

STABILITY DECLARATION

Approval of ship's stability documentation

DNV GL Id No:

27103

Date of issue:

2016-09-08

Issued under the authority of the Government of

THE REPUBLIC OF PANAMAby **DNV GL****Particulars of Ship**

Name of Ship: **"SALINA"**
Distinctive Number or Letters: **3EWD**
Port of Registry: **PANAMA**
IMO Number: **9357377**

This is to certify:

that the following stability information has been approved as required by:

- ☒ SOLAS 74 Reg. II-1/22 ☐ SOLAS 74 (2009) Reg. II-1/5-1 ☒ ICLL 10(2) ☒ MARPOL 73/78 Reg. 28.5
☐ HSC 2000 Ch.2.7 ☐ Other:

Drawing, Document or Plan Number and Description

Drawing No. 7G-7000-010/ Rev. ORG "FINAL TRIM & STABILITY BOOKLET" approved on 2009-02-13, as being in compliance with the intact stability requirements of IMO Res. A.749(18) Ch. 3.1 and MARPOL 73/78 Annex I (2006 Edition) Reg. 27, and the damage stability requirements of MARPOL 73/78 Annex I (2006 Edition) Reg. 28.

Drawing No. 8G-7000-124/ Rev. ORG "PROVISIONAL DAMAGE STABILITY CAL. (ACCORDING TO MARPOL 73/78)" approved on 2008-05-13, as being in compliance with the damage stability requirements of MARPOL 73/78 Annex I (2006 Edition) Reg. 28.

THIS DECLARATION AND THE ABOVE STABILITY INFORMATION ARE TO BE KEPT ONBOARD THE VESSEL.

THIS DECLARATION REPLACES ANY OTHER SUCH DECLARATION ISSUED PREVIOUSLY.

The Approval is valid for:**Maximum moulded summer draft: 17.000 m****Loading conditions given in the above documentation and other conditions that do not differ significantly from these.****Ballast loading conditions within the limits set forth by the approved KG limit curves.**

Conditions of Approval are set forth on page 2

A Abbas.

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7	DAMAGE STABILITY CALCULATION	
**** INTACT STABILITY CONDITION ****		
○	HOMO. LOAD COND. DEP. (T=16.0, S.G.=0.8240)	15
○	HOMO. LOAD COND. ARR. (T=16.0, S.G.=0.8240)	17
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○	NO.1 GROUP LOAD COND. DEP. (S.G.=0.8932)	23
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○	NO.1+2 GROUP LOAD COND. DEP. (S.G.=0.8932)	35
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○	NO.2+3 GROUP LOAD COND. DEP. (S.G.=0.8932)	43
○	NO.2+3 GROUP LOAD COND. ARR. (S.G.=0.8932)	45

1. PRINCIPAL PARTICULARS

Length overall	-----	abt.	274	M
Length between perpendiculars	-----		264.0	M
Freeboard length (Lf)	-----		265.1	M
Breadth, moulded	-----		50.0	M
Depth, moulded	-----		23.1	M
Design draught, moulded	-----		16.0	M
Scantling draught, moulded	-----		17.0	M
Deadweight at scantling draught	-----		163.3	MT

2. GENERAL DESCRIPTION OF CALCULATION

1) Damage stability calculation is carried out for the assumed side, bottom and raking damage at typical cargo loading conditions included in PRELIMINARY TRIM, STABILITY & LONGITUDINAL STRENGTH CALCULATION BOOKLET.

2) Damage cases and locations which result in more severe condition are considered according to regulation 25 and 13F of MARPOL 73/78 Annex I.

3) ASSUMED MAXIMUM DAMAGE EXTENT

	Side damage	Bottom damage		Raking damage DWT ≥ 75,000
		FP-0.3L=79.52	Elsewhere	
Longitudinal extent	13.75 M	13.75 M	5.00 M	159.04
Transverse extent	10.00 M	8.33 M	5.00 M	16.67
Vertical extent	From base line upward without limit	3.33 M	3.33 M	Breach of the outer hull

4) If any damage of a lesser extent than the maximum extent would result in a more severe condition, Such damage shall be considered.

3. CAPACITY TABLE OF DAMAGED COMPARTMENT

COMPARTMENT	DESCRIPTION	VOLUME m3	L.C.G. m	T.C.G. m	V.C.G. m	PERM.
CO1P	NO.1 C.O.T. (P)	11964.698	101.218	-8.735	13.680	0.950
CO1S	NO.1 C.O.T. (S)	11964.698	101.218	8.735	13.680	0.950
CO2P	NO.2 C.O.T. (P)	15600.654	69.205	-10.959	13.573	0.950
CO2S	NO.2 C.O.T. (S)	15600.654	69.205	10.959	13.573	0.950
CO3P	NO.3 C.O.T. (P)	15620.416	35.275	-10.973	13.573	0.950
CO3S	NO.3 C.O.T. (S)	15620.416	35.275	10.973	13.573	0.950
CO4P	NO.4 C.O.T. (P)	15620.420	1.325	-10.973	13.573	0.950
CO4S	NO.4 C.O.T. (S)	15620.420	1.325	10.973	13.573	0.950
CO5P	NO.5 C.O.T. (P)	15620.420	-32.625	-10.973	13.573	0.950
CO5S	NO.5 C.O.T. (S)	15620.420	-32.625	10.973	13.573	0.950
CO6P	NO.6 C.O.T. (P)	14712.388	-66.043	-10.458	13.904	0.950
CO6S	NO.6 C.O.T. (S)	14712.388	-66.043	10.458	13.904	0.950
COSLP	SLOP T. (P)	1764.750	-85.944	-9.118	14.802	0.950
COSLS	SLOP T. (S)	1764.750	-85.944	9.118	14.802	0.950
WB1P	NO.1 W.B.T. (P)	4163.075	102.962	-14.350	8.456	0.950
WB1S	NO.1 W.B.T. (S)	4163.075	102.962	14.350	8.456	0.950
WB2P	NO.2 W.B.T. (P)	4401.559	68.988	-17.019	6.134	0.950
WB2S	NO.2 W.B.T. (S)	4401.559	68.988	17.019	6.134	0.950
WB3P	NO.3 W.B.T. (P)	4505.211	35.275	-17.199	6.083	0.950
WB3S	NO.3 W.B.T. (S)	4505.211	35.275	17.199	6.083	0.950
WB4P	NO.4 W.B.T. (P)	4505.213	1.325	-17.199	6.083	0.950
WB4S	NO.4 W.B.T. (S)	4505.213	1.325	17.199	6.083	0.950
WB5P	NO.5 W.B.T. (P)	4479.377	-32.556	-17.160	6.112	0.950
WB5S	NO.5 W.B.T. (S)	4479.377	-32.556	17.160	6.112	0.950
WB6P	NO.6 W.B.T. (P)	5026.453	-70.113	-16.426	7.937	0.950
WB6S	NO.6 W.B.T. (S)	5026.453	-70.113	16.426	7.937	0.950
WBAPT	A.P.T.	1324.518	-127.164	0.088	15.773	0.950
WBFTP	F.P.T.	2574.671	125.807	0.001	6.821	0.950
F01P	L.S.H.F.O.T. (P)	817.751	-90.502	-12.147	16.737	0.950
F01S	NO.1 H.F.O.T. (S)	817.751	-90.502	12.147	16.737	0.950
F02INP	NO.2 H.F.O.T. (P)	908.578	-100.628	-16.982	18.415	0.950
F02INS	NO.2 H.F.O.T. (S)	1568.032	-101.491	15.625	18.641	0.950
FOLSETP	L.S.H.F.O.SETT.T. (P)	108.910	-101.300	-13.543	17.766	0.950
FOLSRVP	L.S.H.F.O.SERV.T. (P)	108.910	-104.740	-13.543	17.766	0.950
FOSERV	H.F.O. SERV.T. (P)	108.910	-97.860	-13.543	17.766	0.950
FOSETTP	H.F.O. SETT.T. (P)	108.910	-94.420	-13.543	17.766	0.950
DOSERV	M.D.O. SERV.TK. (P)	42.658	-109.470	-13.171	20.473	0.950
DOSTORP	M.D.O. STOR.T. (P)	29.344	-104.515	-3.791	1.747	0.950
DOSTORS	M.D.O. STOR.T. (S)	110.942	-101.855	2.603	1.600	0.950
GELOSLP	G/E L.O.SETT.T. (P)	7.368	-114.845	-12.750	18.913	0.950
GELOSUP	G/E L.O.STOR.T. (P)	6.895	-114.845	-12.746	22.165	0.950
LOCYLLP	L.S.CYL.O.STOR.T. (P)	28.430	-113.340	-13.171	20.474	0.950
LOSETTP	MAIN L.O.SETT.T. (P)	50.283	-115.821	-15.608	20.411	0.950
LOSTORP	MAIN L.O.STOR.T. (P)	39.673	-116.211	-13.354	20.635	0.950
LOSUMP	MAIN L.O.SUMP TK.	38.930	-108.493	0.000	1.487	0.950
LOTBP	TURBINE L.O.STOR.T. (P)	2.923	-117.210	-12.750	18.233	0.950
LODRAINP	L.O. DRAIN T. (P)	8.359	-109.392	-3.313	1.846	0.950
LOCYLP	CYL.O.STOR.T. (P)	95.996	-112.174	-15.163	20.422	0.950

COMPARTMENT	DESCRIPTION	VOLUME m3	L.C.G. m	T.C.G. m	V.C.G. m	PERM.
DISTP	DISTILLED.W.T. (P)	134.460	-124.440	-8.491	21.016	0.950
FWTP	F.W.T. (P)	180.063	-124.086	-12.627	20.949	0.950
FWTS	F.W.T. (S)	314.524	-124.237	10.859	20.978	0.950
ERM	ENGINE ROOM (NET)	12912.538	-106.355	-0.104	15.000	0.850
CWT	C.W.T.	46.632	-122.466	0.000	3.998	0.950
OTBHT	BILGE H. TK.	57.136	-117.596	0.632	1.518	0.950
OTOILYP	OILY BILGE T. (P)	20.250	-116.007	-1.618	1.650	0.950
OTOVFLWP	F.O.OVERF.T. (P)	36.346	-99.870	-4.273	1.661	0.950
OTSLUDGE	SLUDGE TK	15.873	-100.870	-8.500	11.687	0.950
BOSUN	BOSUN STORE	1362.780	126.602	0.000	21.150	0.950
EFPRM	EMER. FIRE P/P RM.	71.743	-122.938	-1.700	15.407	0.950
ESTRUNK	E/R ESCAPE TRUNK	7.690	-121.500	0.641	14.718	0.950
FWDVOID	VOID	1263.096	123.939	0.000	16.190	0.950
PUMPRM	PUMP ROOM	1962.068	-91.867	0.000	9.977	0.950
SGRM	S/G RM.	1861.328	-129.957	-0.000	21.123	0.950
VOID2P	VOID(P)	767.201	-100.972	-18.138	15.128	0.950
VOID2S	VOID(S)	896.315	-102.566	17.811	15.375	0.950
VOIDCYLP	VOID(P, CYL.)	71.013	-114.093	-18.205	20.499	0.950
PRVOID	PUMP RM BOTTOM VOID	432.725	-92.732	0.000	1.640	0.950
ERDBVOID	E/R D.B.VOID	177.698	-107.276	-0.084	1.490	0.950
VOIDTOP	VOIDTOP	58.611	-99.580	-13.560	23.067	0.950
ES	ECHO SOUND	8.568	123.510	-0.425	1.500	0.950
RUTRUNK	RUDDER TRUNK	27.290	-132.375	0.000	15.867	0.950

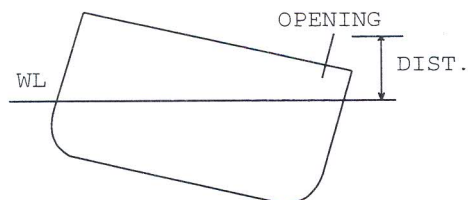
4. OPENING INFORMATION

NO.	NAME	DESCRIPTION	TYPE	FR	DX	Y	Z
1	APT1	A/P FOR A.P.T. (S)		-6	-0.210	3.120	25.046
2	APT2	A/P FOR A.P.T. (P)		12	0.390	-3.050	25.043
3	DOORBDK	DOOR ON B DECK		38	0.730	5.950	30.300
4	DOORBDKP	DOOR ON B DECK		38	0.730	-5.950	30.300
5	DOORBOSU	DOOR FOR BOSUN		99	0.540	1.470	24.976
6	DOOREC	DOOR FOR E/CASING		25	-0.000	5.330	24.121
7	FPTA	A/P FOR F.P.T.		94	0.550	-12.260	24.528
8	FPTF	A/P FOR F.P.T.		94	0.550	12.260	24.528
9	FWDVOID	A/P FOR FWD VOID		94	0.350	-11.676	24.558
10	HATCHER	HATCH FOR E/RM		26	0.105	1.950	24.595
11	HATCHPR	HATCH FOR PUMP RM		48	0.665	3.420	24.420
12	HATCHSG	HATCH FOR S/GEAR RM		11	0.480	4.800	24.805
13	HFO1P	A/P FOR L.S.H.F.O.T. (P)		46	0.630	-7.230	26.124
14	HFO1S	A/P FOR NO.1 H.F.O.T. (S)		46	0.630	7.230	26.124
15	HFO2PA	A/P FOR NO.2 H.F.O.T. (P)		29	0.470	-15.723	25.750
16	HFO2PF	A/P FOR NO.2 H.F.O.T. (P)		44	0.820	-15.723	24.560
17	HFO2SA	A/P FOR NO.2 H.F.O.T. (S)		21	0.510	12.530	25.867
18	HFO2SF	A/P FOR NO.2 H.F.O.T. (S)		44	0.820	15.723	25.700
19	MDO	A/P FOR M.D.O.STOR.T. (S)		19	0.650	12.380	24.560
20	RHATCHA	ROPE HATCH FOR S/GEAR RM		2	0.160	9.800	24.521
21	SGRMA	VENT FOR S/GEAR RM		-3	-0.420	7.990	24.922
22	SGRMD	DOOR FOR S/GEAR RM		11	0.780	6.800	24.670
23	SGRMF	VENT FOR S/GEAR RM		12	0.115	1.230	25.608
24	VOIDPA	A/P FOR VOID(P)		25	0.300	-19.904	24.185
25	VOIDPF	A/P FOR VOID(P)		44	0.270	-23.062	24.004
26	VOIDSA	A/P FOR VOID(S)		21	0.300	18.782	24.243
27	VOIDSF	A/P FOR VOID(S)		44	0.270	23.062	24.004
28	WB1PA	A/P FOR NO.1 W.B.T. (P)		87	2.000	-21.850	24.011
29	WB1PF	A/P FOR NO.1 W.B.T. (P)		92	4.450	-11.650	24.560
30	WB1SA	A/P FOR NO.1 W.B.T. (S)		87	2.000	21.850	24.011
31	WB1SF	A/P FOR NO.1 W.B.T. (S)		92	4.450	11.650	24.560
32	WB2PA	A/P FOR NO.2 W.B.T. (P)		80	2.000	-22.900	24.010
33	WB2PF	A/P FOR NO.2 W.B.T. (P)		86	2.350	-22.625	24.010
34	WB2SA	A/P FOR NO.2 W.B.T. (S)		80	2.000	22.900	24.010
35	WB2SF	A/P FOR NO.2 W.B.T. (S)		86	2.350	22.625	24.010
36	WB3PA	A/P FOR NO.3 W.B.T. (P)		73	2.000	-23.740	23.992
37	WB3PF	A/P FOR NO.3 W.B.T. (P)		79	2.850	-22.900	24.010
38	WB3SA	A/P FOR NO.3 W.B.T. (S)		73	2.000	23.740	23.992
39	WB3SF	A/P FOR NO.3 W.B.T. (S)		79	2.850	22.900	24.010
40	WB4PA	A/P FOR NO.4 W.B.T. (P)		66	3.100	-23.775	23.985

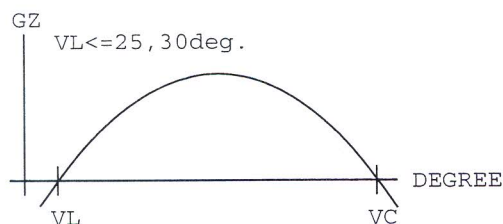
NO.	NAME	DESCRIPTION	TYPE	FR	DX	Y	Z
41	WB4PF	A/P FOR NO.4 W.B.T. (P)		71	3.000	-23.740	23.992
42	WB4SA	A/P FOR NO.4 W.B.T. (S)		66	3.100	23.775	23.985
43	WB4SF	A/P FOR NO.4 W.B.T. (S)		71	3.000	23.740	23.992
44	WB5PA	A/P FOR NO.5 W.B.T. (P)		59	2.000	-22.900	24.010
45	WB5PF	A/P FOR NO.5 W.B.T. (P)		65	4.150	-23.775	23.985
46	WB5SA	A/P FOR NO.5 W.B.T. (S)		59	2.000	22.900	24.010
47	WB5SF	A/P FOR NO.5 W.B.T. (S)		65	4.150	23.775	23.985
48	WB6PA	A/P FOR NO.6 W.B.T. (P)		50	0.360	-21.530	24.167
49	WB6PF	A/P FOR NO.6 W.B.T. (P)		58	1.350	-22.900	24.010
50	WB6SA	A/P FOR NO.6 W.B.T. (S)		50	0.360	21.530	24.167
51	WB6SF	A/P FOR NO.6 W.B.T. (S)		58	1.350	22.900	24.010

5. SURVIVAL CRITERIA DESCRIPTION

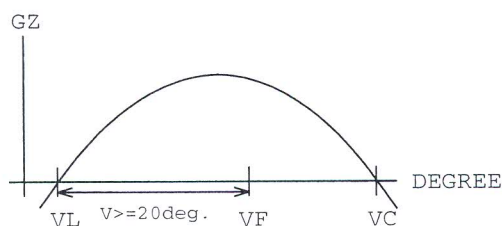
CRIT. NO.1



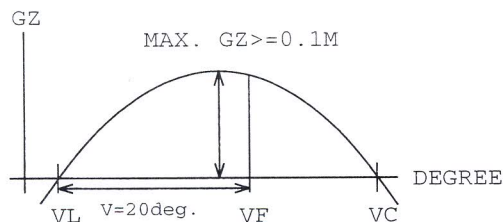
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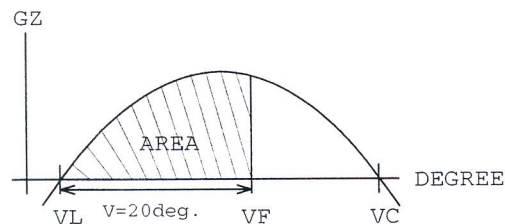
CRIT. NO.3



CRIT. NO.4



CRIT. NO.5



* Note
VL: Angle of list
VC: Capsizing angle
VF: Down flooding angle

- CRIT. NO.1 : The waterline to be below any opening through which progressive flooding may take place.
- CRIT. NO.2 : The angle of heel due to unsymmetrical flooding should not exceed 25 degrees however this angle may be increased up to 30 degrees, if no deck immersion occurs.
- CRIT. NO.3 : The positive GZ range to be greater than 20 degrees from angle of list.
- CRIT. NO.4 : Max. GZ should be at least 0.1 m in the range of 20 degrees from angle of list.
- CRIT. NO.5 : The area under GZ curve in the range of 20 degrees from angle of list not to be less than 0.0175 m-rad.

6. DAMAGE CASES DESCRIPTION

1) SIDE DAMAGE

DAMAGED COMPARTMENTS

Damage case : MP1.11

COMPARTMENT	PERM. STAGE	DESCRIPTION
WBFPT	0.95 2	F.P.T.
FWDVOID	0.95 2	VOID
WB1S	0.95 2	NO.1 W.B.T.(S)
BOSUN	0.60 2	BOSUN STORE

Damage case : MP1.12

COMPARTMENT	PERM. STAGE	DESCRIPTION
WBFPT	0.95 2	F.P.T.
FWDVOID	0.95 2	VOID
WB1S	0.95 2	NO.1 W.B.T.(S)
BOSUN	0.60 2	BOSUN STORE
C01S	0.95 2	NO.1 C.O.T.(S)

Damage case : MP2.11

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB1S	0.95 2	NO.1 W.B.T.(S)
WB2S	0.95 2	NO.2 W.B.T.(S)

Damage case : MP2.12

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB1S	0.95 2	NO.1 W.B.T.(S)
WB2S	0.95 2	NO.2 W.B.T.(S)
C01S	0.95 2	NO.1 C.O.T.(S)
C02S	0.95 2	NO.2 C.O.T.(S)

Damage case : MP3.11

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB2S	0.95 2	NO.2 W.B.T.(S)
WB3S	0.95 2	NO.3 W.B.T.(S)

Damage case : MP3.12

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB2S	0.95 2	NO.2 W.B.T. (S)
WB3S	0.95 2	NO.3 W.B.T. (S)
CO2S	0.95 2	NO.2 C.O.T. (S)
CO3S	0.95 2	NO.3 C.O.T. (S)

Damage case : MP4.11

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB3S	0.95 2	NO.3 W.B.T. (S)
WB4S	0.95 2	NO.4 W.B.T. (S)

Damage case : MP4.12

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB3S	0.95 2	NO.3 W.B.T. (S)
WB4S	0.95 2	NO.4 W.B.T. (S)
CO3S	0.95 2	NO.3 C.O.T. (S)
CO4S	0.95 2	NO.4 C.O.T. (S)

Damage case : MP5.11

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB4S	0.95 2	NO.4 W.B.T. (S)
WB5S	0.95 2	NO.5 W.B.T. (S)

Damage case : MP5.12

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB4S	0.95 2	NO.4 W.B.T. (S)
WB5S	0.95 2	NO.5 W.B.T. (S)
CO4S	0.95 2	NO.4 C.O.T. (S)
CO5S	0.95 2	NO.5 C.O.T. (S)

Damage case : MP6.11

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB5S	0.95 2	NO.5 W.B.T. (S)
WB6S	0.95 2	NO.6 W.B.T. (S)

Damage case : MP6.12

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB5S	0.95 2	NO.5 W.B.T.(S)
WB6S	0.95 2	NO.6 W.B.T.(S)
C05S	0.95 2	NO.5 C.O.T.(S)
C06S	0.95 2	NO.6 C.O.T.(S)

Damage case : MP7.11

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB6S	0.95 2	NO.6 W.B.T.(S)
C06S	0.95 2	NO.6 C.O.T.(S)
C0SLs	0.95 2	SLOP T.(S)
F01S	0.95 2	NO.1 H.F.O.T.(S)
VOID2S	0.95 2	VOID(S)
F02INS	0.95 2	NO.2 H.F.O.T.(S)
PUMPRM	0.95 2	PUMP ROOM
PRVOID	0.95 2	PUMP RM BOTTOM VOID

Damage case : MP8.11

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB6S	0.95 2	NO.6 W.B.T.(S)
C0SLs	0.95 2	SLOP T.(S)
F01S	0.95 2	NO.1 H.F.O.T.(S)
VOID2S	0.95 2	VOID(S)
F02INS	0.95 2	NO.2 H.F.O.T.(S)
PUMPRM	0.95 2	PUMP ROOM
PRVOID	0.95 2	PUMP RM BOTTOM VOID
ERM	0.85 2	ENGINE ROOM (NET)
SGRM	0.95 2	S/G RM.

Damage case : MP9.11

COMPARTMENT	PERM. STAGE	DESCRIPTION
VOID2S	0.95 2	VOID(S)
F02INS	0.95 2	NO.2 H.F.O.T.(S)
SGRM	0.95 2	S/G RM.
WBAPT	0.95 2	A.P.T.
FWTS	0.95 2	F.W.T.(S)
ERM	0.85 2	ENGINE ROOM (NET)

2) BOTTOM DAMAGE

DAMAGED COMPARTMENTS

Damage case : MP1.21

COMPARTMENT	PERM. STAGE	DESCRIPTION
WBFTP	0.95 2	F.P.T.
WB1S	0.95 2	NO.1 W.B.T. (S)
WB1P	0.95 2	NO.1 W.B.T. (P)

Damage case : MP1.22

COMPARTMENT	PERM. STAGE	DESCRIPTION
WBFTP	0.95 2	F.P.T.
WB1S	0.95 2	NO.1 W.B.T. (S)
WB1P	0.95 2	NO.1 W.B.T. (P)
CO1S	0.95 2	NO.1 C.O.T. (S)
CO1P	0.95 2	NO.1 C.O.T. (P)

Damage case : MP2.21

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB1S	0.95 2	NO.1 W.B.T. (S)
WB1P	0.95 2	NO.1 W.B.T. (P)
WB2S	0.95 2	NO.2 W.B.T. (S)
WB2P	0.95 2	NO.2 W.B.T. (P)

Damage case : MP2.22

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB1S	0.95 2	NO.1 W.B.T. (S)
WB1P	0.95 2	NO.1 W.B.T. (P)
WB2S	0.95 2	NO.2 W.B.T. (S)
WB2P	0.95 2	NO.2 W.B.T. (P)
CO1S	0.95 2	NO.1 C.O.T. (S)
CO1P	0.95 2	NO.1 C.O.T. (P)
CO2S	0.95 2	NO.2 C.O.T. (S)
CO2P	0.95 2	NO.2 C.O.T. (P)

Damage case : MP3.21

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB2S	0.95 2	NO.2 W.B.T. (S)
WB2P	0.95 2	NO.2 W.B.T. (P)
WB3S	0.95 2	NO.3 W.B.T. (S)
WB3P	0.95 2	NO.3 W.B.T. (P)

Damage case : MP3.22

COMPARTMENT	PERM.	STAGE	DESCRIPTION
WB2S	0.95	2	NO.2 W.B.T. (S)
WB2P	0.95	2	NO.2 W.B.T. (P)
WB3S	0.95	2	NO.3 W.B.T. (S)
WB3P	0.95	2	NO.3 W.B.T. (P)
C02S	0.95	2	NO.2 C.O.T. (S)
C02P	0.95	2	NO.2 C.O.T. (P)
C03S	0.95	2	NO.3 C.O.T. (S)
C03P	0.95	2	NO.3 C.O.T. (P)

Damage case : MP4.21

COMPARTMENT	PERM.	STAGE	DESCRIPTION
WB3S	0.95	2	NO.3 W.B.T. (S)
WB3P	0.95	2	NO.3 W.B.T. (P)
WB4S	0.95	2	NO.4 W.B.T. (S)
WB4P	0.95	2	NO.4 W.B.T. (P)

Damage case : MP4.22

COMPARTMENT	PERM.	STAGE	DESCRIPTION
WB3S	0.95	2	NO.3 W.B.T. (S)
WB3P	0.95	2	NO.3 W.B.T. (P)
WB4S	0.95	2	NO.4 W.B.T. (S)
WB4P	0.95	2	NO.4 W.B.T. (P)
C03S	0.95	2	NO.3 C.O.T. (S)
C03P	0.95	2	NO.3 C.O.T. (P)
C04S	0.95	2	NO.4 C.O.T. (S)
C04P	0.95	2	NO.4 C.O.T. (P)

Damage case : MP5.21

COMPARTMENT	PERM.	STAGE	DESCRIPTION
WB4S	0.95	2	NO.4 W.B.T. (S)
WB4P	0.95	2	NO.4 W.B.T. (P)
WB5S	0.95	2	NO.5 W.B.T. (S)
WB5P	0.95	2	NO.5 W.B.T. (P)

Damage case : MP5.22

COMPARTMENT	PERM.	STAGE	DESCRIPTION
WB4S	0.95	2	NO.4 W.B.T. (S)
WB4P	0.95	2	NO.4 W.B.T. (P)
WB5S	0.95	2	NO.5 W.B.T. (S)
WB5P	0.95	2	NO.5 W.B.T. (P)
C04S	0.95	2	NO.4 C.O.T. (S)
C04P	0.95	2	NO.4 C.O.T. (P)

COMPARTMENT	PERM. STAGE	DESCRIPTION
C05S	0.95 2	NO.5 C.O.T.(S)
C05P	0.95 2	NO.5 C.O.T.(P)

Damage case : MP6.21

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB5S	0.95 2	NO.5 W.B.T.(S)
WB5P	0.95 2	NO.5 W.B.T.(P)
WB6S	0.95 2	NO.6 W.B.T.(S)
WB6P	0.95 2	NO.6 W.B.T.(P)

Damage case : MP6.22

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB5S	0.95 2	NO.5 W.B.T.(S)
WB5P	0.95 2	NO.5 W.B.T.(P)
WB6S	0.95 2	NO.6 W.B.T.(S)
WB6P	0.95 2	NO.6 W.B.T.(P)
C05S	0.95 2	NO.5 C.O.T.(S)
C05P	0.95 2	NO.5 C.O.T.(P)
C06S	0.95 2	NO.6 C.O.T.(S)
C06P	0.95 2	NO.6 C.O.T.(P)

Damage case : MP7.21

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB6S	0.95 2	NO.6 W.B.T.(S)
WB6P	0.95 2	NO.6 W.B.T.(P)
C06S	0.95 2	NO.6 C.O.T.(S)
C06P	0.95 2	NO.6 C.O.T.(P)
C0SLS	0.95 2	SLOP T.(S)
C0SLP	0.95 2	SLOP T.(P)
PRVOID	0.95 2	PUMP RM BOTTOM VOID
PUMPRM	0.95 2	PUMP ROOM

Damage case : MP8.21

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB6S	0.95 2	NO.6 W.B.T.(S)
WB6P	0.95 2	NO.6 W.B.T.(P)
C0SLS	0.95 2	SLOP T.(S)
C0SLP	0.95 2	SLOP T.(P)
PRVOID	0.95 2	PUMP RM BOTTOM VOID
PUMPRM	0.95 2	PUMP ROOM
ERDBVOID	0.95 2	E/R D.B.VOID
DOSTORP	0.95 2	M.D.O. STOR.T.(P)

COMPARTMENT	PERM. STAGE	DESCRIPTION
DOSTORS	0.95 2	M.D.O. STOR.T. (S)
ERM	0.85 2	ENGINE ROOM (NET)
SGRM	0.95 2	S/G RM.

Damage case : MP8.22

COMPARTMENT	PERM. STAGE	DESCRIPTION
PUMPRM	0.95 2	PUMP ROOM
PRVOID	0.95 2	PUMP RM BOTTOM VOID
ERDBVOID	0.95 2	E/R D.B.VOID
DOSTORP	0.95 2	M.D.O. STOR.T. (P)
DOSTORS	0.95 2	M.D.O. STOR.T. (S)
ERM	0.85 2	ENGINE ROOM (NET)
SGRM	0.95 2	S/G RM.

Damage case : MP9.21

COMPARTMENT	PERM. STAGE	DESCRIPTION
ERM	0.85 2	ENGINE ROOM (NET)
ERDBVOID	0.95 2	E/R D.B.VOID
CWT	0.95 2	C.W.T.
SGRM	0.95 2	S/G RM.

3) RAKING DAMAGE

DAMAGED COMPARTMENTS

Damage case : MP1.31

COMPARTMENT	PERM. STAGE	DESCRIPTION
WBFPT	0.95 2	F.P.T.
WB1S	0.95 2	NO.1 W.B.T. (S)
WB2S	0.95 2	NO.2 W.B.T. (S)
WB3S	0.95 2	NO.3 W.B.T. (S)
WB4S	0.95 2	NO.4 W.B.T. (S)
WB5S	0.95 2	NO.5 W.B.T. (S)

Damage case : MP1.32

COMPARTMENT	PERM. STAGE	DESCRIPTION
WBFPT	0.95 2	F.P.T.
WB1S	0.95 2	NO.1 W.B.T. (S)
WB1P	0.95 2	NO.1 W.B.T. (P)
WB2S	0.95 2	NO.2 W.B.T. (S)
WB2P	0.95 2	NO.2 W.B.T. (P)

COMPARTMENT	PERM. STAGE	DESCRIPTION
WB3S	0.95 2	NO.3 W.B.T. (S)
WB3P	0.95 2	NO.3 W.B.T. (P)
WB4S	0.95 2	NO.4 W.B.T. (S)
WB4P	0.95 2	NO.4 W.B.T. (P)
WB5S	0.95 2	NO.5 W.B.T. (S)
WB5P	0.95 2	NO.5 W.B.T. (P)

HOMO.LOAD AT DESIGN DRAFT DEP. (S.G.=0.82402)

DEADWEIGHT ITEMS	WEIGHT (ton)	FILL RATIO	L.C.G. FROM L/2 (m)	MOMENT ABOUT L/2 (t-m)	V.C.G. FROM BL (m)	MOMENT ABOUT BL (t-m)	FREE SURFACE MOMENT (t-m)
Bunker	151623.7		9.41	1426797	13.60	153533	246740
NO.1 C.O.T. (P)	9613.7	98.0	101.18	972739	13.47	129482	9381
NO.1 C.O.T. (S)	9613.7	98.0	101.18	972739	13.47	129482	9381
NO.2 C.O.T. (P)	12535.2	98.0	69.20	867489	13.36	167460	16247
NO.2 C.O.T. (S)	12535.2	98.0	69.20	867489	13.36	167460	16247
NO.3 C.O.T. (P)	12551.0	98.0	35.27	442738	13.36	167664	16282
NO.3 C.O.T. (S)	12551.0	98.0	35.27	442738	13.36	167664	16282
NO.4 C.O.T. (P)	12551.0	98.0	1.32	16630	13.36	167664	16282
NO.4 C.O.T. (S)	12551.0	98.0	1.32	16630	13.36	167664	16282
NO.5 C.O.T. (P)	12551.0	98.0	-32.63	-409478	13.36	167664	16283
NO.5 C.O.T. (S)	12551.0	98.0	-32.63	-409478	13.36	167664	16283
NO.6 C.O.T. (P)	11821.4	98.0	-66.03	-780594	13.70	161895	15021
NO.6 C.O.T. (S)	11821.4	98.0	-66.03	-780594	13.70	161895	15021
SLOP T. (P)	1418.0	98.0	-85.94	-121866	14.62	20728	1561
SLOP T. (S)	1418.0	98.0	-85.94	-121866	14.62	20727	1564
NO.6 W.B.T. (P)	0.0	0.0	-70.11	0	7.94	0	30366
NO.6 W.B.T. (S)	0.0	0.0	-70.11	0	7.94	0	30366
CARGO	146082.7		13.52	1975316	13.45	158817	182119
WATER BALLAST	0.0		0.00	0	0.00	0	60733
DEADWEIGHT	0.0		0.00	0	0.00	0	60733
LIGHTWEIGHT	25300.0		-11.84	-299562	12.50	316250	
DISPLACEMENT	176923.7		6.37	1127235	13.44	2377998	246740
DRAFT EQUIV.	16.00 m			TRANSV. METACENTRE	KMT		21.26 m
TRIM BY STERN	-1.34 m			VERT. CENTRE OF GRAV	KG		13.44 m
DRAFT FORWARD	15.34 m			METAC. HEIGHT	GM		7.82 m
DRAFT AFTER	16.68 m			FREE SURFACE CORR.	GGo		1.39 m
DRAFT MEAN	16.01 m			CORR. METAC. HEIGHT	GoM		6.42 m
HEELING ANGLE	0.00 DEG.			T.C.G. FROM C.L.			-0.00 m
L.C.B.	6.35 m			PROPELLER IMMERSION			199.1 %
L.C.F.	-2.50 m						
M.T.C.	2307.10 t-m						
T.P.C.	122.70 t/cm						