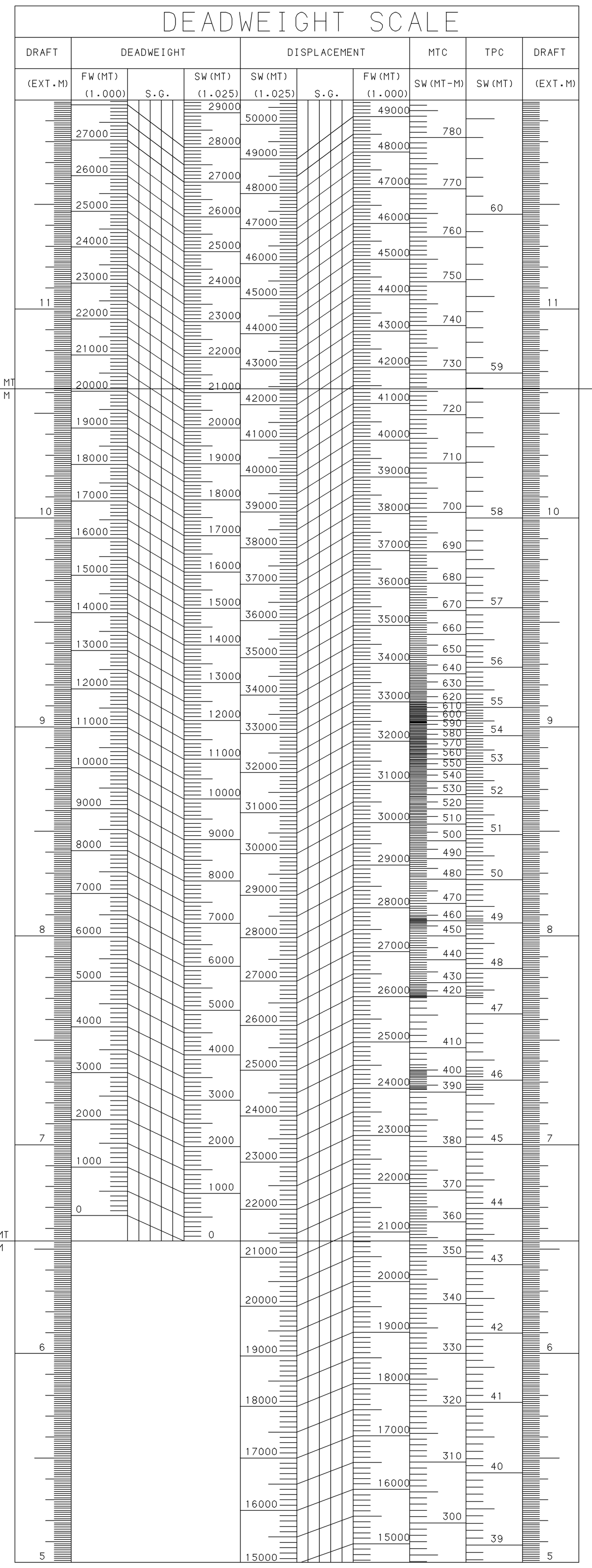
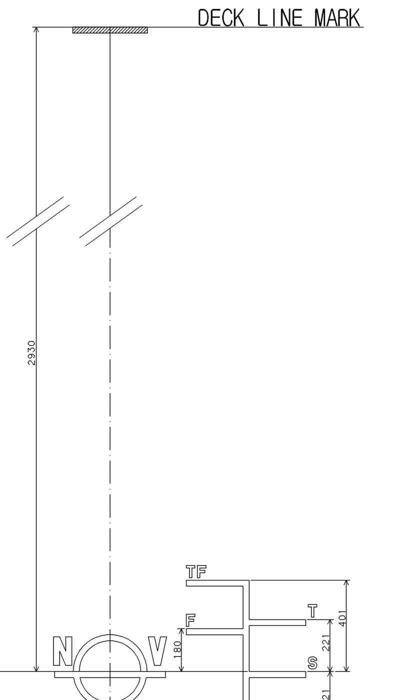
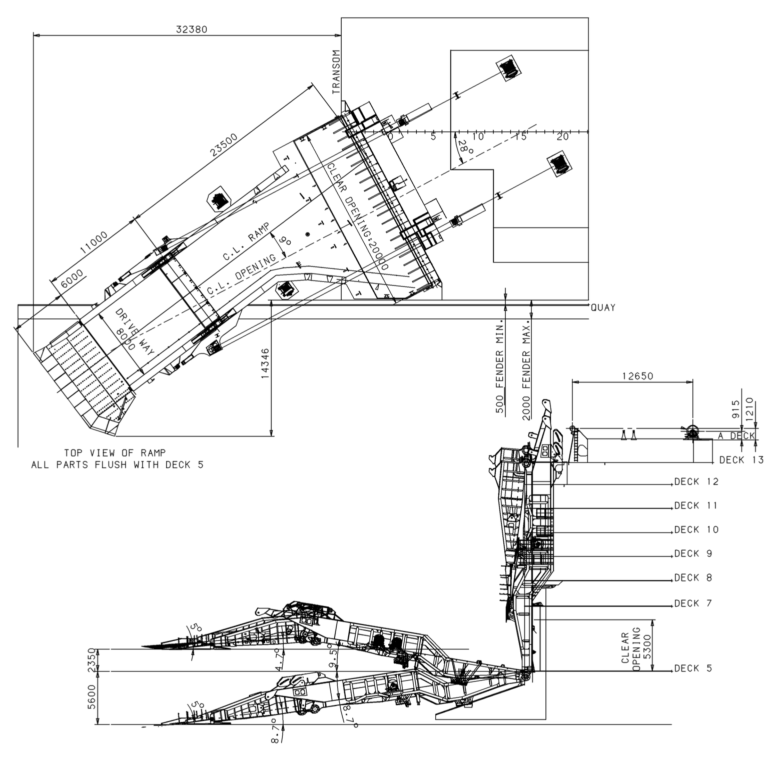
CAPACITY PLAN WITH DEADWEIGHT SCALE





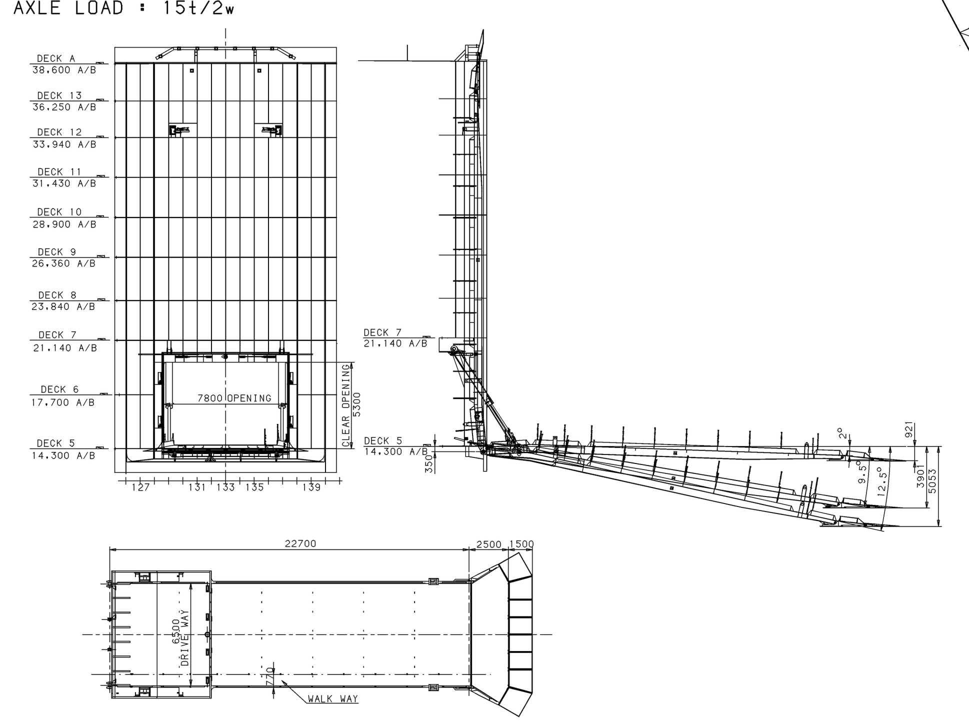
PARTICULARS OF STERN RAMP

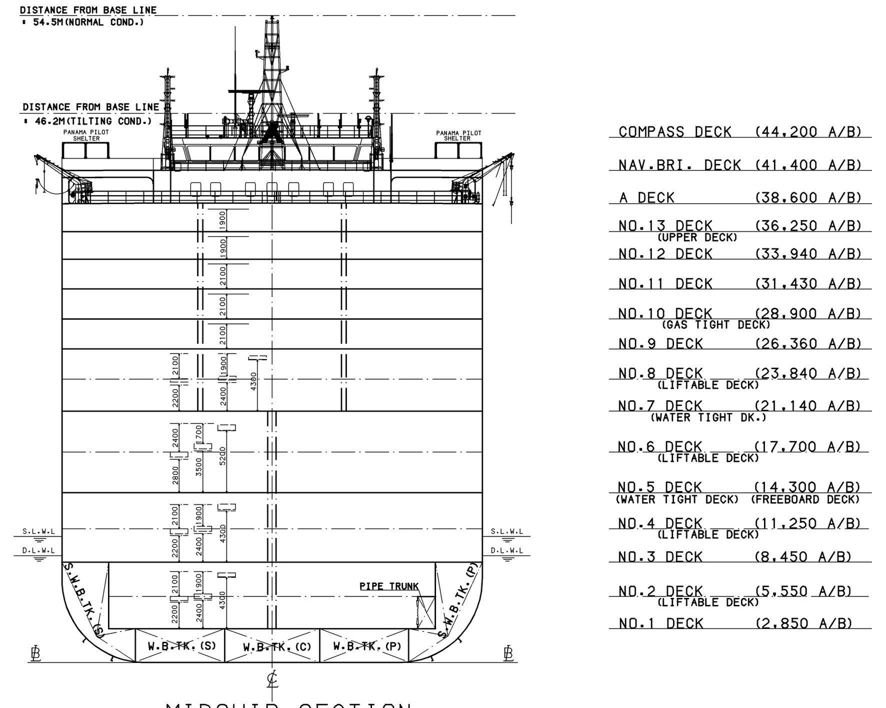
UNIFORM LOAD : External sea load according to class rules
AXLE LOAD : 55t/4w, 36t/2w



PARTICULARS OF SIDE RAMP

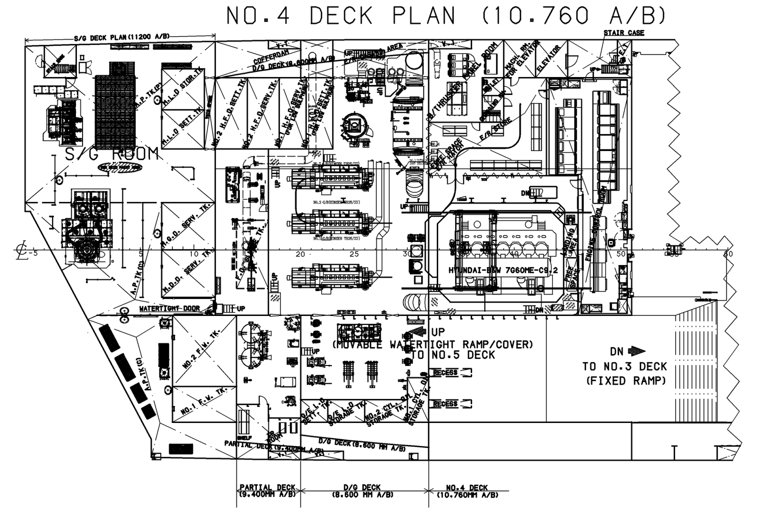
UNIFORM LOAD : External sea load according to class rules
AXLE LOAD : 15t/2w

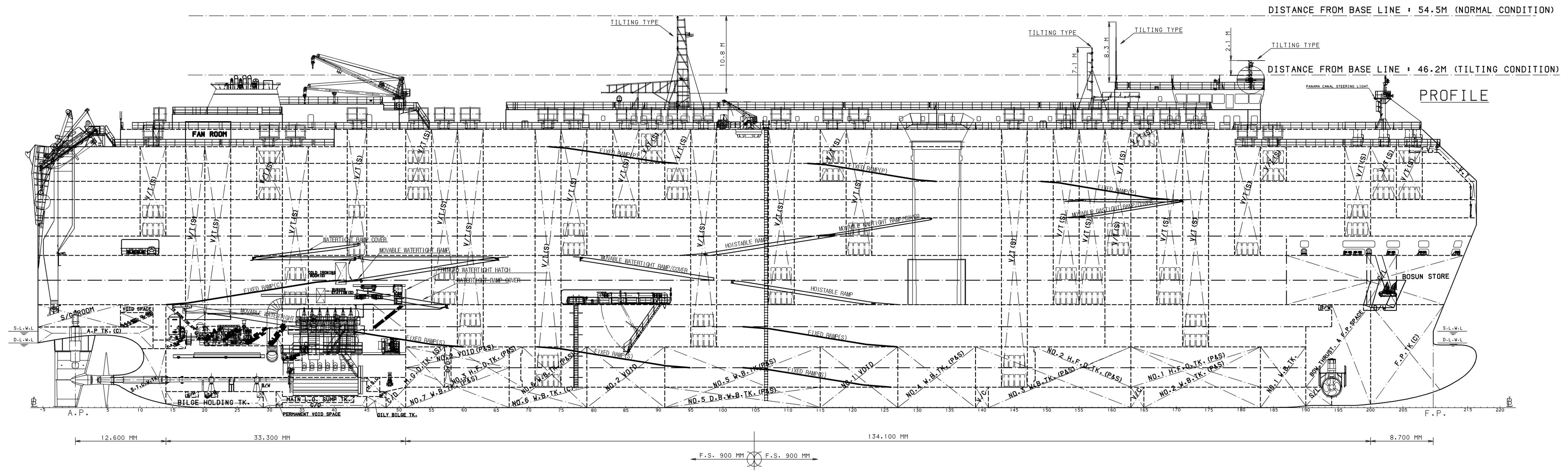




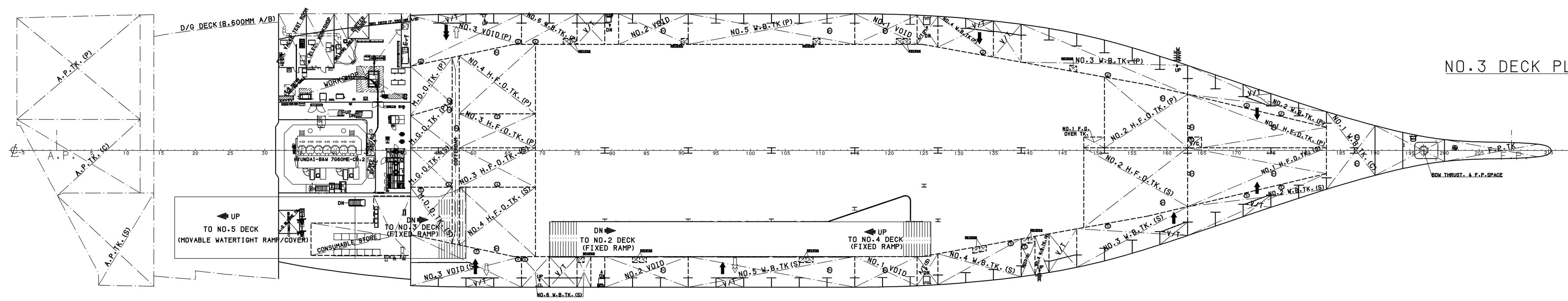
MIDSHIP SECTION

NO.4 DECK PLAN (10.760 A/B)

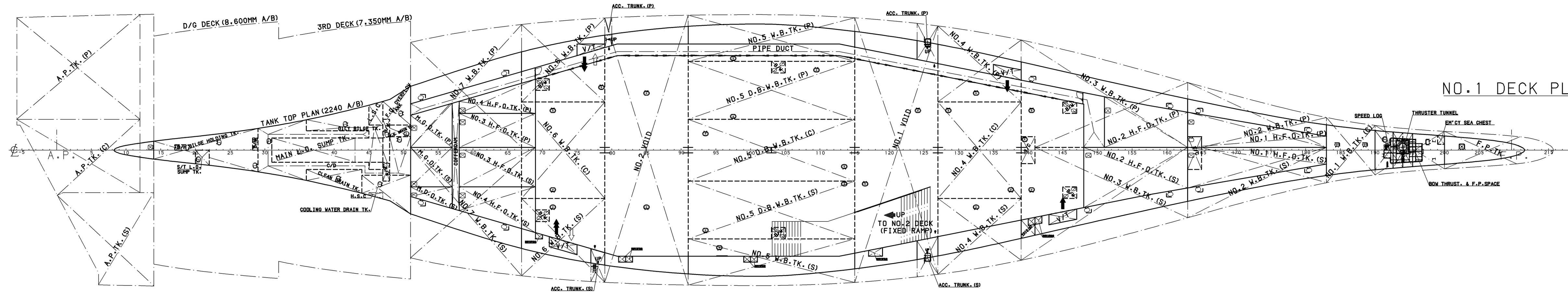




NO.3 DECK PLAN (8450 A/B)



NO.1 DECK PLAN (2850 A/B)



CAR LOADING TABLE

DECK NO.	CAR Q'TY IN CARGO HOLD HD4	HD3	HD2	HD1	CAR Q'TY	DECK AREA (M^2)	UNI. LOAD (TON/M^2)	AXLE LOAD(TON) /NO. OF WHEEL
13	103	162	174	235	674	5284	0.22	1.2/2
12	160	168	163	287	778	6198	0.22	1.2/2
11	167	171	175	284	797	6320	0.3	1.5/2
10	169	171	176	282	798	6367	0.3	1.5/2
9	170	172	173	289	804	6373	0.3	1.5/2
8 1)	175	155	170	275	775	6257	0.3	1.5/2
7	123	144	180	202	649	5326	1.0	8.0/2, 10.0/4
6 1)	133	142	175	199	649	5299	0.3	1.5/2
5	158	128	174	169	629	5080	3.0	22.2/2, 36.0/4 2)
4 1)	-	117	154	134	405	3336	0.3	1.5/2
3	-	144	159	97	400	3327	2.0	15.0/2, 20.0/4
2 1)	-	55	125	28	208	1836	0.3	1.5/2
1	-	45	116	15	176	1554	6.0	15.0/2, 20.0/4
TOTAL	7742				7742	62556		

NOTE: 1) LIFTABLE DECK
2) STOWED IN LONG'L DIRECTION ONLY
3) NOTED THAT THESE ARE THE MAXIMUM CAR LOADING LIMITS IN DECKS PASSING THROUGH THE RAMPS AND NOT THE MAXIMUM LOAD LIMITS OF DECKS FROM STRENGTH/DESIGN POINT OF VIEW.
4) CAR Q'TY AND DECK AREA AT FIXED RAMP BELONG TO ADJACENT DECK BASED ON CAR LOADING PLAN.

SEASONAL FREEBOARD	FREEBOARD (M)	DRAFT(EXT) (M)	DISPLACEMENT (MT)	DEADWEIGHT (MT)
TF	2.529	11.019	43,711	22,278
F	2.750	10.798	42,432	20,999
T	2.709	10.839	43,736	20,303
S	2.930	10.618	42,428	20,995
W	3.151	10.397	41,132	19,699

INTERNATIONAL TONNAGE	
GROSS TONNAGE	71178
NET TONNAGE	25380

SUEZ CANAL TONNAGE	
GROSS TONNAGE	TO BE INFORMED LATER
NET TONNAGE	TO BE INFORMED LATER

* NOTE
1.SUEZ CANAL TONNAGE TO BE FILLED AFTER CLASS'S ASSIGNMENT AND MEASUREMENT.

WATER BALLAST

(S.G. * FILL RATIO = 1.025 * 100 %)

COMPARTMENTS	LOCATION (FRAME)	VOLUME 100% (M3)	WEIGHT (MT)	V.C.G. FROM B.L.(M)	L.C.G. FROM MIDSHIP(M)	T.C.G. FROM C.L.(M)	I MAX. (M4)
F.P.TK	200.0 - 216.3	431.0	441.8	7.911	90.645	-0.000	594
NO.1 W.B.TK	183.0 - 190.0	318.2	326.2	4.951	73.336	0.000	304
NO.2 W.B.TK(P)	163.0 - 183.0	358.2	367.1	4.096	60.557	-4.152	168
NO.2 W.B.TK(S)	163.0 - 183.0	386.6	396.2	3.899	60.765	3.827	243
NO.3 W.B.TK(P)	139.0 - 163.0	787.5	807.2	3.784	40.726	-7.144	1305
NO.3 W.B.TK(S)	139.0 - 163.0	738.4	756.8	3.395	41.614	6.243	1605
NO.4 W.B.TK(C)	127.0 - 139.0	379.2	388.6	1.431	25.337	0.000	1758
NO.4 W.B.TK(P)	127.0 - 139.0	297.8	305.3	4.123	24.616	-11.580	244
NO.4 W.B.TK(S)	127.0 - 139.0	346.1	354.7	4.421	25.221	11.694	244
NO.5 D.B.W.B.TK(C)	91.0 - 115.0	487.6	499.7	1.425	-1.650	0.000	922
NO.5 D.B.W.B.TK(P)	91.0 - 115.0	452.7	464.1	1.426	-1.677	-7.720	759
NO.5 D.B.W.B.TK(S)	91.0 - 115.0	452.7	464.1	1.426	-1.677	7.720	759
NO.5 W.B.TK(P)	91.0 - 115.0	569.0	583.2	4.768	-1.908	-14.864	151
NO.5 W.B.TK(S)	91.0 - 115.0	563.4	577.5	4.764	-1.904	14.872	151
NO.6 W.B.TK(C)	67.0 - 79.0	380.9	390.4	1.425	-28.650	0.000	1758
NO.6 W.B.TK(P)	67.0 - 79.0	335.1	343.4	3.816	-28.916	-12.144	411
NO.6 W.B.TK(S)	67.0 - 79.0	292.9	300.2	3.538	-29.018	11.770	411
NO.7 W.B.TK(P)	51.0 - 67.0	500.2	512.7	2.655	-40.908	-6.789	1408
NO.7 W.B.TK(S)	51.0 - 67.0	528.7	541.9	2.590	-40.927	6.426	1699
A.P.TK.(C)	-5.8 - 12.0	347.4	356.1	10.443	-92.586	1.461	1443
A.P.TK.(P)	-5.8 - 12.0	469.3	481.0	10.024	-91.115	-10.175	3175
A.P.TK.(S)	-5.8 - 14.0	418.8	429.3	10.206	-91.022	11.347	1546
TOTAL		9841.7	10087.5				

FO OVERFLOW

(S.G. * FILL RATIO = 0.990 * 98.0 %)

COMPARTMENTS	LOCATION (FRAME)	VOLUME 100% (M3)	WEIGHT (MT)	V.C.G. FROM B.L.(M)	L.C.G. FROM MIDSHIP(M)	T.C.G. FROM C.L.(M)	I MAX. (M4)
NO.1 F.O.OVER.TK.	148.0 - 151.0	10.2	9.9	7.020	40.275	-1.050	1
NO.2 F.O.OVER.TK.	47.0 - 51.0	18.6	18.0	1.608	-49.940	-4.675	13
TOTAL		28.8	27.9				

HEAVY FUEL OIL

(S.G. * FILL RATIO = 0.990 * 98.0 %)

COMPARTMENTS	LOCATION (FRAME)	VOLUME 100% (M3)	WEIGHT (MT)	V.C.G. FROM B.L.(M)	L.C.G. FROM MIDSHIP(M)	T.C.G. FROM C.L.(M)	I MAX. (M4)
NO.1 H.F.O.TK(P)	163.0 - 183.0	375.8	364.6	5.979	60.181	-2.619	218
NO.1 H.F.O.TK(S)	163.0 - 183.0	459.2	445.5	5.919	60.148	2.175	320
NO.2 H.F.O.TK(P)	151.0 - 163.0	408.9	396.8	5.914	46.671	-3.932	499
NO.2 H.F.O.TK(S)	148.0 - 163.0	582.6	565.2	5.881	45.222	3.705	875
NO.3 H.F.O.TK(P)	58.0 - 69.0	240.3	233.1	5.650	-37.200	-2.550	70
NO.3 H.F.O.TK(S)	58.0 - 69.0	278.5	270.2	5.650	-37.201	2.200	109
NO.4 H.F.O.TK(P)-LS	58.0 - 69.0	319.1	309.6	6.310	-36.892	-8.342	510
NO.4 H.F.O.TK(S)	58.0 - 69.0	358.6	347.9	6.078	-36.926	8.359	510
NO.1 H.F.O.SERV.(P)-LS	18.0 - 20.5	39.6	38.4	11.012	-77.025	-11.458	41
NO.2 H.F.O.SERV.(P)	15.0 - 18.0	47.5	46.1	11.012	-79.500	-11.458	49
NO.1 H.F.O.SETT.(P)-LS	20.5 - 23.0	39.6	38.4	11.012	-74.775	-11.458	40
NO.2 H.F.O.SETT.(P)	12.0 - 15.0	47.5	46.1	11.012	-82.200	-11.458	49
TOTAL		3197.2	3101.9				

DIESEL OIL

(S.G. * FILL RATIO = 0.900 * 98.0 %)

COMPARTMENTS	LOCATION (FRAME)	VOLUME 100% (M3)	WEIGHT (MT)	V.C.G. FROM B.L.(M)	L.C.G. FROM MIDSHIP(M)	T.C.G. FROM C.L.(M)	I MAX. (M4)
M.D.O.STOR.TK.(P)	51.0 - 57.0	95.5	84.3	7.000	-45.780	-8.370	112
M.D.O.STOR.TK.(S)	51.0 - 57.0	149.2	131.6	6.644	-45.691	7.700	139
M.D.O.SERV.TK.(S)	7.0 - 12.0	35.5	31.3	12.200	-85.800	2.000	24
TOTAL		280.2	247.2				

FRESH WATER

(S.G. * FILL RATIO = 1.000 * 100 %)

COMPARTMENTS	LOCATION (FRAME)	VOLUME 100% (M3)	WEIGHT (MT)	V.C.G. FROM B.L.(M)	L.C.G. FROM MIDSHIP(M)	T.C.G. FROM C.L.(M)	I MAX. (M4)
NO.1 F.W.TK.	8.0 - 14.0	78.2	78.2	11.850	-84.450	13.000	12
NO.2 F.W.TK.	8.0 - 14.0	156.4	156.4	11.850	-84.450	8.500	97
TOTAL		234.6	234.6				

GAS OIL

(S.G. * FILL RATIO = 0.900 * 98.0 %)

COMPARTMENTS	LOCATION (FRAME)	VOLUME 100% (M3)	WEIGHT (MT)	V.C.G. FROM B.L.(M)	L.C.G. FROM MIDSHIP(M)	T.C.G. FROM C.L.(M)	I MAX. (M4)
M.G.O.TK(P)	51.0 - 57.0	146.9	129.5	5.650	-45.609	-2.836	57
M.G.O.TK(S)	51.0 - 57.0	151.9	134.0	5.650	-45.750	2.200	60
M.G.O.SERV.TK(P)	7.0 - 12.0	35.5	31.3	12.200	-85.800	-2.000	24
TOTAL		334.3	294.8				

COOLING WATER

(S.G. * FILL RATIO = 1.000 * 100 %)

COMPARTMENTS	LOCATION (FRAME)	VOLUME 100% (M3)	WEIGHT (MT)	V.C.G. FROM B.L.(M)	L.C.G. FROM MIDSHIP(M)	T.C.G. FROM C.L.(M)	I MAX. (M4)
S/T C.W.TK.	5.9 - 14.0	30.2	30.2	3.512	-84.001	-0.000	4
TOTAL		30.2	30.2				

LUBRICATING OIL

(S.G. * FILL RATIO = 0.900 * 98.0 %)

COMPARTMENTS	LOCATION (FRAME)	VOLUME 100% (M3)	WEIGHT (MT)	V.C.G. FROM B.L.(M)	L.C.G. FROM MIDSHIP(M)	T.C.G. FROM C.L.(M)	I MAX. (M4)
M/E L.O.STOR.TK.	7.0 - 11.0	24.5	21.6	12.200	-86.250	-13.525	12
M/E L.O.SETT.TK.	7.0 - 11.0	23.4	20.6	12.200	-86.250	-10.150	11
G/E L.O.STOR.TK.	22.6 - 26.0	11.0	9.7	10.350	-72.500	13.550	1
G/E L.O.SETT.TK.	20.0 - 22.6	8.2	7.2	10.350	-75.200	13.550	1
NO.1 CYL.O.TK	30.0 - 32.0	16.6	14.7	9.850	-68.450	12.625	8
NO.2 CYL.O.TK	20.0 - 30.0	24.9	22.0	9.574	-70.609	13.550	5
M/E L.O.SUMP.TK.	31.0 - 43.0	30.4	26.8	1.161	-61.428	0.003	27
TOTAL		139.0	122.6				

MISCELLANEOUS

(S.G. * FILL RATIO = 0.900 * 98.0 %)

COMPARTMENTS	LOCATION (FRAME)	VOLUME 100% (M3)	WEIGHT (MT)	V.C.G. FROM B.L.(M)	L.C.G. FROM MIDSHIP(M)	T.C.G. FROM C.L.(M)	I MAX. (M4)
L.O.SLU.TK.	32.0 - 35.0	9.6	8.5	6.731	-64.126	9.155	6
S/T L.O.SUMP.TK.	20.0 - 32.0	2.5	2.2	1.851	-75.432	0.871	1
BILGE HOLD.TK.	14.0 - 29.0	74.6	65.8	1.312	-73.647	-0.012	72
OILY BILGE TK.	36.0 - 48.0	49.7	43.0	1.217	-54.629	-1.659	110
F.O.SLU.TK.	14.0 - 17.0	16.8	14.8	8.840	-80.367	-9.194	43
SEWAGE HOLD.TK.	39.0 - 47.0	20.5	18.7	5.090	-54.546	-9.064	25
CLEAN DRAIN TK.	36.0 - 44.0	18.1	16.3	1.505	-57.729	3.341	8
C.W.DRAIN.TK.	44.0 - 51.0	26.5	23.4	1.582	-50.955	4.529	18
F.O.DRAIN.TK.	47.0 - 51.0	12.1	10.7	1.195	-50.054	-2.493	11
TOTAL		229.5	202.4				

PLAN HISTORY

DATE	REV.	MARK	DESCRIPTION	DRAWN	CHECKED	APPROVED
2015.11.17	ORI		ORIGINALLY PREPARED FOR APPROVAL.	S.H.LEE	J.B.LEE	S.H.PARK
			1)CHANGED THE VOLUME OF BILGE HOLDING TANK. 2)CHANGED THE DEADWEIGHT SCALE.			
2015.12.22	1		1.ADDED HULL NO.8153~8156. 2.FOLLOWING TWO(2) ITEMS ARE DIFFERENT FROM EACH OTHER. 1)RUDDER TYPE -H8151/52 : PROMAS SYSTEM TO BE FITTED. -H8153/54/55/56 : BECKER MARINE SYSTEM TO BE FITTED. 2)COLD IRONING(AMP) SYSTEM & ROOM -H8151/52 : TO BE PROVIDED. -H8153/54/55/56 : NOT TO BE PROVIDED. 3.CORRECTED NO.7 DECK UNIFORM LOAD FROM $2.0T/M^2$ TO $1.0T/M^2$. 4.ADDED DECK AREA IN CAR LOADING TABLE FOR H8151/52 AND FOR H8153~8156 SEPARATELY. 5.CORRECTED D/G ARRANGEMENT AS AGREED MACHINERY ARRANGEMENT. 6.DELETED STERN THRUSTER TUNNEL. 7.REFLECTED SHELVES IN TR ROOM AS AGREED MACHINERY ARRANGEMENT.	S.H.LEE	J.B.LEE	S.H.PARK
2017.11.16	FIN		FINALLY PREPARED FOR FINISHED PLAN	Y.H.CHOI	J.B.LEE	S.H.OH

PRINCIPAL PARTICULARS

LENGTH	OVER	ALL	199.95 M
LENGTH	BETW.	PERP.	188.70 M
BREADTH	MLD.		35.40 M
DEPTH	MLD.		36.25 M
DRAFT	DESIGN	MLD.	9.00 M
	SCANT.	MLD.	10.60 M

MAIN ENGINE HYUNDAI-B&W 7G60ME-C9.2
Norminal Rating 18,760 kW x 97.0 RPM
MCR 12,927 kW x 80.0 RPM
NCR 11,634 kW x 77.2 RPM

SERVICE SPEED AT DESIGN DRAFT Abt. 19.5 KNOTS
(NCR WITH 15% SEA MARGIN)

CLASSIFICATION
DNV, +1A1, Car Carrier RO/RO, MCDK, EO, NAUT-OC, CLEAN, TMON, BMON

FLAG MARSHALL ISLANDS
FREEBOARD TYPE B
COMPLEMENT 32P + 6SUEZ
IMO NUMBER 9775816

DEP'T NO. 5610 | DEP'T NAME NAVAL ARCHITECTURE & DESIGN ADMINISTRATION DEP'T | SHIP TYPE 7,700 UNIT CLASS PURE CAR AND TRUCK CARRIER
TEL.NO. 3827 | SHIP NO. 8151 | SHIP NAME GOLDEN RAY SILVER RAY
APPROVED S. H. OH [redacted]
CHECKED J. B. LEE [redacted]
DRAWN Y. H. CHOI
NAME OF DRAWING CAPACITY PLAN WITH DEADWEIGHT SCALE
SCALE 1/300
HYUNDAI MIPO DOCKYARD CO., LTD. ULSAN KOREA