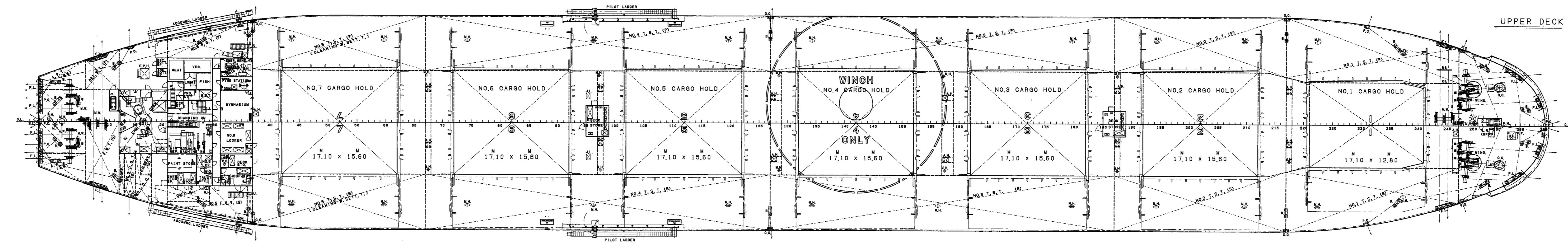
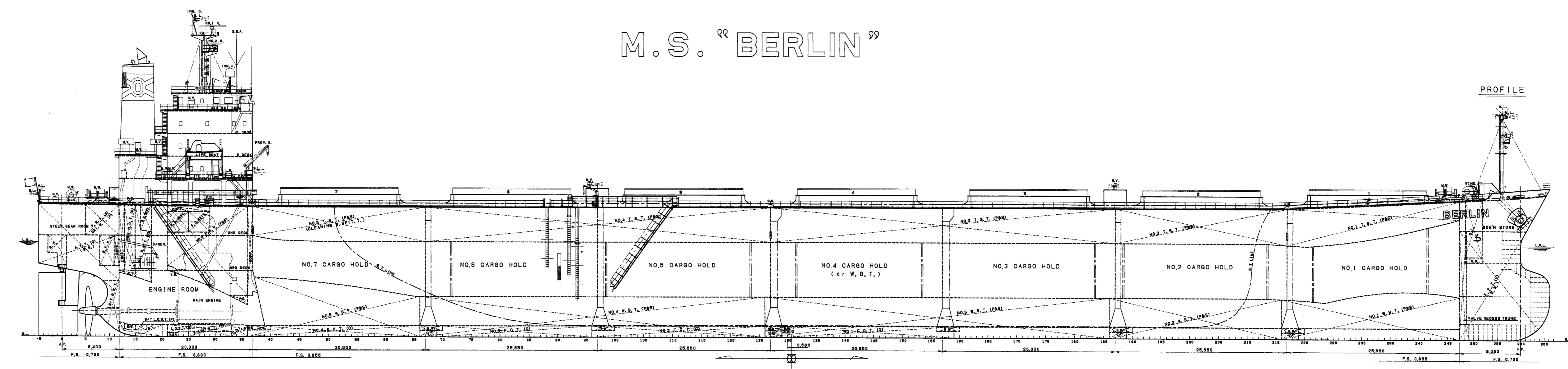
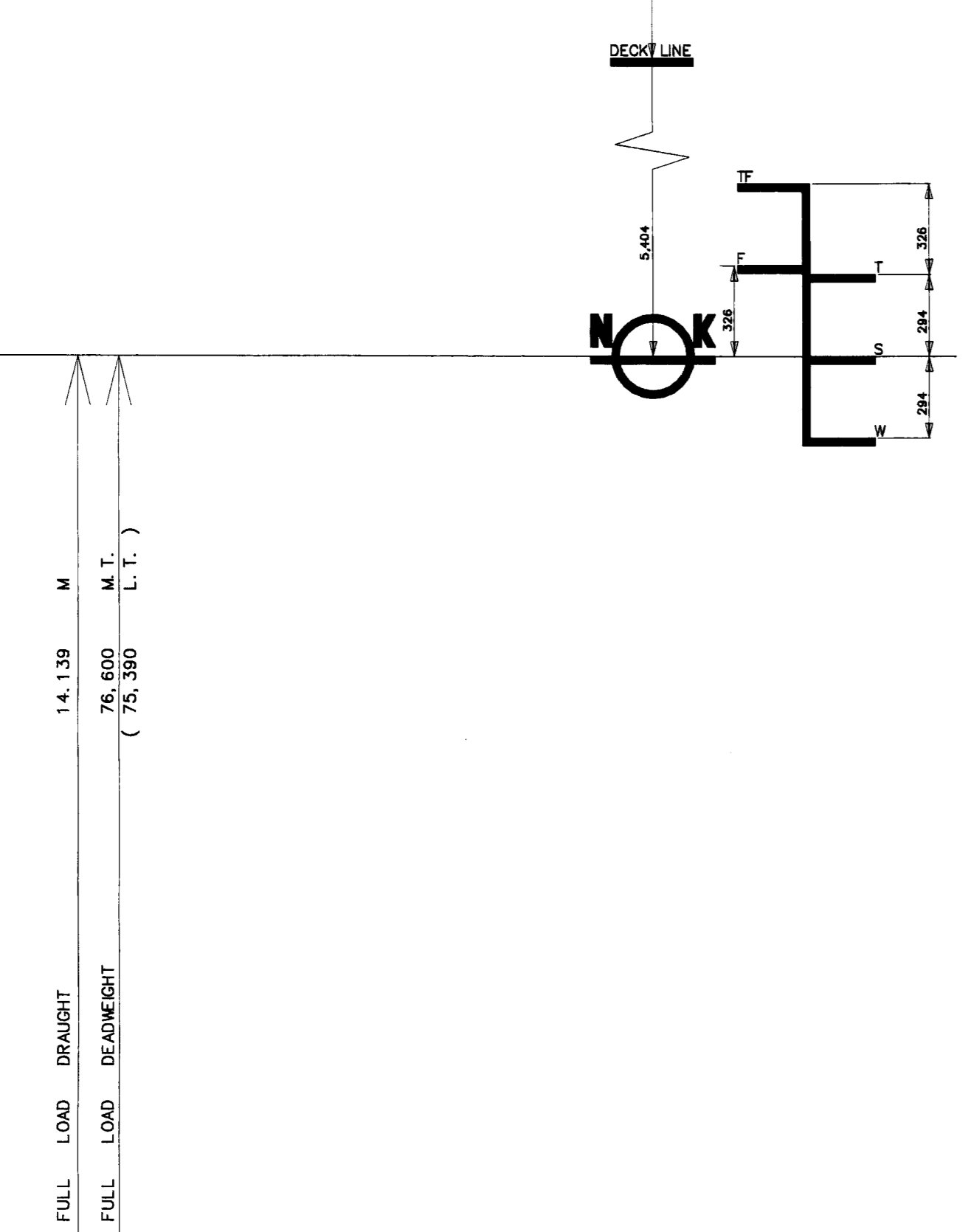
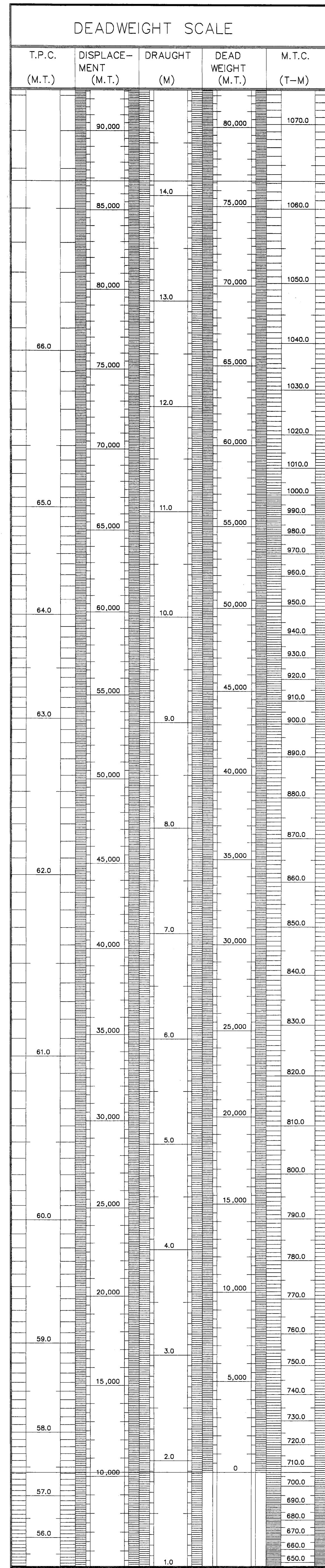


# CAPACITY PLAN WITH DEADWEIGHT SCALE

M.S. "BERLIN"



FREEBOARD TABLE

LOAD LINE	MARK	FREEBOARD (m)	DRAUGHT (m)	DEADWEIGHT (M.T.)	DEADWEIGHT (T.M.)
TROPICAL FRESH WATER	TF	4.784	14.759	75,516	77,276
FRESH WATER	F	5.078	14.465	76,603	75,393
TROPICAL	T	5.110	14.433	76,560	77,320
SEMIARID	S	5.404	14.139	76,600	75,393
WINTER	W	5.698	13.845	74,649	73,470
WINTER NORTH ATLANTIC	WNA	5.698	13.845	74,649	73,470

\* CARGO HOLD (GRAIN) EQUIVALENT USE : 1m<sup>3</sup> = 35.315 CF.

NAME	POSITION	CAPACITY	WT	KG		
	FRAME	m <sup>3</sup>	MT	m		
NO. 1 CARGO HOLD	HOLD 217-247	11,288.23	398,644	-86.13	10.87	
	HATCH WAY 221-241		8,844	-84.84	21.19	
	SUM	11,288.23	407,488	-85.10	11.08	
NO. 2 CARGO HOLD	HOLD 187-217	13,013.29	459,564	-61.37	10.44	
	HATCH WAY 192-212		371.20	-13.109	-60.98	20.70
	SUM	13,384.49	472,679	-61.36	10.72	
NO. 3 CARGO HOLD	HOLD 157-187	12,926.78	456,479	-36.82	10.42	
	HATCH WAY 162-182		371.20	-13.109	-36.93	20.70
	SUM	13,297.98	469,658	-35.81	10.71	
NO. 4 CARGO HOLD	HOLD 127-157	12,955.56	457,526	-10.19	10.43	
	HATCH WAY 132-152		371.20	-13.109	-9.88	20.70
	SUM	13,326.76	470,695	-10.18	10.72	
NO. 5 CARGO HOLD	HOLD 97-127	13,053.49	460,278	15.50	10.44	
	HATCH WAY 102-122		371.20	-13.109	15.98	20.70
	SUM	13,424.69	479,387	15.57	10.72	
NO. 6 CARGO HOLD	HOLD 67-97	13,020.49	459,819	41.22	10.44	
	HATCH WAY 72-92		371.20	-13.109	41.63	20.70
	SUM	13,391.69	472,928	41.23	10.72	
NO. 7 CARGO HOLD	HOLD 37-67	12,025.90	424,895	66.51	10.97	
	HATCH WAY 42-62		371.20	-13.109	67.28	20.70
	SUM	12,397.10	437,804	66.53	11.28	
TOTAL		99,740.35	3,204,498			

\* WATER BALLAST TANK (100% FULL) S.G.: 1.025

NAME	POSITION	CAPACITY	WEIGHT	KG	
	FRAME	m <sup>3</sup>	MT	m	
FORE PEAK TANK	C 247-F.E.	1,750.47	1,794.23	-103.70	8.25
NO. 1 W. B. T. +1, S. T.	P 216-247	1,293.63	1,329.87	-84.95	8.14
	S 216-247	1,280.28	1,312.29	-85.08	8.22
NO. 2 W. B. T. +1, S. T.	P 186-217	1,621.12	1,659.15	-60.45	8.18
	S 186-217	1,507.76	1,545.45	-60.55	8.25
NO. 3 W. B. T. +1, S. T.	P 126-187	2,724.72	2,792.84	-23.44	8.99
	S 126-187	2,717.93	2,785.88	-23.51	9.01
NO. 4 W. B. T. +1, S. T.	P 66-127	2,424.51	2,485.12	28.93	9.99
	S 66-127	2,424.51	2,485.12	28.93	9.99
NO. 5 W. B. T.	P 36-66	602.71	617.78	68.49	2.98
	S 36-66	602.71	617.78	68.49	2.98
NO. 6 T. S. T.	P 37-67	602.91	617.98	67.03	11.89
	S 37-67	602.91	617.98	67.03	11.89
AFT PEAK TANK	C A.E.-12	955.31	989.44	105.74	13.68
NO. 4 CARGO HOLD	C 127-157	13,390.89	1,3654.16	-10.17	10.72
TOTAL		34,352.37	3,5211.17		

\* FUEL OIL TANK (100% FULL) S.G.: HEAVY OIL = 0.950, DIESEL OIL = 0.880

NAME	POSITION	CAPACITY	WEIGHT	KG	
	FRAME	m <sup>3</sup>	MT	m	
NO. 1 FUEL OIL T.	C 129-159	600.84	576.80	-11.29	0.85
NO. 2 FUEL OIL T.	C 96-126	594.16	564.45	16.78	0.84
NO. 3 FUEL OIL T.	C 69-96	540.09	513.09	41.27	0.85
NO. 4 FUEL OIL T.	C 36-58	354.17	338.48	64.28	0.85
NO. 5 FUEL OIL T.	P 21-36	523.47	497.30	86.04	14.64
	S 21-36	483.92	449.72	85.57	14.24
SUM		3,076.65	2,922.82		
NO. 1 DIE. OIL T.	S 15-18	133.45	112.44	98.53	14.68
NO. 2 DIE. OIL T.	S 13-15	88.80	78.14	98.48	15.41
SUM		222.25	190.58		
TOTAL		3,298.90	3,113.40		

\* LUBRICATING OIL TANK (100% FULL) S.G.: 0.920

NAME	POSITION	CAPACITY	WEIGHT	KG	
	FRAME	m <sup>3</sup>	MT	m	
LUB. OIL SUMP T.	C 21-33	23.04	21.20	85.33	1.25
S/T L. O. SUMP T.	P 15-17	2.31	2.13	96.88	1.36
CYL. OIL STOR. T.	P 15-18	59.78	54.98	96.45	12.06
M/E L. O. STOR. T.	P 13-15	26.25	24.15	98.48	12.16

\* OTHER TANK (100% FULL)

NAME	POSITION	CAPACITY	KG	
	FRAME	m <sup>3</sup>	m	
CLEAN DRAIN T.	P 33-36	10.42	82.06	1.07
BILGE SLUDGE T.	P 25-33	15.41	85.91	1.14
BILGE TANK	C 12-20	25.53	95.20	1.00
S/T COOL. W. T.	C A.E.-12	15.85	100.88	4.20

PRINCIPAL PARTICULARS

LENGTH (O.A.)	224.94 m
LENGTH (S.P.)	217.00 m
BREADTH (M.L.D.)	32.26 m
DEPTH (M.L.D.)	19.50 m
DRAUGHT (EXT.)	14.138 m
DEADWEIGHT (AT ASSIGNED DRAUGHT)	76,600 M.T.
HOLD CAPACITY	99,740.35 M <sup>3</sup>
GROSS TONNAGE (I.C.T.M.)	39,737
NET TONNAGE (I.C.T.M.)	25,764
MAIN ENGINE	MITSUBI-MAN B&W 6SR0W (M&V V) 1 x 1
MAX. OUTPUT	10,320 kW x 89.0 RPM
NOR. OUTPUT	6,770 kW x 84.9 RPM
SPEED	(ON DESIGNED LOADED DRAUGHT) 15.28 knots
TRIAL MAX.	17.168 knots
CLASSIFICATION	NIPPON KAIJI KYOKAI (NK)
CLASSIFICATION CHARACTERS	NS*BULK CARRIER - STRENGTHENED FOR HEAVY CARGOES, NS*W&B HOLD MAY BE EMPTY, (CEP) NS*W&B
INSTALLATIONS CHARACTERS	1. SH, MFF, LSA, RCF, AFS, W

COMPLEMENT

DECK PART	ENGINE PART	BUSINESS PART	
CAPTAIN	1 CHIEF ENGINEER	1	
CHIEF OFFICER	1 1ST ENGINEER	1	
2ND OFFICER	1 2ND ENGINEER	1	
3RD OFFICER	1 3RD ENGINEER	1	
BOATSWAIN	1 NO. 1 OILER	1 CHIEF COOK	1
ABLE SEAMAN	3 OILER	2 MESS MAN	1
ORDINARY SEAMAN	3 WIPER	1	
TOTAL NUMBER OF OFFICER			6 P.
TOTAL NUMBER OF CREW			13 P.
SPARE OFFICER (JUNIOR OFFICER CLASS)			1 P.
CREW (RATING CREW CLASS)			1 P.
PILOT (JUNIOR OFFICER CLASS)			1 P.
GRAND TOTAL			24 P.

FINISHED PLAN

CON-FERRED	SHIP DESIGN GROUP	
	BASIC DESIGN TEAM	
CHECKED	Y. TAKAKAWA	
CHECKED	[Signature]	
DRAWN	[Signature]	
SHIP NO.	S-K002	CLASS NK
SCALE	****	DWG. NO. C-0300

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JAN. 11. 2009  
SHIP DESIGN DIVISION SERIAL NO. B-04