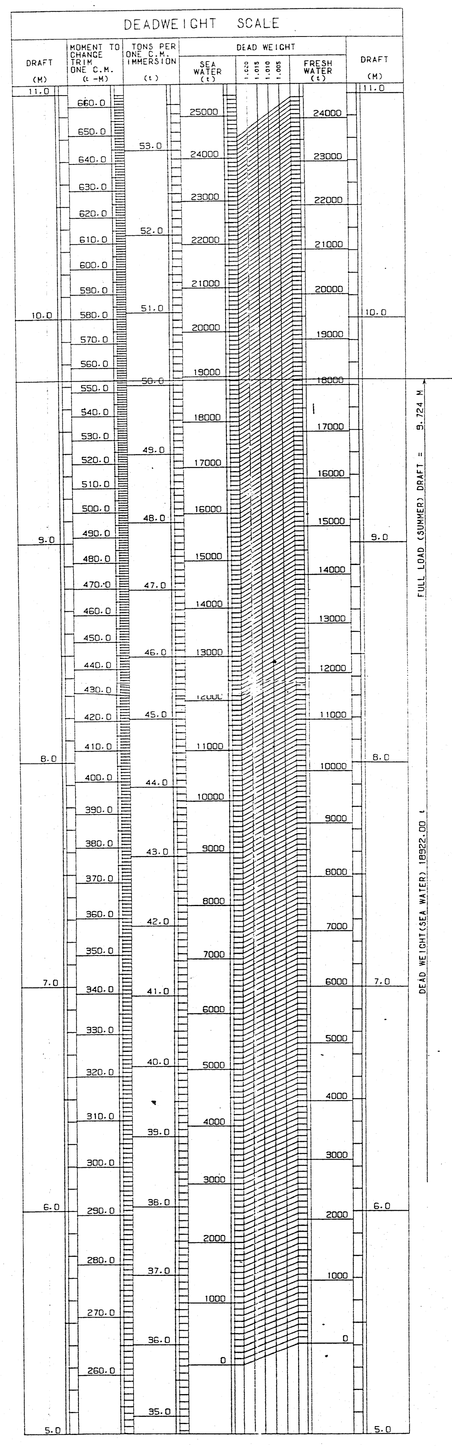
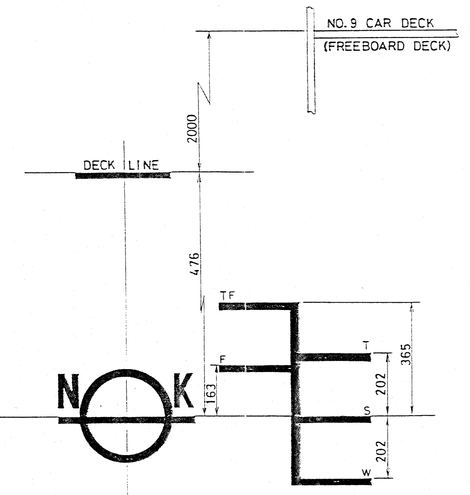
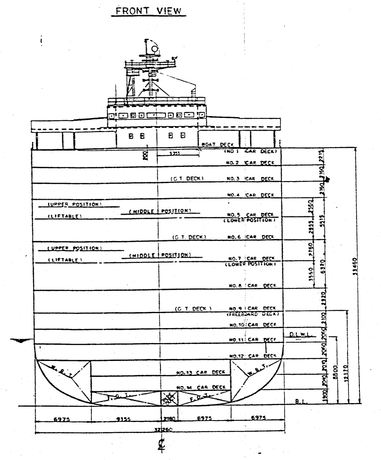
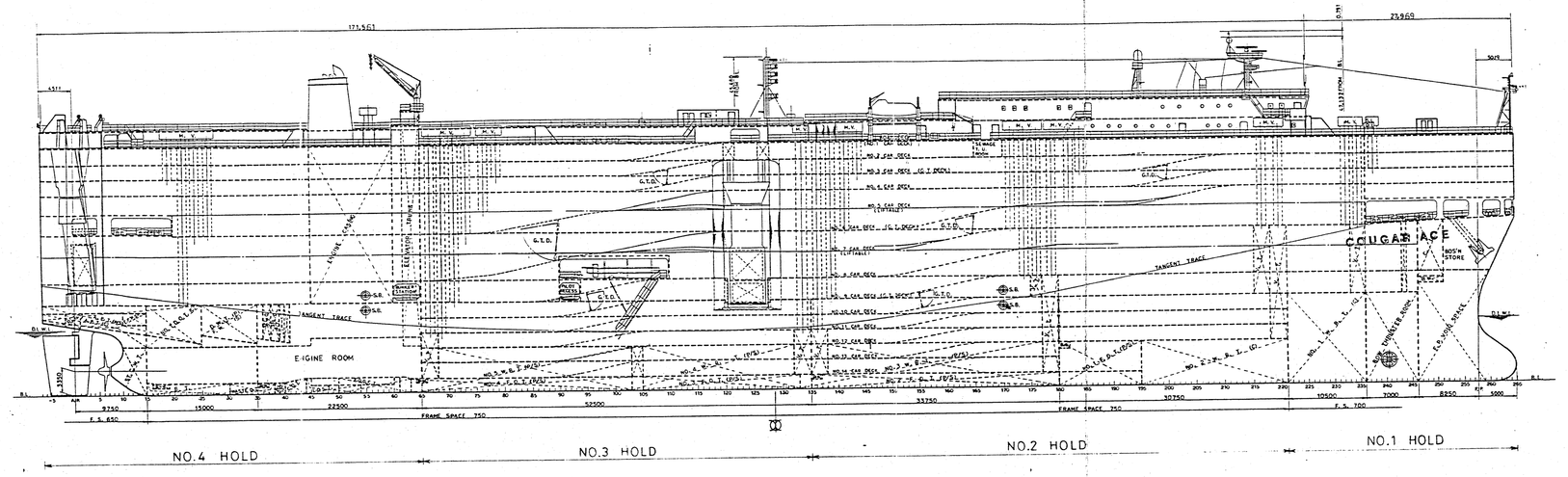
CAPACITY PLAN M. V. COUGAR ACE

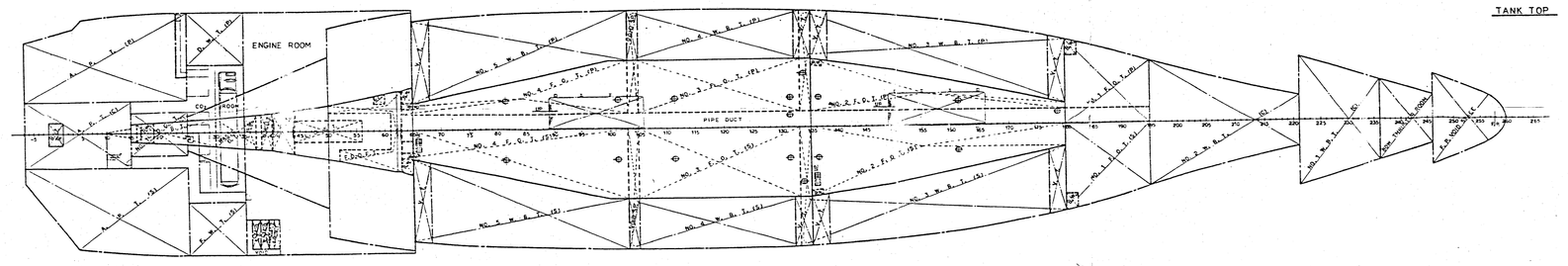
SCALE 1:400



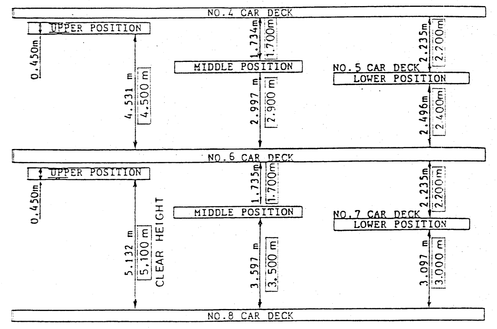








POSITION OF NO.5 & NO.7 LIFTABLE CAR DECK



PRINCIPAL PARTICULARS		
LENGTH	(O.A)	199.53 m
LENGTH	(B.P)	190.00 m
BREADTH	(MLD)	32.26 m
DEPTH	(MLD)(STRENGTH DECK)	33.46 m
DEPTH	(MLD)(FREEBOARD)	12.17 m
DRAFT	(MLD)(DESIGNED)	9.30 m
DRAFT	(EXTREME) (SUMMER)	9.724 m
DEADWEIGHT		18922 kt
GROSS TONNAGE		55328 T
CAR STOWAGE CAPACITY		5542 cars
MAIN ENGINE		7UEC60LS x 1 SET
M.C.R.	11695 KW(15900 PS) x 95	rpm
N.O.R.	9940 KW(13510 PS) x 90	rpm
SERVICE SPEED		18.6 knots
CLASS.	NK NS* (Vehicles Carrier) MNS* 'MO'	

Light Wt : 15,768
Net Wt : 17,224

NUMBER OF CAR STOWAGE
(STANDARD CAR)

DECK	NO.4 HOLD	NO.3 HOLD	NO.2 HOLD	NO.1 HOLD	TOTAL
NO. 1 CAR DECK	122	120	-	-	242
NO. 2 CAR DECK	149	159	193	74	575
NO. 3 CAR DECK	149	156	192	74	571
NO. 4 CAR DECK	151	162	196	74	583
NO. 5 CAR DECK	150	141	184	69	544
NO. 6 CAR DECK	110	157	163	29	479
NO. 7 CAR DECK	138	144	197	43	522
NO. 8 CAR DECK	151	127	182	23	483
NO. 9 CAR DECK	111	158	172	12	454
NO.10 CAR DECK	-	161	148	-	309
NO.11 CAR DECK	-	161	135	-	296
NO.12 CAR DECK	-	150	115	-	265
NO.13 CAR DECK	-	72	43	-	115
NO.14 CAR DECK	-	72	32	-	104
TOTAL	1,221	1,941	1,972	398	5,542

Based on the STANDARD CAR of 4500mm length, 1700mm width and 1400mm height with a stowage distance of 300mm lengthwise and 100mm sidewise, including hold fastener space.

CAR DECK STRENGTH, CLEAR HEIGHT & AREA										
DECK NO.	EQUIV. LOAD (t/m²)	AXLE LOAD (t/axle)	CLEAR HEIGHT (m)	CAR DECK AREA				AREA (m²) / MID.C (m)		DECK TOTAL
				NO.4 HOLD	NO.3 HOLD	NO.2 HOLD	NO.1 HOLD			
1	0.20	1.20	3.700	1 189 / 72.42	1 219 / 21.48					2 408 / 46.63
2	0.20	1.20	1.700	1 453 / 73.11	1 601 / 21.33	1 558 / -27.36	766 / -82.81			5 800 / 0.34
3	0.20	1.20	1.800	1 453 / 73.11	1 550 / 21.43	1 911 / -36.95	787 / -82.81			5 701 / 0.64
4	0.20	1.20	1.800	1 455 / 73.18	1 712 / 21.88	1 974 / -37.24	794 / -82.81			5 940 / 0.85
5	0.20 / 0.50	1.60	2.300 / 1.300	1 455 / 73.20	1 526 / 21.83	1 880 / -36.56	794 / -82.81			5 655 / 0.92
6	1.00	9.00	2.400 / 1.300	1 108 / 67.41	1 652 / 21.64	1 894 / -37.54	306 / -74.44			4 940 / 3.27
7	0.20 / 0.50	1.60	2.300 / 1.300	1 302 / 71.60	1 422 / 20.93	1 998 / -36.43	445 / -77.44			5 227 / 3.82
8	2.00	27.00	2.000 / 1.300 / 2.100	1 492 / 73.24	1 433 / 20.95	1 821 / -36.63	288 / -76.97			5 034 / 9.64
9	0.30	1.60	2.200	1 183 / 73.28	1 630 / 21.44	1 792 / -34.24	178 / -76.16			4 783 / 9.82
10	0.20	1.20	1.700		1 576 / 21.61	1 636 / -33.73				3 212 / -6.56
11	0.20	1.20	1.700		1 621 / 21.40	1 478 / -31.60				3 097 / -3.86
12	0.20	1.20	1.700		1 580 / 21.26	1 293 / -30.28				2 873 / -1.93
13	0.20	1.20	1.700		827 / 18.34	510 / -21.04				1 317 / 3.09
14	0.20	1.20	1.700		821 / 18.32	411 / -18.04				1 232 / 5.86
TOTAL	–	–	–	12 123 / 72.43	20 110 / 21.18	20 564 / -34.81	4 377 / -81.03			57 184 / 4.06

NOTE : *** Nos. 5 & 7 LIFTABLE DECK MIDDLE POSITION
"E" Nos. 5 & 7 LIFTABLE DECK UPPER POSITION
No.8 CAR DECK (FR.286 - F.E.) : 1.20 t/axle, 0.20 t/m²

WATER BALLAST TANK									
				1 CUB.FT = 0.0283168 CUB.M SPECIFIC GRAVITY = 0.980 t/CUB.M SYSTEMIC DATUM = 9.00					
NAME OF TANKS		LOCATION (Fr.-Fr.)	FULL CAPACITY CUB.M	FULL CAPACITY CUB.FT	WEIGHT (t)	MID. G (m)	K G (m)	C.L.C. (m)
NO.1 W. B. T.	C	221 - 236	774.22	27,341	793.56	-74.02	7.93	0.00
NO.2 W. B. T.	C	195 - 221	847.50	29,929	868.69	-58.11	3.68	0.00
NO.3 W. B. T.	P	133 - 160	689.67	24,799	717.16	-20.82	3.43	-9.35
NO.3 W. B. T.	S	133 - 160	705.76	24,924	723.40	-20.67	3.60	9.28
NO.4 W. B. T.	P	103 - 133	539.62	19,057	553.11	7.91	3.64	-11.57
NO.4 W. B. T.	S	103 - 133	545.71	19,272	559.35	8.02	3.61	11.46
NO.5 W. B. T.	P	65 - 103	784.89	27,718	804.51	33.65	3.94	-9.95
NO.5 W. B. T.	S	65 - 103	784.89	27,718	804.51	33.65	3.94	9.95
AFT. PEAK TANK	C	-7 - 15	266.38	9,407	273.04	90.76	9.93	0.00
AFT. PEAK TANK	P	-7 - 25	496.26	17,525	508.67	86.75	10.72	-8.89
AFT. PEAK TANK	S	-7 - 25	520.66	18,385	533.70	85.82	10.67	8.83
WATER BALLAST TOTAL			6,965.58	245,986	7,139.72	(5.41)	(5:45)	(0.04)

FUEL OIL TANKS									
				1 CUB.FT = 0.0283168 CUB.M SPECIFIC GRAVITY = 0.980 t/CUB.M SYSTEMIC DATUM = 9.00					
NAME OF TANKS		LOCATION (Fr.-Fr.)	FULL CAPACITY CUB.M	FULL CAPACITY CUB.FT	WEIGHT SGG (t)	MID. G (m)	K G (m)	C.L.C. (m)
NO.1 F. O. T.	P	180 - 195	303.46	12,836	320.59	-43.78	3.94	-3.90
NO.1 F. O. T.	S	180 - 195	402.23	14,346	355.29	-43.80	3.63	3.90
NO.2 F. O. T.	P	135 - 180	223.33	8,281	206.33	-17.09	1.03	-4.55
NO.2 F. O. T.	S	135 - 180	303.95	13,060	326.30	-16.75	1.00	3.28
NO.3 F. O. T.	P	105 - 133	202.65	8,064	226.37	7.25	1.00	-5.55
NO.3 F. O. T.	S	105 - 133	341.44	12,058	301.15	7.25	0.99	4.44
NO.4 F. O. T.	P	63 - 103	219.56	7,754	193.65	30.64	1.02	-4.56
NO.4 F. O. T.	S	63 - 103	302.78	11,893	297.04	31.73	1.00	3.37
FUEL OIL TOTAL			2,804.02	89,277	2,229.72	(-9.05)	(1.65)	(0.16)

DIESEL OIL TANKS									
				1 CUB.FT = 0.0283168 CUB.M SPECIFIC GRAVITY = 0.850 t/CUB.M SYSTEMIC DATUM = 9.00					
NAME OF TANKS		LOCATION (Fr.-Fr.)	FULL CAPACITY CUB.M	FULL CAPACITY CUB.FT	WEIGHT SGG (t)	MID. G (m)	K G (m)	C.L.C. (m)
NO.1 D. O. T.	C	15 - 25	217.22	8,377	181.47	81.39	9.42	0.00
DIESEL OIL TOTAL			217.22	8,377	181.47	81.39	9.42	0.00

OTHER TANKS									
				1 CUB.FT = 0.0283168 CUB.M S.G. (L.O.) = 0.900 t/CUB.M S.G. (DIESEL OIL) = 0.900 t/CUB.M S.G. (BRAIN, BILGE & F.W.)=1.000t/CUB.M					
NAME OF TANKS		LOCATION (Fr.-Fr.)	FULL CAPACITY CUB.M	FULL CAPACITY CUB.FT	WEIGHT (t)	MID. G (m)	K G (m)	C.L.C. (m)
L. O. SUMP. T.	C	44 - 56	29.45	1040	26.51	59.24	0.62	0.00
M/E L.O. STOR T.	S	38 - 40	12.47	440	11.22	66.87	8.89	13.23
M/E L.O. STOR T.	S	40 - 41	12.76	451	11.48	66.12	8.94	13.23
NO.1 CYL. O.S.T.	S	37.5- 39	18.17	642	16.35	67.81	10.65	13.23
NO.2 CYL. O.S.T.	S	36 - 37.5	17.58	619	15.78	68.35	10.15	13.22
F. O. O. F. T.	C	50 - 63	51.47	1,818	50.44	52.09	1.23	-0.02
WASTE OIL TANK	C	30 - 38	23.32	824	22.85	71.07	0.82	0.00
CLEAN DRAIN TANK	C	40 - 44	21.62	764	21.62	64.87	1.01	0.00
WASH W. D. T.	C	38 - 40	7.97	281	7.97	67.24	0.85	0.00
BILGE TANK	C	15 - 30	30.09	1,062	30.09	78.69	0.86	0.00
S/T C.T.	C	8 - 15	24.33	859	24.33	86.80	3.03	0.00

FRESH WATER TANK									
				1 CUB.FT = 0.0283168 CUB.M SPECIFIC GRAVITY = 1.000 t/CUB.M					
NAME OF TANKS		LOCATION (Fr.-Fr.)	FULL CAPACITY CUB.M	FULL CAPACITY CUB.FT	WEIGHT (t)	MID. G (m)	K G (m)	C.L.C. (m)
D. W. T.	P	25 - 35	190.07	6,712	190.07	73.82	10.28	-12.13
F. W. T.	S	25 - 35	190.07	6,712	190.07	73.82	10.28	12.13
FRESH WATER TOTAL			380.14	13,424	380.14	(73.82)	(10.28)	(0.00)

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KANASASHI CO., LTD. TOYOHASHI WORKS

HA - 4

BIBLIOGRAPHY

DATE: OCT. 14, 1993
DESIGNED BY
INITIAL DESIGN SECTION

COUGAR ACE

SNo. 3305 | CLASS : NK-M0

CAPACITY PLAN AND DEADWEIGHT SCALE

MANAGER
SECT. CHIEF
CHECKED
DRAWN
DATE OCT. 14, 1993

SCALE 1/400

DRAWING NO. FINISHED PLAN

KANASASHI CO., LTD.
TOYOHASHI WORKS
DESIGNING DEPARTMENT

HA - 4