,052	1,444	1,667	1,780	1,756	1,676	1,545
0,900	0,000	0,192	0,480	0,941	1,308	1,519	1,678	1,684	1,620	1,502
1,000	0,000	0,171	0,428	0,843	1,143	1,324	1,499	1,539	1,501	1,411



Critical points		
Draft	Downflooding angle	Opening
1,000	58,0°	ENGINE AIR INTAKE PS ENGINE

Trim = 0,200

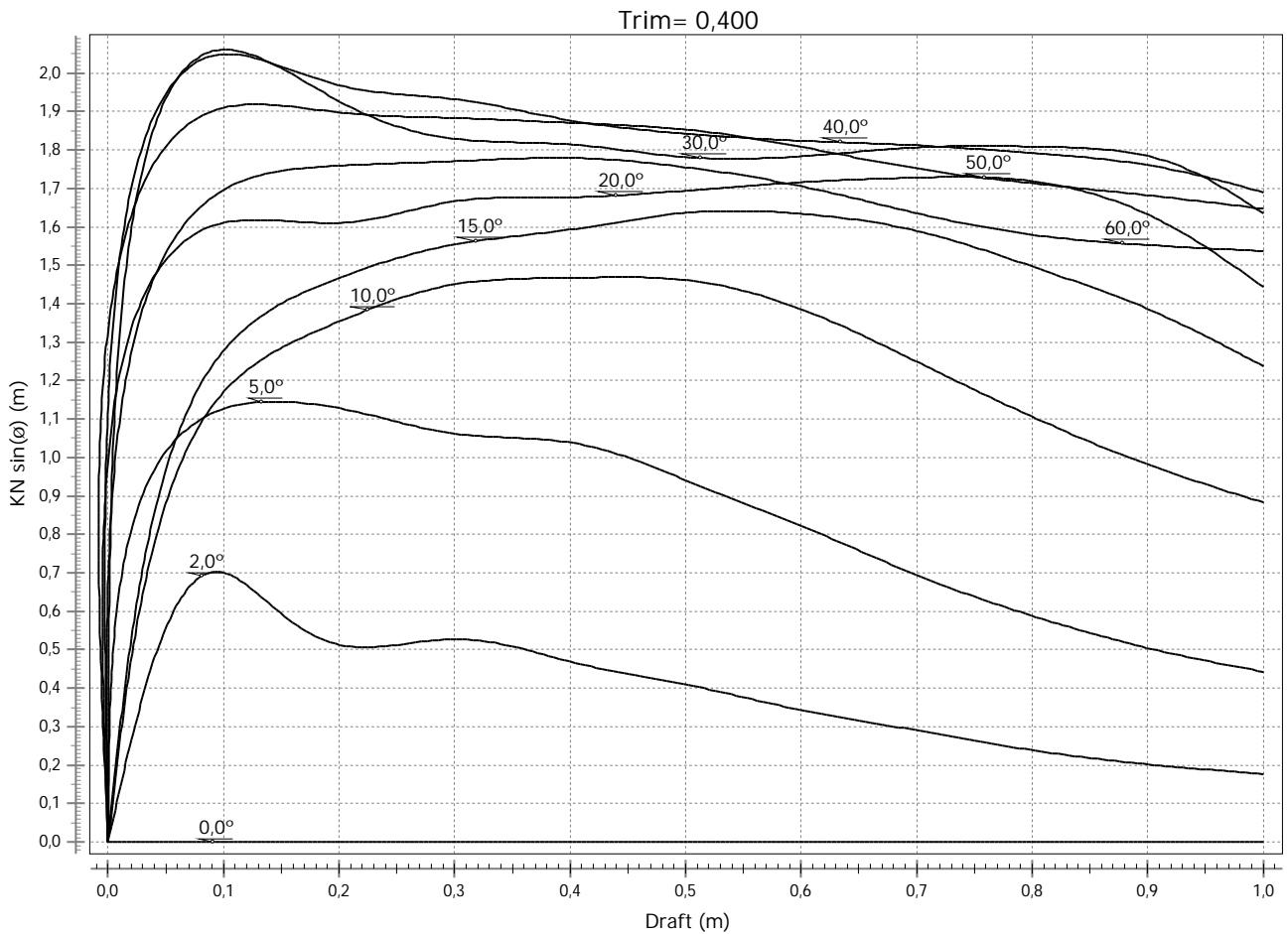
Draft	0,0°	2,0°	5,0°	10,0°	15,0°	20,0°	30,0°	40,0°	50,0°	60,0°
0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
0,100	0,000	0,785	1,102	1,143	1,255	1,678	2,089	2,051	1,884	1,656
0,200	0,000	0,617	1,149	1,325	1,489	1,676	1,947	1,969	1,873	1,697
0,300	0,000	0,550	1,139	1,438	1,547	1,663	1,864	1,924	1,859	1,730
0,400	0,000	0,476	1,063	1,502	1,597	1,671	1,803	1,877	1,852	1,760
0,500	0,000	0,408	0,941	1,484	1,642	1,693	1,769	1,832	1,847	1,739
0,600	0,000	0,334	0,801	1,371	1,644	1,715	1,781	1,814	1,791	1,684
0,700	0,000	0,278	0,672	1,225	1,579	1,733	1,803	1,801	1,732	1,612
0,800	0,000	0,231	0,570	1,083	1,481	1,710	1,798	1,775	1,695	1,561
0,900	0,000	0,197	0,492	0,964	1,359	1,593	1,757	1,742	1,664	1,536
1,000	0,000	0,174	0,435	0,868	1,200	1,393	1,578	1,622	1,577	1,475



Critical points		
Draft	Downflooding angle	Opening
1,000	57,7°	ENGINE AIR INTAKE SB ENGINE

Trim = 0,400

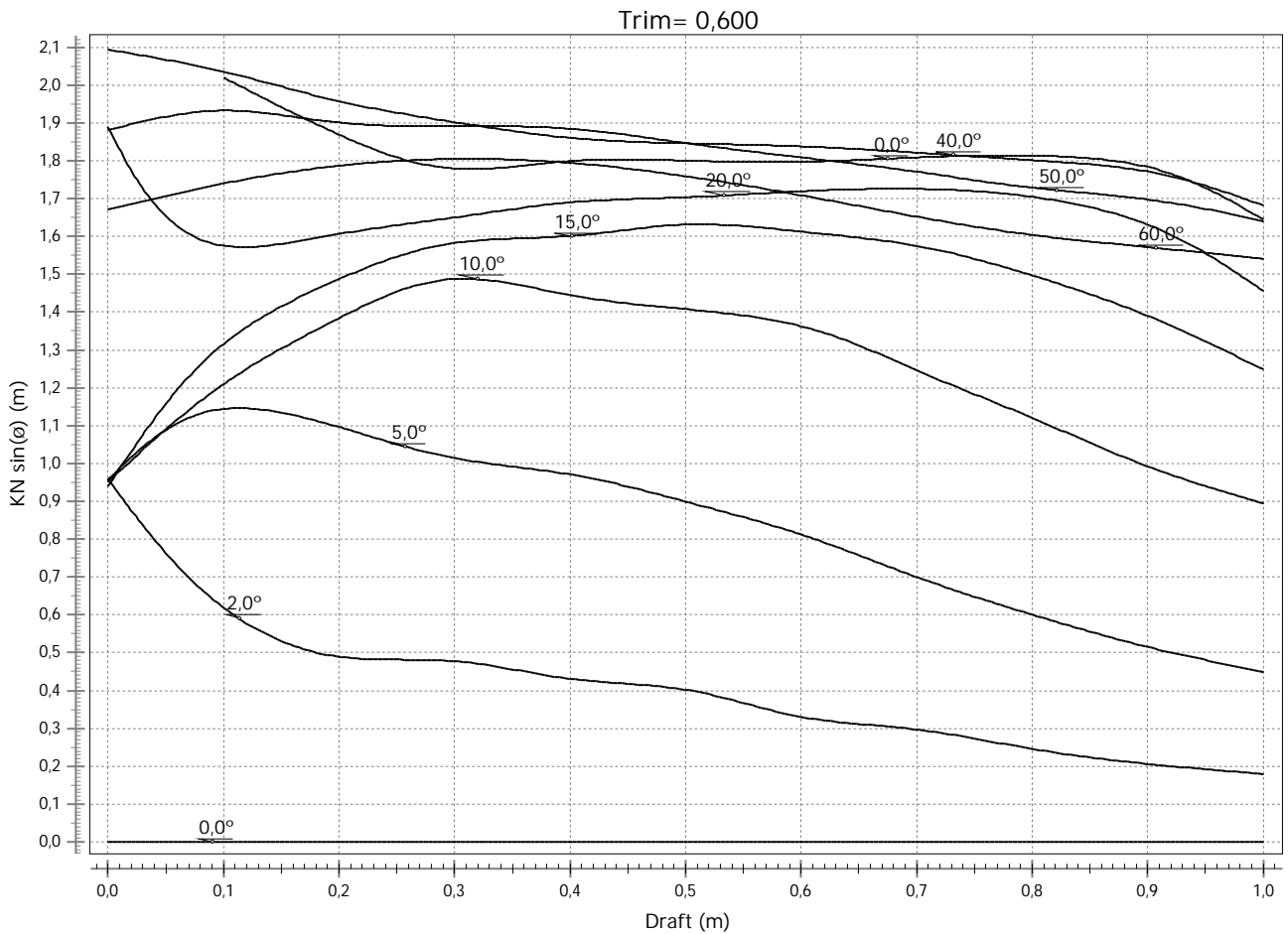
Draft	0,0°	2,0°	5,0°	10,0°	15,0°	20,0°	30,0°	40,0°	50,0°	60,0°
0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
0,100	0,000	0,701	1,126	1,170	1,278	1,610	2,061	2,049	1,910	1,696
0,200	0,000	0,513	1,128	1,353	1,467	1,610	1,927	1,968	1,897	1,759
0,300	0,000	0,527	1,062	1,450	1,554	1,666	1,829	1,932	1,883	1,771
0,400	0,000	0,469	1,039	1,467	1,593	1,677	1,814	1,877	1,871	1,779
0,500	0,000	0,410	0,941	1,461	1,636	1,694	1,781	1,842	1,853	1,755
0,600	0,000	0,343	0,822	1,386	1,634	1,716	1,783	1,824	1,808	1,706
0,700	0,000	0,290	0,694	1,249	1,590	1,728	1,807	1,812	1,752	1,635
0,800	0,000	0,239	0,588	1,106	1,497	1,719	1,809	1,792	1,713	1,580
0,900	0,000	0,202	0,504	0,982	1,387	1,632	1,784	1,760	1,682	1,553
1,000	0,000	0,177	0,443	0,883	1,237	1,443	1,634	1,690	1,647	1,537



Critical points		
Draft	Downflooding angle	Opening
1,000	56,9°	ENGINE AIR INTAKE PS ENGINE

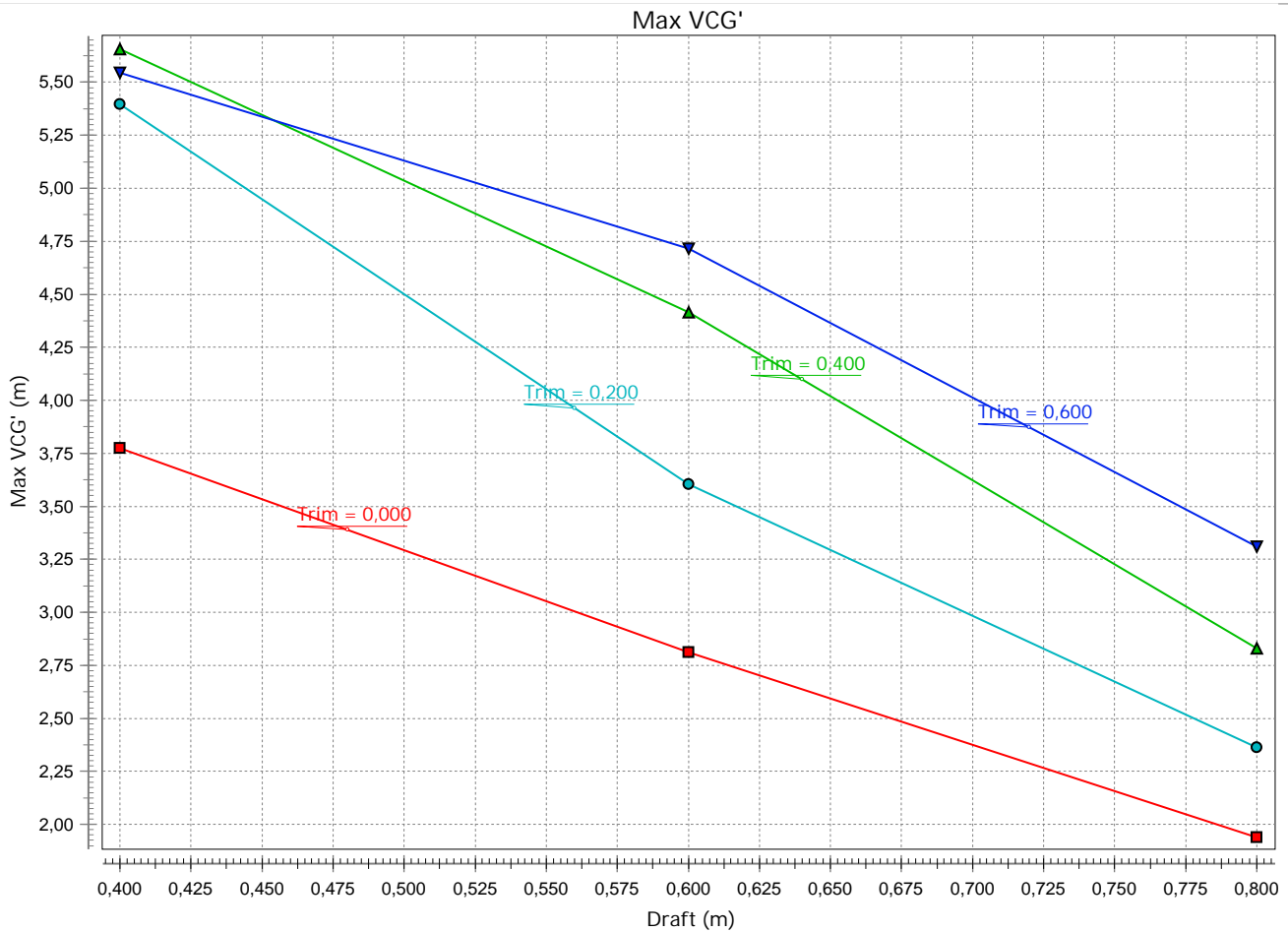
Trim = 0,600

Draft	0,0°	2,0°	5,0°	10,0°	15,0°	20,0°	30,0°	40,0°	50,0°	60,0°
0,000	0,000	0,958	0,958	0,951	0,939	1,888	<->	2,094	1,881	1,671
0,100	0,000	0,619	1,144	1,210	1,316	1,575	2,020	2,035	1,933	1,740
0,200	0,000	0,489	1,096	1,384	1,487	1,606	1,869	1,957	1,901	1,787
0,300	0,000	0,477	1,014	1,487	1,583	1,650	1,779	1,902	1,891	1,805
0,400	0,000	0,431	0,971	1,445	1,601	1,690	1,799	1,860	1,884	1,794
0,500	0,000	0,402	0,899	1,408	1,631	1,703	1,800	1,846	1,847	1,759
0,600	0,000	0,331	0,812	1,363	1,613	1,719	1,797	1,838	1,809	1,709
0,700	0,000	0,297	0,700	1,246	1,575	1,725	1,809	1,821	1,771	1,652
0,800	0,000	0,246	0,601	1,120	1,497	1,705	1,813	1,801	1,728	1,604
0,900	0,000	0,206	0,515	0,992	1,390	1,631	1,783	1,771	1,698	1,572
1,000	0,000	0,180	0,449	0,894	1,248	1,456	1,644	1,682	1,641	1,540



Critical points		
Draft	Downflooding angle	Opening
1,000	56,8°	ENGINE AIR INTAKE SB ENGINE

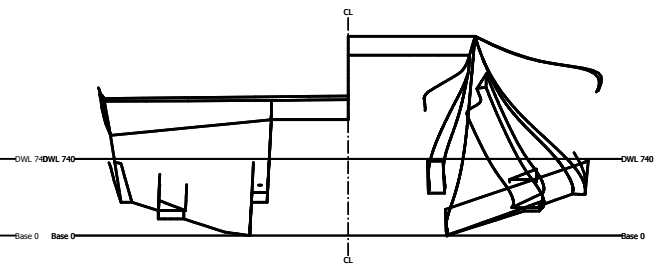
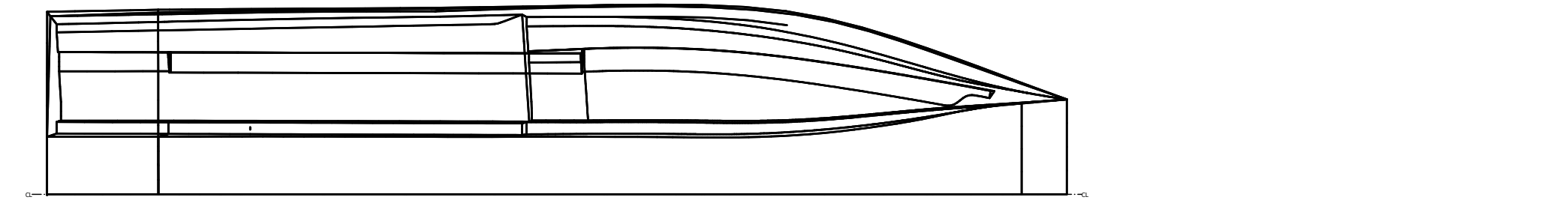
Calculation of maximum allowable VCG'



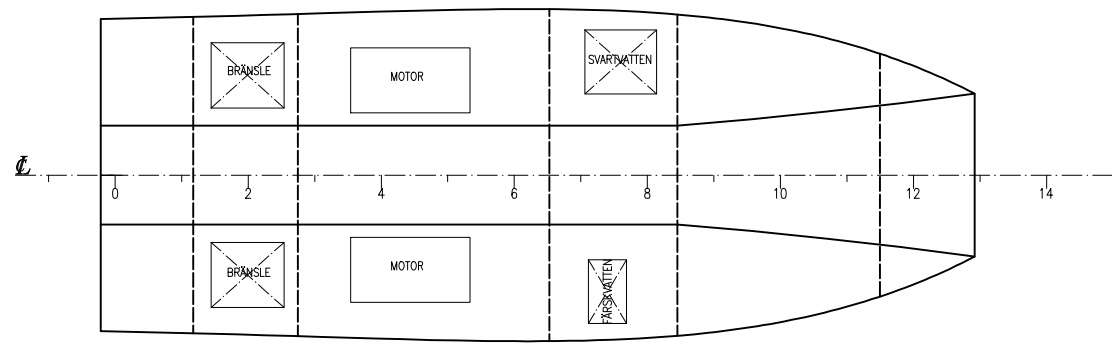
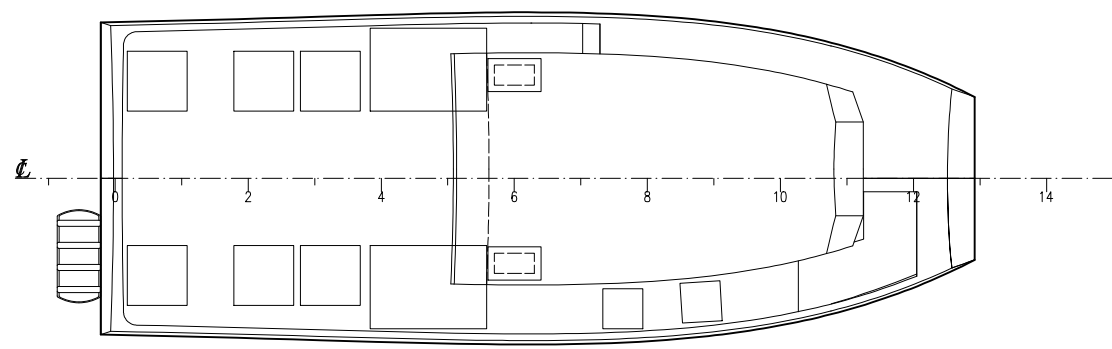
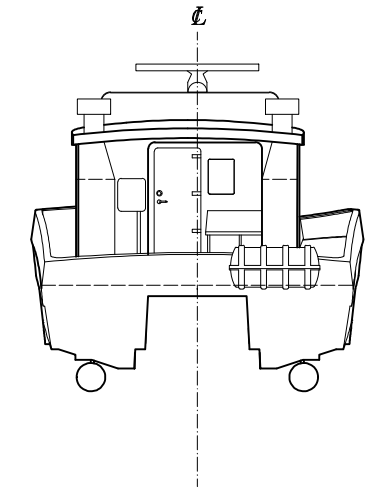
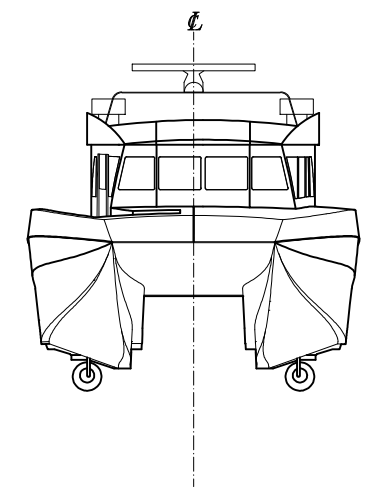
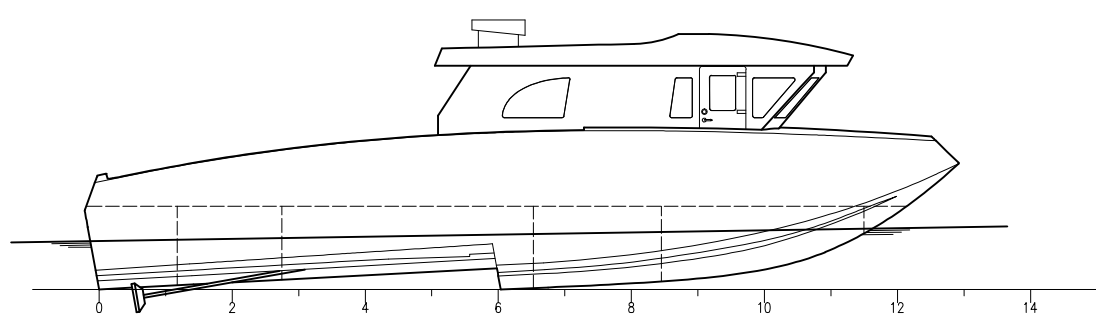
Max VCG'												
Draft	Trim 0,000				Trim 0,200				Trim 0,400			
	Max VCG'	Min GM' case	Damage	Criterion	Max VCG'	Min GM' case	Damage	Criterion	Max VCG'	Min GM' case	Damage	Criterion
0,400	3,774	9,563	PS.2	RESIDUAL RIGHTINGARM	5,397	8,342	SB.2	RANGE OF STABILITY	5,656	8,271	SB.7	RANGE OF STABILITY
0,600	2,813	6,211	SB.2	RESIDUAL RIGHTINGARM	3,603	5,976	SB.2	RESIDUAL RIGHTINGARM	4,415	5,439	SB.2	RESIDUAL RIGHTINGARM
0,800	1,939	4,429	SB.2	RESIDUAL RIGHTINGARM	2,362	4,250	SB.2	RESIDUAL RIGHTINGARM	2,830	4,014	PS.2	RESIDUAL RIGHTINGARM

Max VCG'


Trim 0,600				
Draft	Max VCG'	Min GM'	Damage case	Criterion
0,400	5,543	7,339	SB.7	RANGE OF STABILITY
0,600	4,717	4,603	SB.6	RESIDUAL RIGHTING ARM
0,800	3,310	3,750	SB.2	RESIDUAL RIGHTING ARM

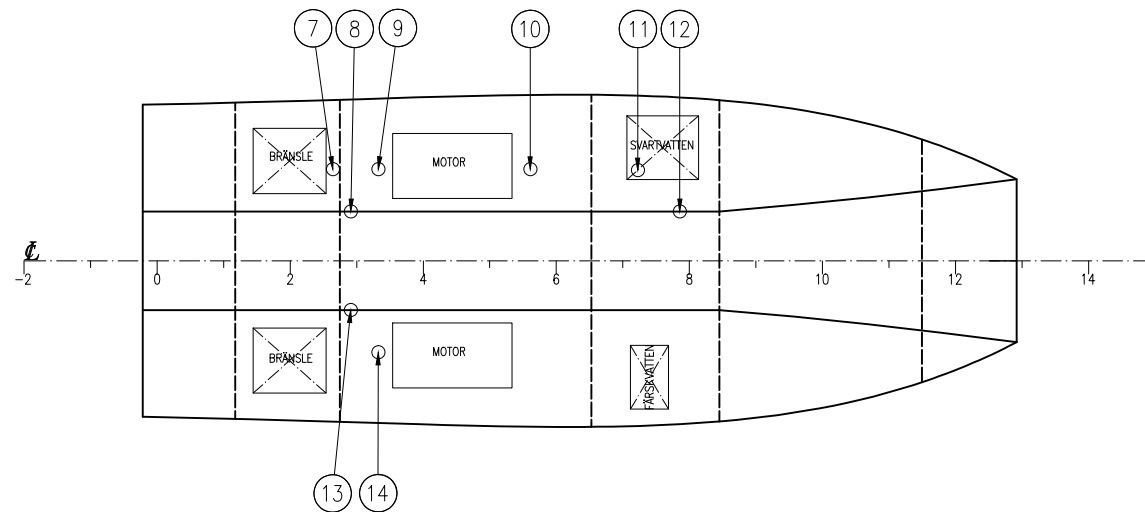
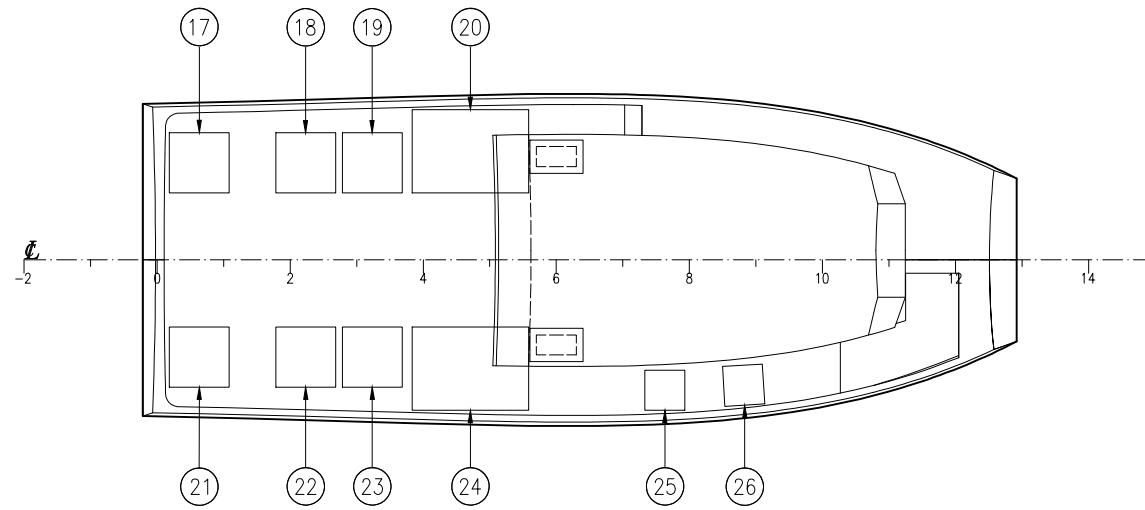
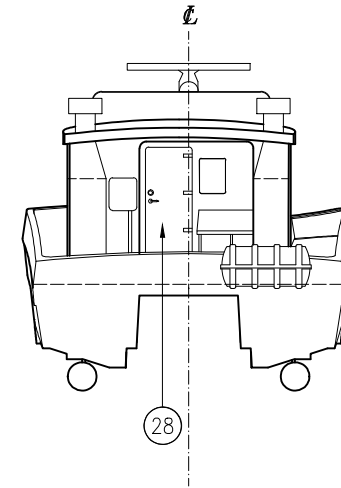
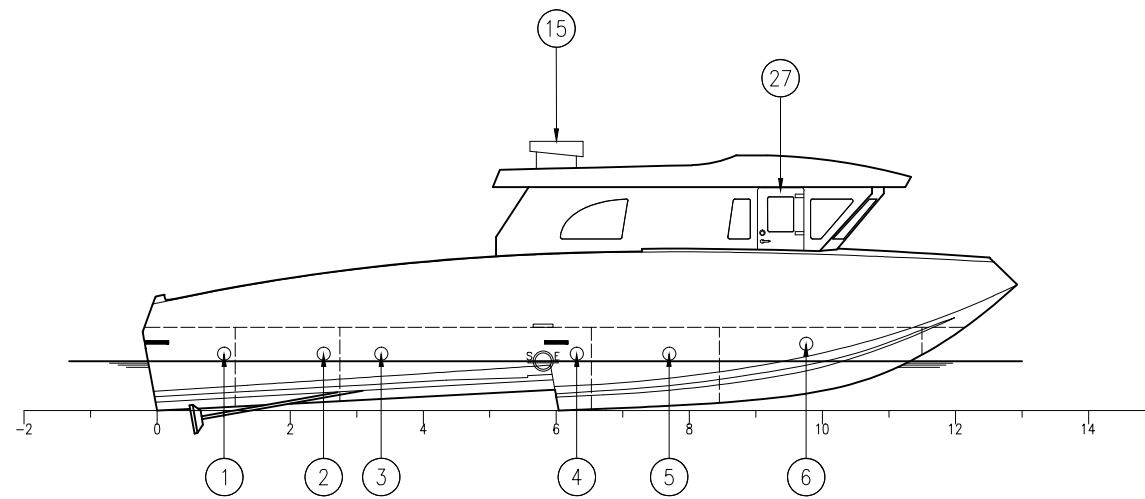


ISSUE	DESCRIPTION	DATE	DRWN	DATE	CHKD
A	IN PROGRESS	2016-04-25	RSG	2016-04-25	CIN



HUVUDDIMENSIONER:
 LÄNGD ÖVER ALLT 13.12 m
 BREDD 4.95 m
 DJUP MALLAT 1.25 m
 DJUPGÅENDE MAX 0.81 m
 FRIBORD 0.44 m

AUTR	CLASS	OWNER	TYPE	APPROVED	INFO	 GUSTAF MATTSOONS VÄG 2 SE-451 69 LUDDEVALLA SWEDEN PHONE: +46 - (0)322 - 98100 FAX: +46 - (0)322 - 16876 Email: info@fkab.se Web: www.fkab.com	YARD	DATE	DATE	SCALE
							RS Plast & Båtservice AB	2016-04-25	2014-04-25	1:50
							TITLE	SJVX HAVSCATTEN GENERALARRANGEMANG		
							DWG NO.	SHEET	NO. OF SHEETS	ISSUE
							14236-1-102-01	1	1	A



ISSUE	DESCRIPTION	DATE	DRWN	DATE	CHKD
A	FOR APPROVAL	2016-03-08	RSG	2016-03-08	CIN
B	FOR APPROVAL	2016-04-25	RSG	2016-04-25	CIN

GENOMFÖRINGAR			
POS	GENOMFÖRINGAR	ANM.	
1	DRÄNERING DÄCKSLUCKA SB, BB	KULVENTIL UTAN BACKFUNKTION	
2	DRÄNERING DÄCKSLUCKA SB, BB	KULVENTIL UTAN BACKFUNKTION	
3	DRÄNERING DÄCKSLUCKA SB, BB	KULVENTIL UTAN BACKFUNKTION	
4	LÄNSPUMP SB, BB	ÖVERBORDVENTIL	
5	DRÄNERING DÄCKSLUCKA SB	KULVENTIL UTAN BACKFUNKTION	
6	DRÄNERING DÄCKSLUCKA SB	KULVENTIL UTAN BACKFUNKTION	
7	SPÖLVATTENINLAG	KULVENTIL UTAN BACKFUNKTION	
8	AVGASGENOMFÖRING MOT "TUNNEL"	KULVENTIL UTAN BACKFUNKTION	
9	KYLVAATTENINLAG	KULVENTIL UTAN BACKFUNKTION	
10	BRÄNDVAATTENINLAG	KULVENTIL UTAN BACKFUNKTION	
11	TÖAVATTENINLAG	KULVENTIL UTAN BACKFUNKTION	
12	TÖMNING TOATANK	ÖVERBORDVENTIL	
13	AVGASGENOMFÖRING MOT "TUNNEL"	KULVENTIL UTAN BACKFUNKTION	
14	KYLVAATTENINLAG	KULVENTIL UTAN BACKFUNKTION	

VENTILATION				
POS	FRÅN	HÖJD Ö. DÄCK	FRÅN CL	ANM.
15	MASKINRUM SB, BB	2520	1420	MED BRANDSPJÄLL

DÖRRAR/LUCKOR				
POS	DÖRR/LUCKA	HÖJD Ö. DÄCK	FRÅN CL	ANM.
17	LUCKA	0	1010	TVÅ VRED OCH VÄDERTÄT
18	LUCKA	0	1010	TVÅ VRED OCH VÄDERTÄT
19	LUCKA	0	1010	TVÅ VRED OCH VÄDERTÄT
20	LUCKA	130	1010	TVÅ VRED OCH VÄDERTÄT
21	LUCKA	0	1010	TVÅ VRED OCH VÄDERTÄT
22	LUCKA	0	1010	TVÅ VRED OCH VÄDERTÄT
23	LUCKA	0	1010	TVÅ VRED OCH VÄDERTÄT
24	LUCKA	130	1010	TVÅ VRED OCH VÄDERTÄT
25	LUCKA	0	1660	TVÅ VRED OCH VÄDERTÄT
26	LUCKA	0	1660	TVÅ VRED OCH VÄDERTÄT
27	DÖRR	450	1350	VÄDERTÄT
28	DÖRR	450	0	VÄDERTÄT

HUVUDDIMENSIONER:
 LÄNGD ÖVER ALLT 13.12 m
 LÄNGD MELLAN PERPENDIKLARNA 11.65 m
 BREDD 4.95 m
 DJUP MALLAT 1.25 m
 DJUPGÄNDE MAX 0.81 m
 FRIBORD 0.44 m
 FRIBORDSLÄNGD 11.58 m

AUTR	KLASS	EJNER	TYP	APPROVED	INFO		VARO	DATE	DATE	SCALE	
							RS Plast & Båtservice AB	2016-03-08	2016-03-08	1:50	
							TITEL	SJVX HAVSCATTEN			
							TITEL	FRIBORDSPLAN			
							DRWNO.	14236-3-112-01	SHEET	NO. OF SHEETS	ISSUE
									1		B

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 FAX: +46 - (0)322 - 19876
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 Web: www.fkab.com

Krängningsrapport Havscatten, SJVX

Krängningsprov utfördes 2016-03-17 vid Björlanda Kile, Göteborg.

Fartyget är ett nybygge och ska därför genomgå krängningsprov.

Vid avläsningarna låg fartyget fritt från kaj med slacka förtöjningar.

Väder: Mulet, med svag vind på 2 - 3 m/s i riktning mot fartygets för.

Följande personer var närvarande:

Lennart Bjärkemyr
Rebecka Sandberg
Christer Ingelsten

Daisy Fishing AB
Fartygskonstruktioner AB
Fartygskonstruktioner AB

Djupgåendeavläsningar samt beräkning av hydrostatiska parametrar

Uppmätta djupgåenden (från underkant köl).

$d_{\text{steg}}(\text{SB}) = 0.760 \text{ m}$	0.04 m för om # 6
$d_{\text{steg}}(\text{BB}) = 0.730 \text{ m}$	0.04 m för om #6
$d_{\text{Ap}}(\text{SB}) = 0.655 \text{ m}$	Vid # 0 (AP)
$d_{\text{Ap}}(\text{BB}) = 0.640 \text{ m}$	Vid # 0 (AP)

Medelvärden SB & BB samt omräkning till perpendiklarna och BL

Lpp = 11,65 m. Aktra perpendikeln är belägen vid aktra steget.:

$$\begin{aligned}d_{\text{steg}} &= (0.760 + 0.730) / 2 &&= 0.745 \text{ m (vid 6,04m för om AP)} \\d_A &= (0.655 + 0.640) / 2 &&= 0.648 \text{ m}\end{aligned}$$

Medeldjupgående (d_M) och trim (t):

$$\begin{aligned}d_M &= 0.742 \text{ m över BL} \\t &= 2*(0.742 - 0.648) &&= 0.188 \text{ m (förligt)}\end{aligned}$$

Vattnets densitet var 1.002 ton / m³.

Hydrostatiska data ger displacement, långskeppstygndpunkt och tvärskepps metacentrum:

Displacement	= 11,48 ton
LCB	= 4.936 m
VCB	= 0.506 m
KM _T	= 7.363 m över BL

Krängande moment, pendelutslag och metacenterhöjd

Krängningen åstadkoms med hinkar fyllda med vatten placerade på akterdäck varvid följande krängande moment uppstod.

Vikt Namn	Massa [kg]	Hävarm [m]	Moment [kg x m]	VCG [m]	Anmärkning
A	225	4,040	909	0,15	Vattenhinkar
B	210	4,040	848	0,15	Vattenhinkar
Totalt:	435				

Vid ursprungsplaceringen stod vikt A placerad på SB sida och vikt B på BB sida.
 Vikt A innehöll 11 st. á 15 kg och 2 st. á 30 kg.
 Vikt B innehöll 10 st. á 15 kg och 2 st. á 30 kg.

En pendel med längden 1820 mm var riggad från styrhusets tak ner till däck.

Metacenterhöjden beräknas enligt följande:

$$G'M = \frac{\text{Krängande moment}}{\text{Displacement} * \tan \varphi}$$

Pendelutslag och metacenterhöjd

Vikt: Riktning	Krängn. moment [kg*m]	Pendel- utslag [m]	$\tan\phi$	ϕ [°]	G'M [m]
A: SB-BB	909	0,023	0,0126	0,72	6,272
A: BB-SB	909	0,023	0,0126	0,72	6,272
B: BB-SB	848	0,021	0,0115	0,66	6,411
B: SB-BB	848	0,021	0,0115	0,66	6,411

G'M = 6,341 m

Avgående vikter

Benämning	Vikt [kg]	LCG [m]	VCG [m]	I [ton * m]
Brännolja SB 100 %	500	1,95	0,85	0,0
Brännolja BB 100 %	500	1,95	0,85	0,0
Tre personer	240	4,00	2,00	0,0
Krängningsvikt	435	1,00	1,65	0,0
Totalt	1675	2,00	1,22	0,0

Tillkommande vikter

Benämning	Vikt [kg]	LCG [m]	VCG [m]	I [ton * m]
Inga tillkommande vikter.	0	0,00	0,00	0,0
Totalt	0	0,00	0,00	0,0

Beräkning av tyngdpunktscentrum

$$KG = KM - G'M - GG'$$

$$KG = 7,363 - 6,341 - 0 = 1,022 \text{ m}$$

$$LCG = LCB - (KG - KB) * t / L_{pp} = 4,936 + (1,022 - 0,506) * 0,188 / 11,65 = 4,944 \text{ m}$$

Notera: VCG = KG och VCB = KB samt $L_{pp} = 11,65 \text{ m}$

Beräkning av egenvikt och tyngdpunkt

Vikt	Vikt [ton]	LCG fr AP [m]	VCG [m]
Krängningskondition	11,48	4,94	1,02
Avgående vikter (se sid. 3)	-1,68	2,00	1,23
Tillkommande vikter (se ovan)	0,00	0,00	0,00
Totalt	9,81	5,45	0,99


Summering:

Egenvikt = 9,81 ton

Tyngdpunkt långskepps (LCG) = 5,45 m

Tyngdpunkt över BL (KG) = 0,99 m

Fartygskonstruktioner AB



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