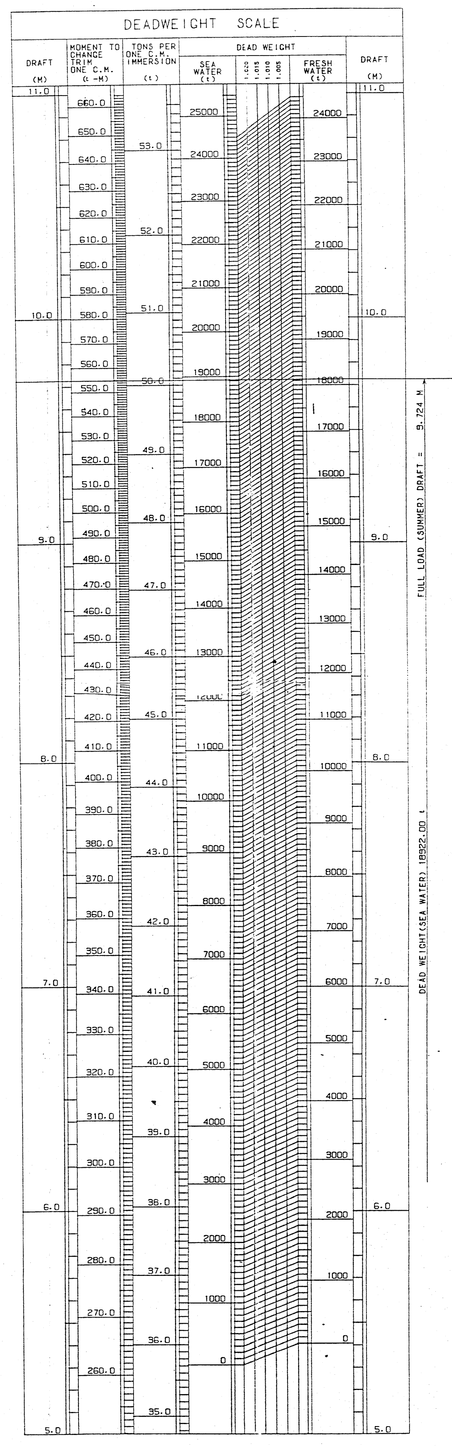
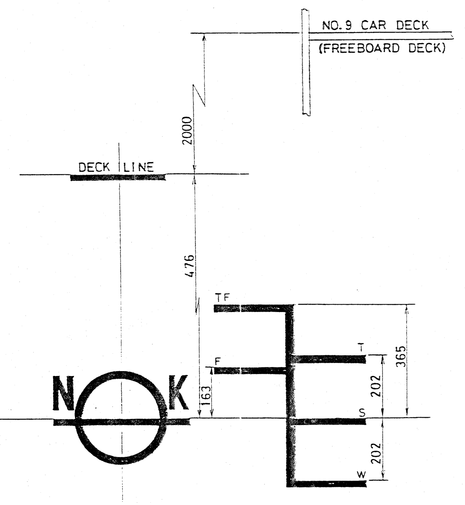
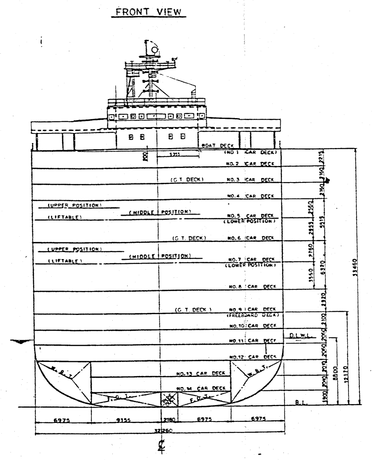
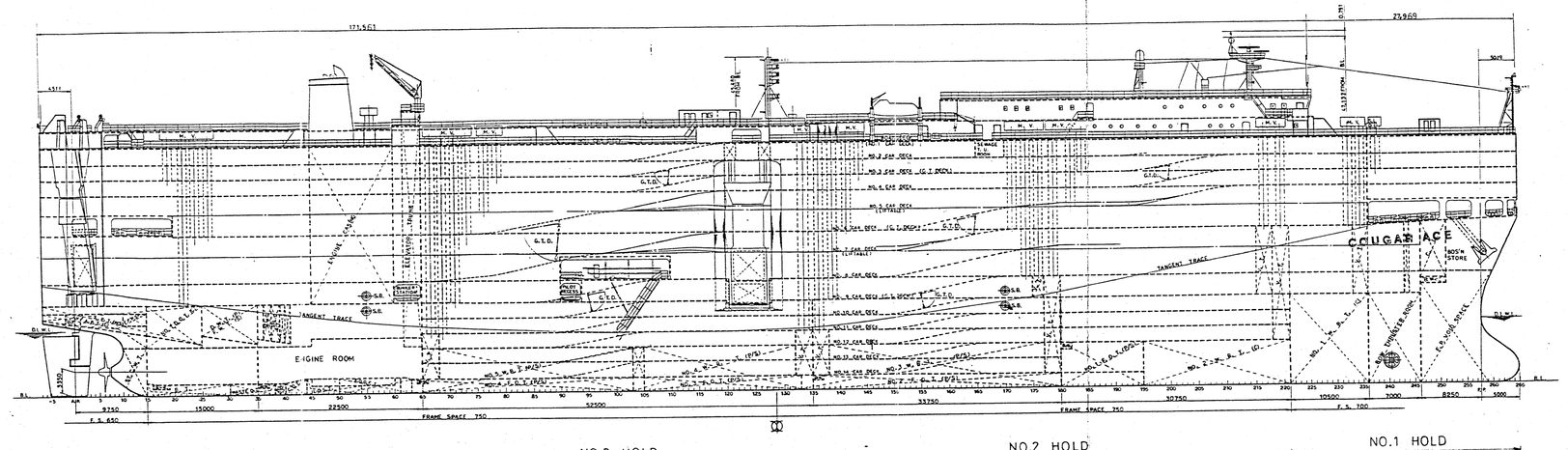
CAPACITY PLAN M. V. COUGAR ACE

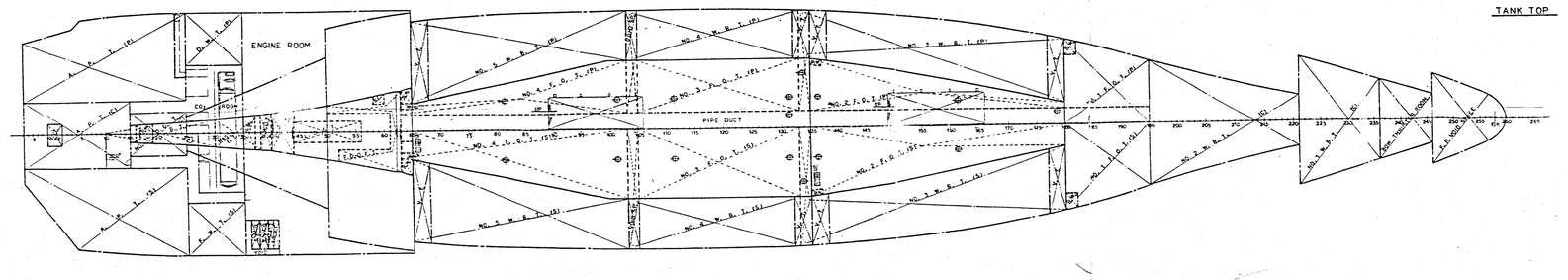
SCALE 1:400



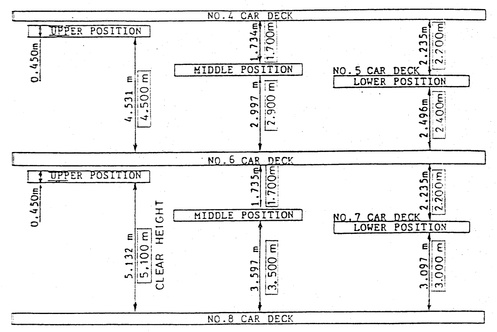








POSITION OF NO.5 & NO.7 LIFTABLE CAR DECK



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^2 (Vehicles Carrier) MNS^2 'MO'	

Light Wt : 15,368
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	139	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	1,961	1,972	936	5,542

Based on the STANDARD CAR of 4500mm length, 1700mm width and 1400mm height with a stowage distance of 900mm lengthwise and 100mm sidewise, including hold fresmen deck.

FUEL OIL TANKS					1 CUB.FT = 0.0283168 CUB.M SPECIFIC GRAVITY = 0.860 t/CUB.M FILLING RATIO = 98%			
NAME OF TANKS	LOCATION	FULL CAPACITY CUB.M	FULL CAPACITY CUB.FT	WEIGHT (t)	MID. G (m)	V.C (m)	C.L.C (m)
NO.1 F. O. T.	P	180 - 195	303.46	12,838	220.59	-43.78	3.94	-3.90
NO.1 F. O. T.	S	180 - 195	408.23	14,346	356.29	-43.80	3.63	3.90
NO.2 F. O. T.	P	135 - 180	233.83	8,281	206.33	-77.09	1.03	-4.55
NO.2 F. O. T.	S	135 - 180	303.95	10,065	226.30	-76.75	1.00	3.28
NO.3 F. O. T.	P	105 - 133	256.65	9,064	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	7,764	193.65	30.64	1.02	-4.56
NO.4 F. O. T.	S	63 - 103	312.78	11,880	297.04	31.73	1.00	3.37
FUEL OIL TOTAL			2,864.02	89,277	2,229.72	(-9.05)	(1.85)	(0.16)

DIESEL OIL TANKS					1 CUB.FT = 0.0283168 CUB.M SPECIFIC GRAVITY = 0.850 t/CUB.M FILLING RATIO = 98%			
NAME OF TANKS	LOCATION (Fr.-Fr.)	FULL CAPACITY CUB.M	FULL CAPACITY CUB.FT	WEIGHT SCR (t)	MID. G (m)	V.C (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. (F.O.) = 0.860 t/CUB.M S.G. (L.O. & CYL.O.) = 0.900 t/CUB.M S.G. (BRAIN, SPACE & F.W.) = 1.000 t/CUB.M			
NAME OF TANKS	LOCATION (Fr.-Fr.)	FULL CAPACITY CUB.M	FULL CAPACITY CUB.FT	WEIGHT (t)	MID. G (m)	V.C (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	0.89	13.23
M/E L.O. STOR T.	S	40 - 41	12.76	451	11.48	66.12	0.94	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	17.59	619	15.78	66.93	10.12	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. O. T.	C	38 - 40	7.97	281	7.97	67.24	0.86	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

WATER BALLAST TANK					1 CUB.FT = 0.0283168 CUB.M SPECIFIC GRAVITY = 1.025 t/CUB.M			
NAME OF TANKS	LOCATION (Fr.-Fr.)	FULL CAPACITY CUB.M	FULL CAPACITY CUB.FT	WEIGHT (t)	MID. G (m)	V.C (m)	C.L.C (m)
NO.1 W. B. T.	C	221 - 238	774.22	27,341	793.58	-74.02	7.93	0.00
NO.2 W. B. T.	C	195 - 221	847.50	29,929	868.69	-58.11	3.69	0.00
NO.3 W. B. T.	P	133 - 180	689.67	24,709	717.16	-20.82	3.43	-9.35
NO.3 W. B. T.	S	133 - 180	705.76	24,924	723.40	-20.67	3.40	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	3.51	11.46
NO.5 W. B. T.	P	65 - 103	784.89	27,718	804.51	33.65	3.34	-9.86
NO.5 W. B. T.	S	65 - 103	784.89	27,718	804.51	33.65	3.34	9.86
AFT. PEAK TANK	C	-7 - 15	266.98	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	-6.89
AFT. PEAK TANK	S	-7 - 25	520.66	18,386	533.70	85.82	10.57	6.83
WATER BALLAST TOTAL			6,965.58	245,986	7,139.72	(5.41)	(5.45)	(0.04)

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)	V.C (m)	C.L.C (m)
D. W. T.	P	25 - 35	190.07	6,712	190.07	72.82	10.28	-12.13
F. W. T.	S	25 - 35	190.07	6,712	190.07	72.82	10.28	12.13
FRESH WATER TOTAL			380.14	13,424	380.14	(72.82)	(10.28)	(0.00)

CAR DECK STRENGTH, CLEAR HEIGHT & AREA							
DECK NO.	EQUIV. LOAD (t/m²)	AXLE LOAD (t/axle)	CLEAR HEIGHT (m)	CAR DECK AREA NO.4 HOLD	NO.3 HOLD	NO.2 HOLD	NO.1 HOLD	AREA (m²) WITH C.L (m) DECK TOTAL
1	0.20	1.20	3.700	1 189 72.42	1 219 23.48			2 408 46.63
2	0.20	1.20	1.700	1 433 73.11	1 601 21.33	1 558 -27.36	766 -82.81	5 360 0.34
3	0.20	1.20	1.800	1 453 73.11	1 660 21.43	1 911 -36.96	787 -82.81	5 701 0.64
4	0.20	1.20	1.800	1 400 73.18	1 712 21.89	1 974 -37.24	794 -82.81	5 940 0.65
5	0.20 0.50 1.00	1.60	2.300 1.700	1 455 73.20	1 526 21.83	1 880 -56.96	794 -82.81	5 653 0.92
6	1.00	9.00	2.400 1.700 24.500	1 106 67.41	1 662 21.64	1 894 -57.54	306 -74.44	4 940 3.27
7	0.20 0.50 1.00	1.60	2.300 1.700	1 302 71.60	1 402 20.93	1 998 -58.43	445 -77.44	5 207 3.82
8	2.00	27.00	3.000 2.400 25.100	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 73.29	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	1 696 -33.73		3 312 -6.56
11	0.20	1.20	1.700		1 621 21.40	1 478 -31.60		3 207 -2.86
12	0.20	1.20	1.700		1 580 21.26	1 293 -30.28		2 873 -1.33
13	0.20	1.20	1.700		827 18.34	510 -21.04		1 317 2.09
14	0.20	1.20	1.700		821 16.32	411 -18.04		1 232 5.86
TOTAL	-	-	-	12 123 72.43	20 110 21.19	20 864 -34.81	4 377 -81.03	57 184 4.06

NOTE : "**" Nos. 5 & 7 LIFTABLE DECK MIDDLE POSITION
"S" Nos. 5 & 7 LIFTABLE DECK UPPER POSITION
No.8 CAR DECK (FR.235 ~ F.E.) : 1.20 t/axle, 0.20 t/m²

KANASASHI CO., LTD. TOYOHASHI WORKS

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BIBLIOGRAPHY

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

COUGAR ACE

SNo. 3305 CLASS : NK-M0

CAPACITY PLAN AND DEADWEIGHT SCALE

MANAGER		SCALE 1/400	DRAWING NO. FINS3305A01LAN
SECT. CHIEF		KANASASHI CO., LTD.	
CHECKED		TOYOHASHI WORKS	
DRAWN		DESIGNING DEPARTMENT	
DATE	OCT. 14, 1993		

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