



F/F «G.O. Sars»



1. GENERELT OM FARTØYET

IMO nr	9260316
Kjenningsbokstaver	LMEL
Lengde over alt	77,5 m
Lengde mellom p.p.	68,40 m
Bredde (moulded)	16,40/18,60 m
Gross Tons	4067 GRT
Hovedmotor(er)	Diesel: 3 X Wartsila / W6L32(2700kW x 3), DC-Motors 2 X TECO westinghouse(3000kW X 2)

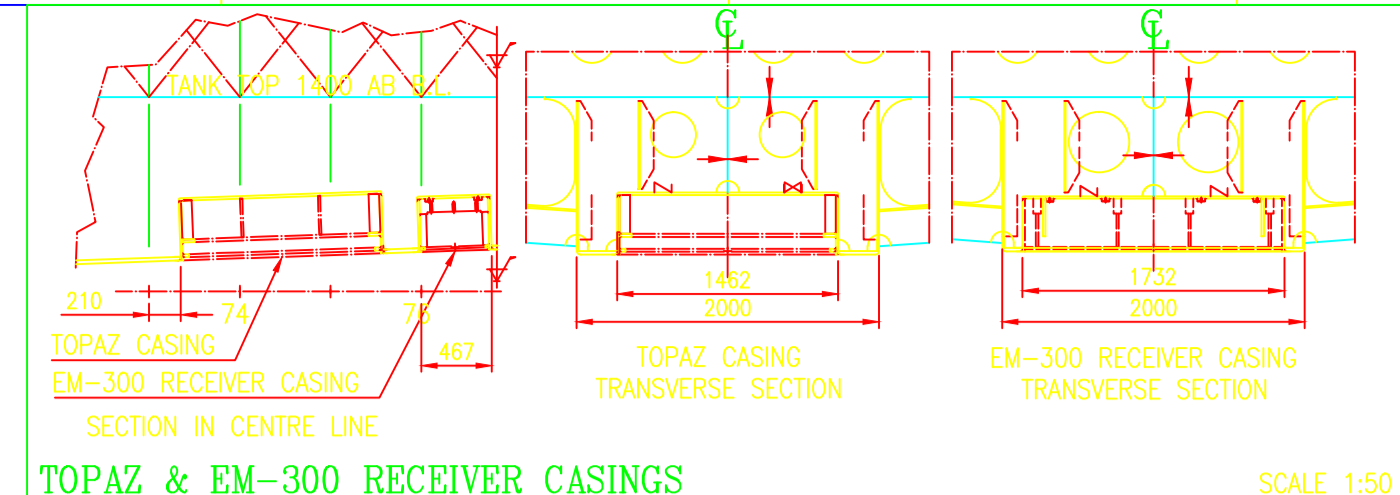
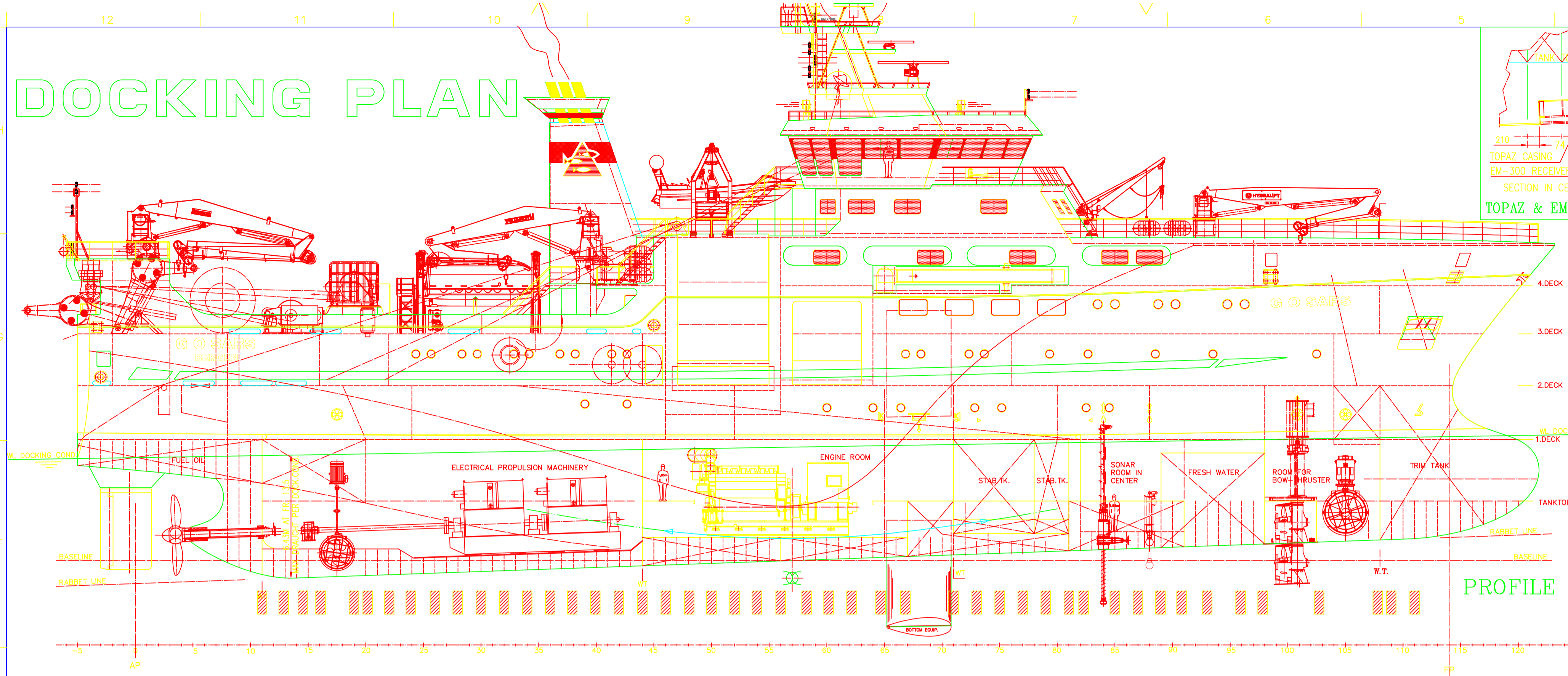
Fartøyet har to senkekjøler

Fartøyet har azimuth thruster forran.

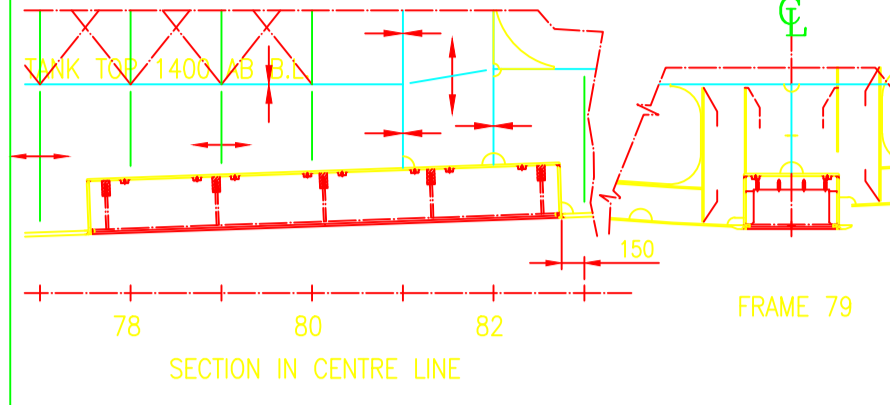
Inndokkingsdybde Aft PP: 6,7 Mtr. F PP 5,4 Mtr

Kjølblokker må være minst 1,5 mtr.

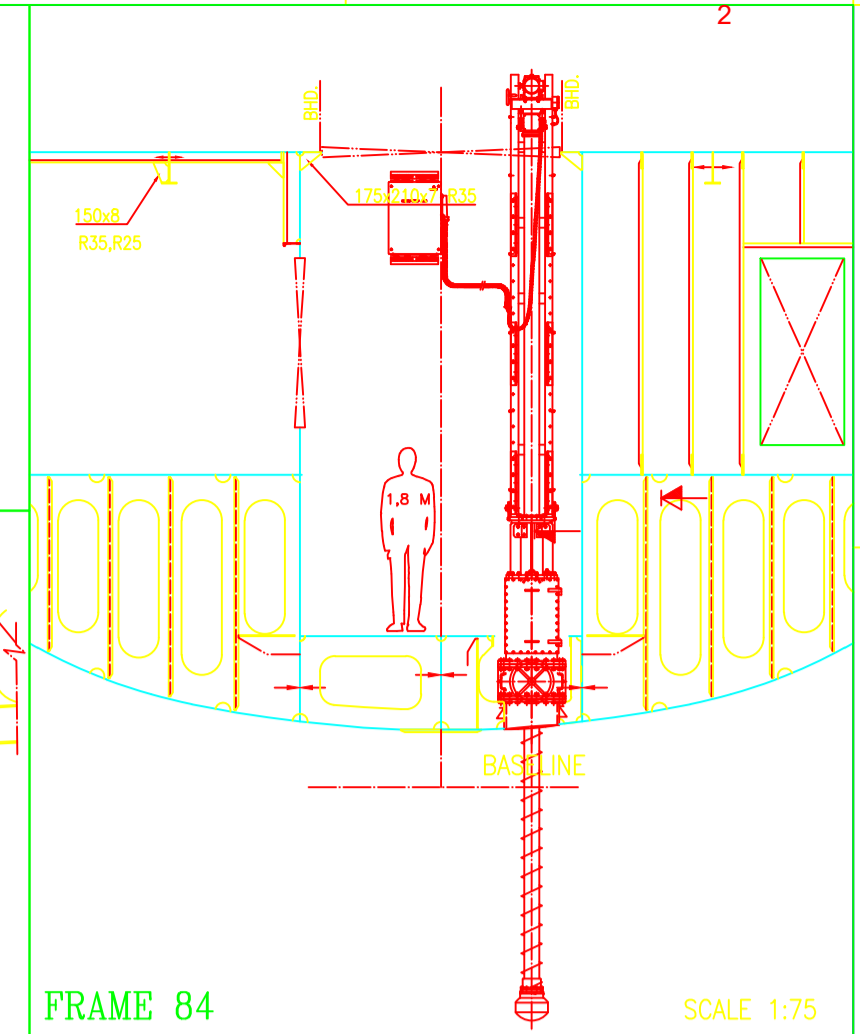
DOCKING PLAN



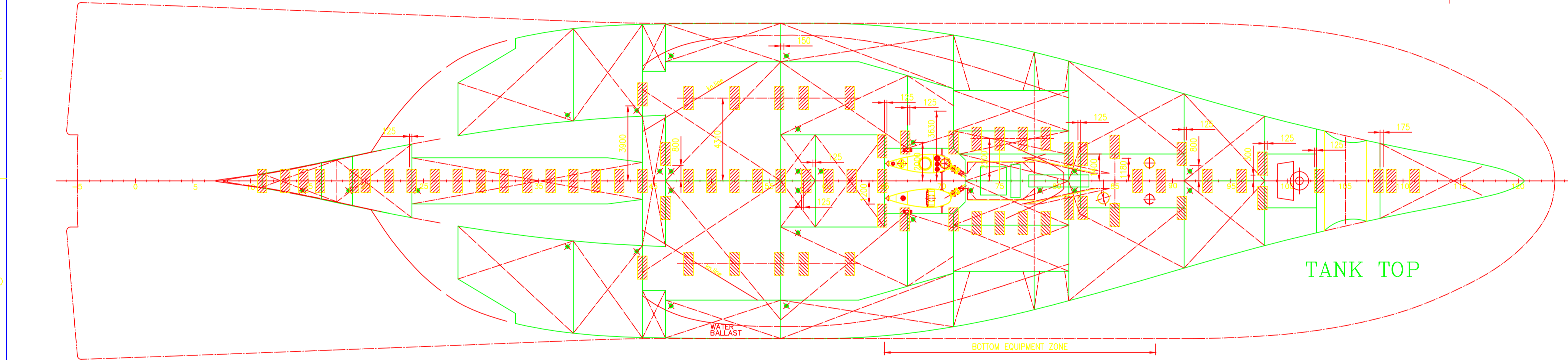
TOPAZ & EM-300 RECEIVER CASINGS SCALE 1:50



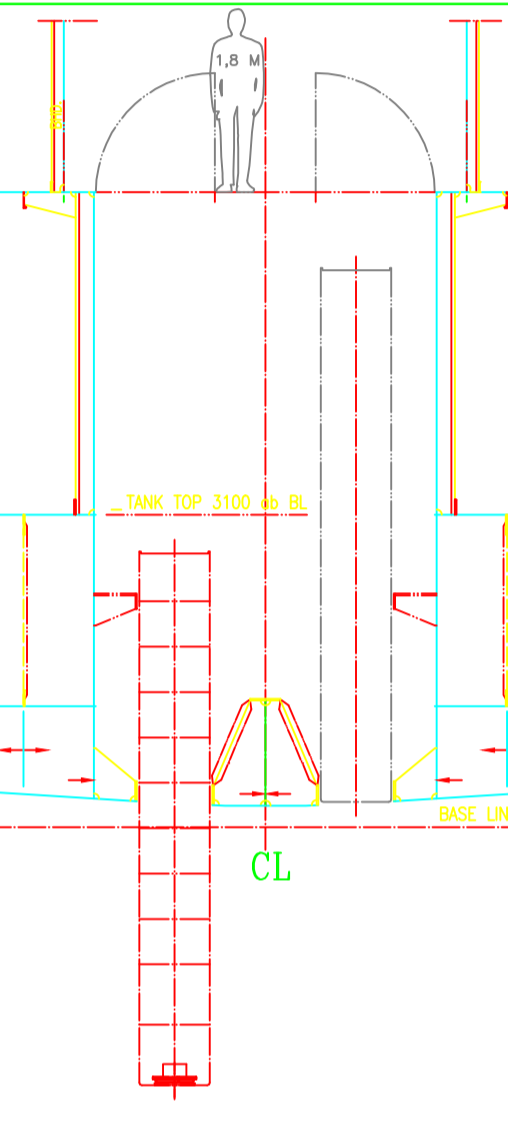
EM-300 TRANSMITTER CASING SCALE 1:50



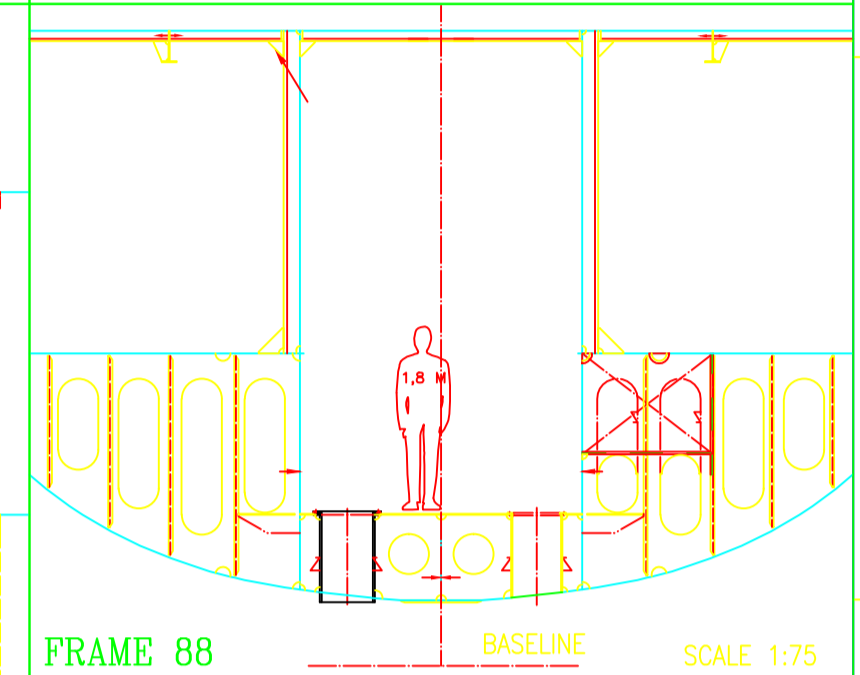
FRAME 84 SCALE 1:75



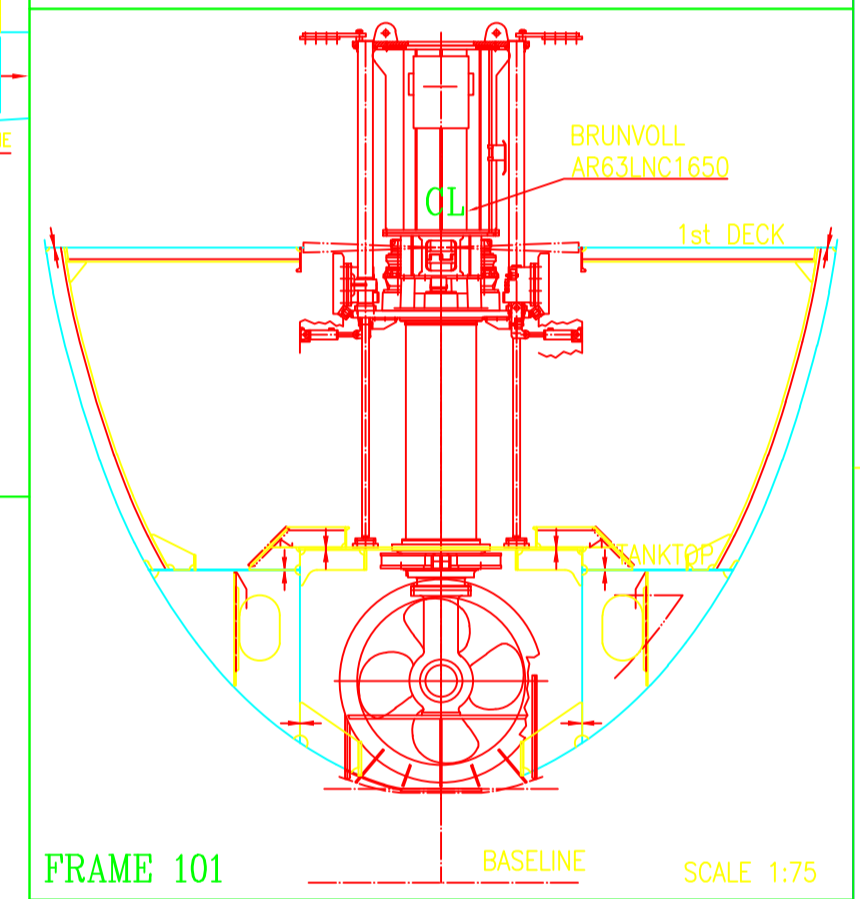
TANK TOP



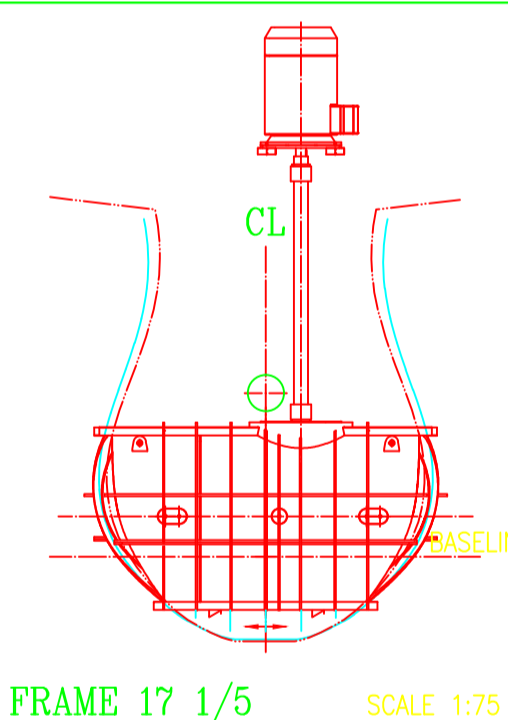
FRAME 67 SCALE 1:75



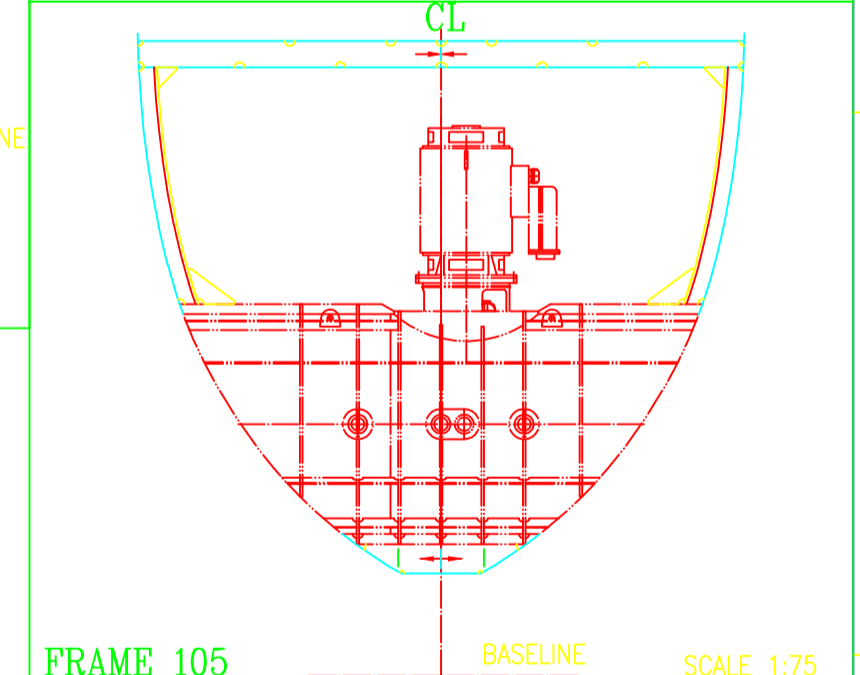
FRAME 88 SCALE 1:75



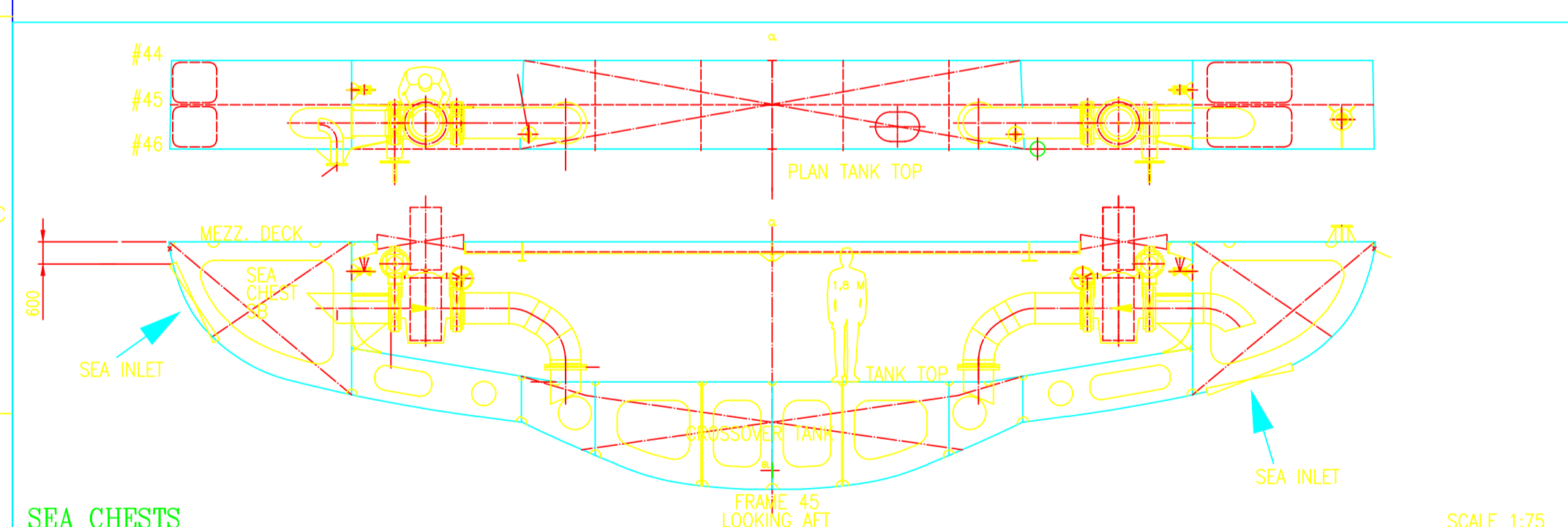
FRAME 101 SCALE 1:75



FRAME 17 1/5 SCALE 1:75



FRAME 105 SCALE 1:75

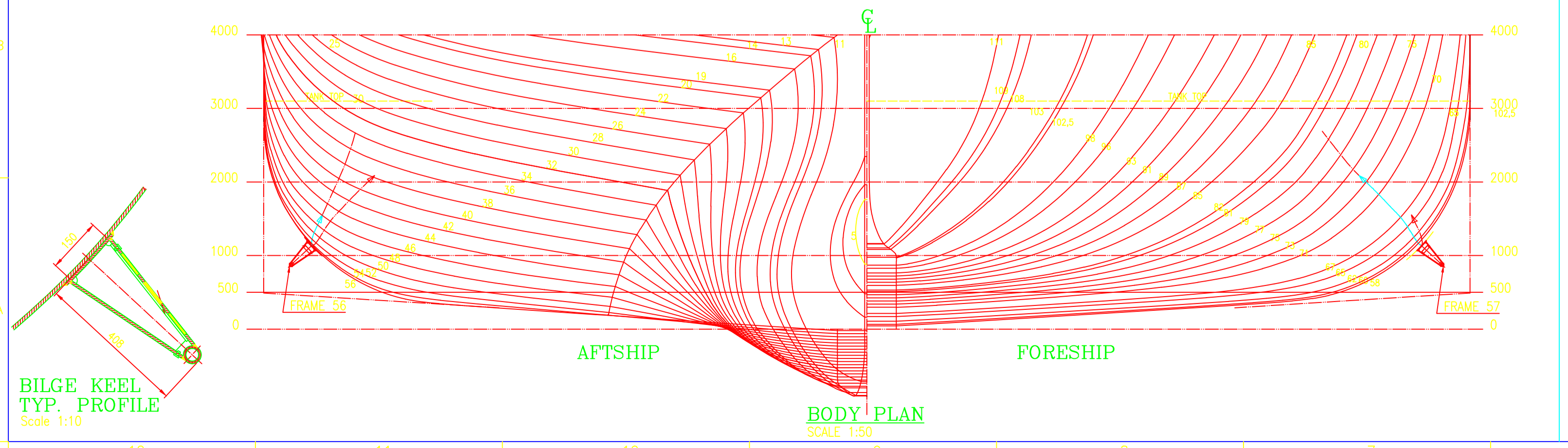


SEA CHESTS SCALE 1:75

DOCKING ASSUMPTIONS:
 SHIP'S DISPLACEMENT = 3860 METRIC TONNES
 ■ = POPPETS (500x1200)
 MAX. PRESSURE ON POPPETS: 100 M.TONNES
 * = BOTTOM PLUGS

DOCKING CONDITION:
 FUEL OIL: 82 TONNES
 FRESH WATER: 171 TONNES
 MISC. TANKS: 41 TONNES
 WATER BALLAST: 419 TONNES
 SCIENTIFIC EQUIPMENT: 45 TONNES
 FISHING EQUIPMENT: 64 TONNES
 TOTAL DEADWEIGHT: 822 TONNES
 CORRESPONDING TO MAX DRAUGHT TO UNDERSIDE KEEL AT FR. 13.5 = 6.43M

MAIN DIMENSIONS:
 LENGTH O.A. 77,50 m
 LENGTH P.P. 68,40 m
 BEAM 16,40/18,60 m
 DEPTH TO 1.DECK 6,30 m
 DEPTH TO 2.DECK 9,10 m
 DEPTH TO 3.DECK 11,80 m
 DEPTH TO 4.DECK 14,30 m
 FRAME SPACING 600 mm



AFTSHIP

FORESHIP

BODY PLAN SCALE 1:50



BILGE KEEL TYP. PROFILE Scale 1:10

REV.	DESCRIPTION:	DATE	APPR.	DATE	REV.	SIGN:
A	SHEET 2 ADDED	25.03.03		25.03.03		WK
B	SOME POPPETS ADDED/RE-ARRANGED ACC. TO INCR.DOCKING WEIGHT(4000MT)	25.03.03		25.03.03		AL
C	DNV RECOMMENDATIONS INCORPORATED	31.03.04		31.03.04		JEL

ORDER FLEKKEFJORD SLIP & MASKINFABRIKK AS YARD No.175

DOCKING PLAN, SHEET 1 OF 2

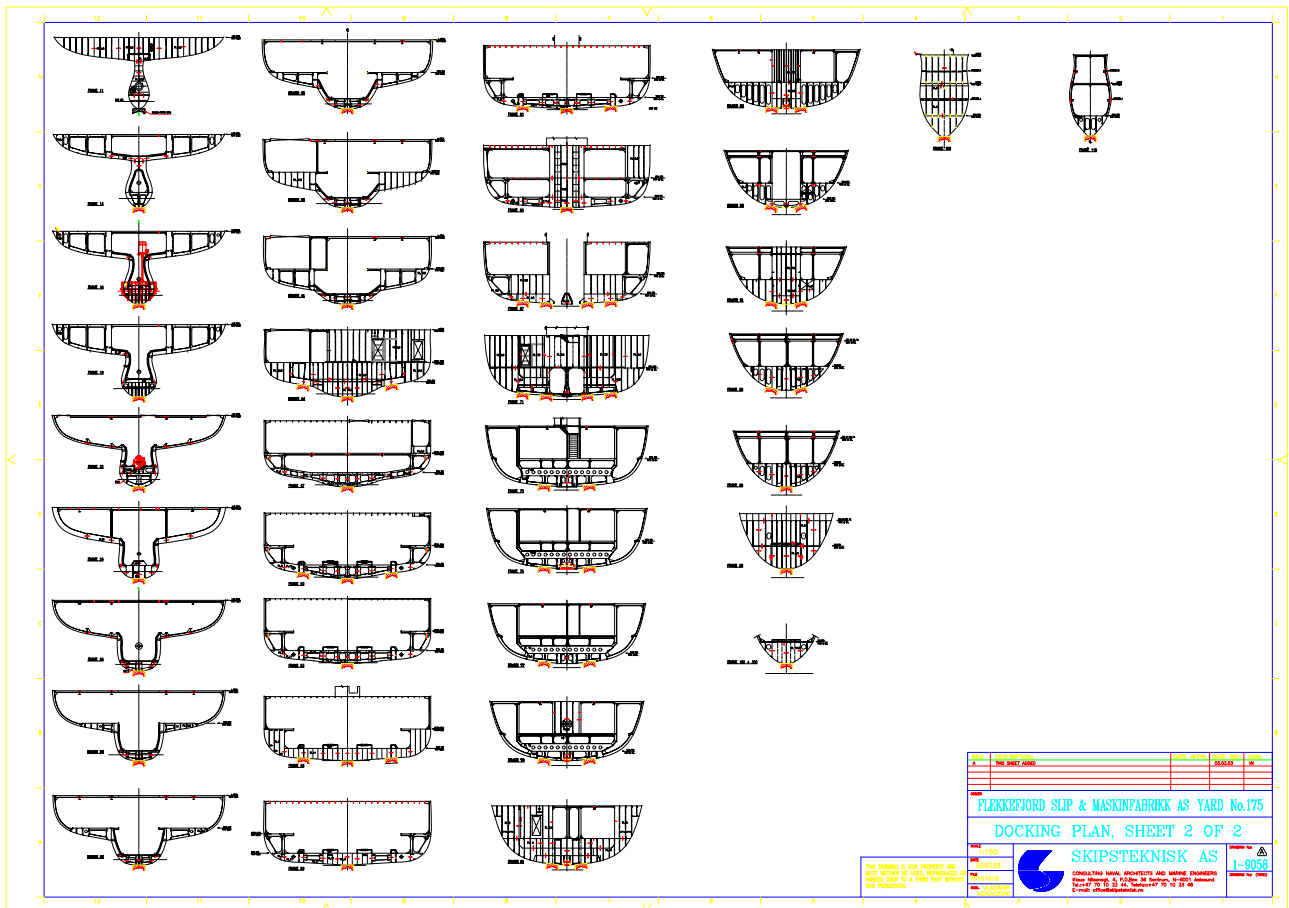
SCALE 1:150
 DATE 27.02.03
 FILE 75101009B
 SIGN. VLADIMIR KOVACEVIC



SKIPSTEKNISK AS
 CONSULTING NAVAL ARCHITECTS AND MARINE ENGINEERS
 Klavus Nilsensgt. 4, P.O.Box 38 Sentrum, N-6001 Aalesund
 Tel:+47 70 10 33 44, Telefax:+47 70 10 33 48
 E-mail: office@skipsteknik.no

DRAWING No 1-9045
 DRAWING No (YARD) REV. C

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NO.	DESCRIPTION	DATE	BY	CHECKED

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DOCKING PLAN, SHEET 2 OF 2

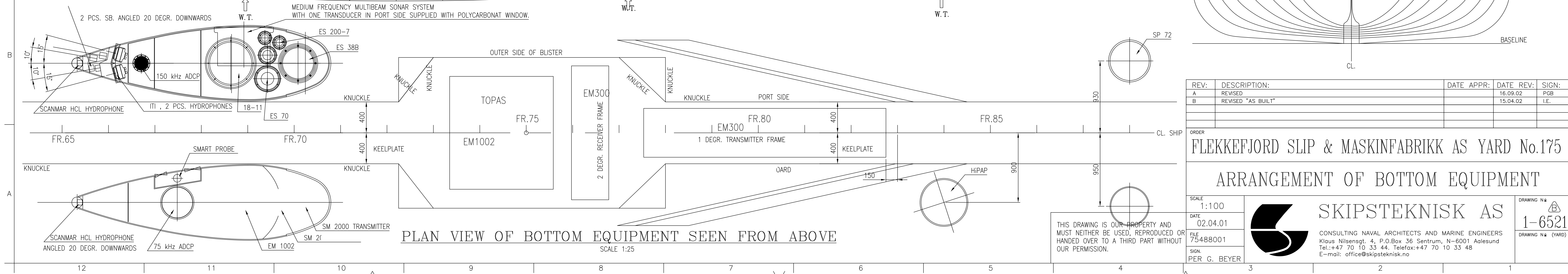
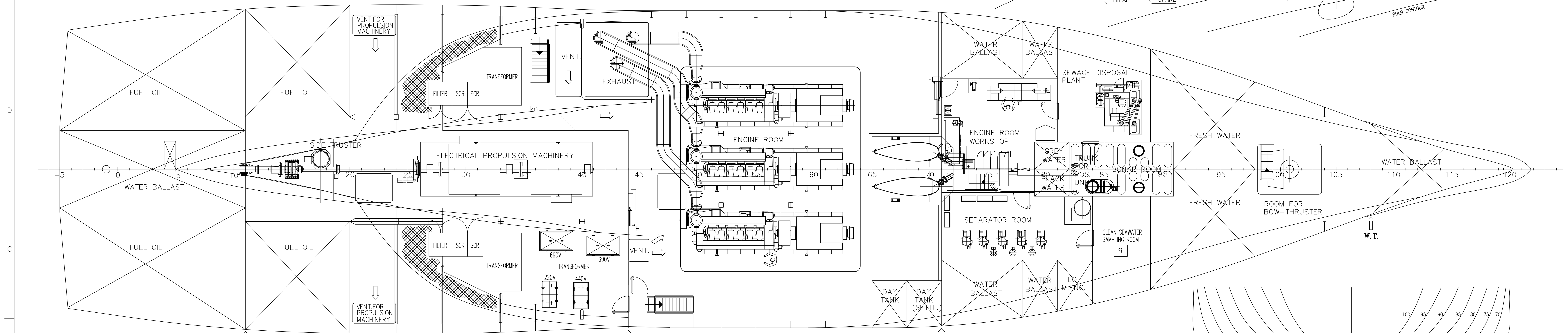
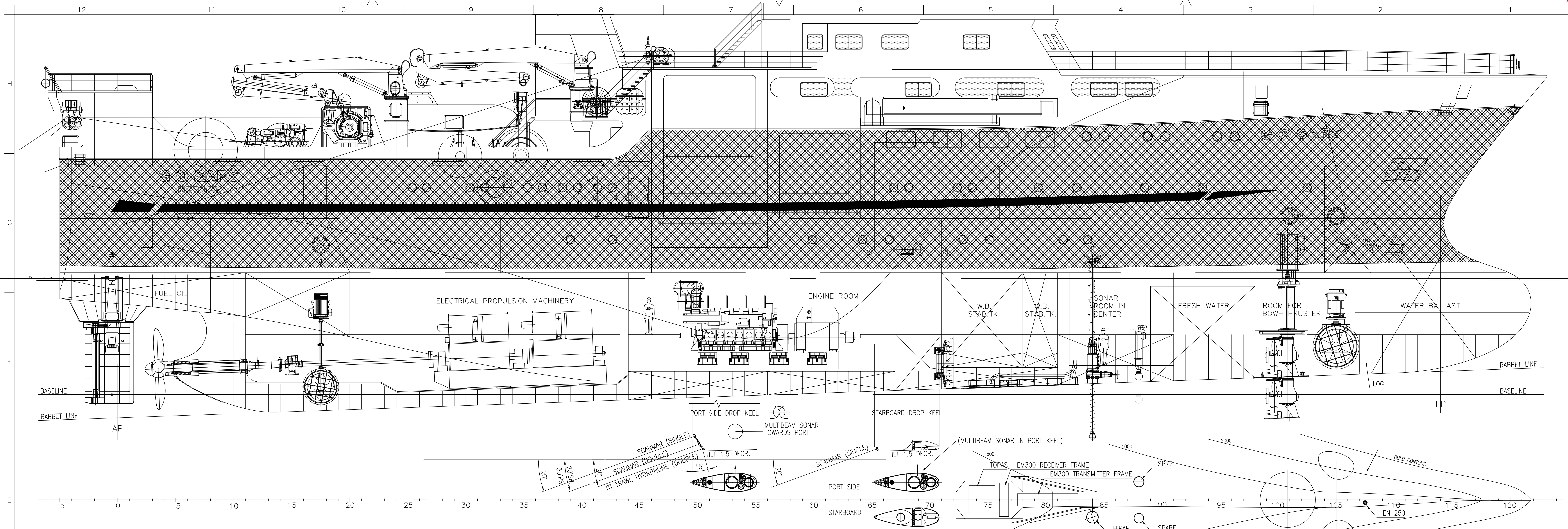
NO. 1150
NO. 1150/03
NO. 01610
NO. 1150/01
NO. 1150/02

SKIPSTEKNISK AS

CONSULTING NAVAL ARCHITECTS AND SHIP ENGINEERS
Skipsveier 10, 1120 Havn, Norway, is a member of the
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1-8058

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REV:	DESCRIPTION:	DATE APPR:	DATE REV:	SIGN:
A	REVISED		16.09.02	PGB
B	REVISED "AS BUILT"		15.04.02	I.E.

ORDER
FLEKKEFJORD SLIP & MASKINFABRIKK AS YARD No.175

ARRANGEMENT OF BOTTOM EQUIPMENT

SCALE: 1:100
 DATE: 02.04.01
 FILE: 75488001

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SKIPSTEKNISK AS
 CONSULTING NAVAL ARCHITECTS AND MARINE ENGINEERS
 Klaus Nilsenstgt. 4, P.O.Box 36 Sentrum, N-6001 Adlesund
 Tel:+47 70 10 33 44; Telefax:+47 70 10 33 48
 E-mail: office@skipsteknisk.no

DRAWING No. **1-6521**
 DRAWING No. (YARD)

PLAN VIEW OF BOTTOM EQUIPMENT SEEN FROM ABOVE

SCALE 1:25

Loading Condition no. : 30

DOCKING CONDITION

FLOATING CONDITION DATA

Mean Draught (moulded) : 5.904 m
 Trim over Lpp (aft +) : -1.093 m
 List (starboard +) ... : 0.010 °

Draft references:

- AT TRANSOM : 6.534 m
 - AT AP : 6.582 m
 - AT AMIDSHIPS : 5.929 m
 - AT FP : 5.273 m
 - DRAFT EXTREME #13.5 : 6.427 m

Freeboard references:

- 1ST DECK - AMIDSHIPS: 0.396 m

Min. vertical distance to Flood Openings:

- downflooding type .. : 9.597 m

Displacement : 3858.115 MT
 LCB (rel. AP) : 34.681 m
 VCB (rel. BL) : 3.485 m
 LCF (rel. AP) : 29.713 m
 TPC - Immersion : 9.966 MT/cm
 Trim Moment : 51.764 MT*m/cm

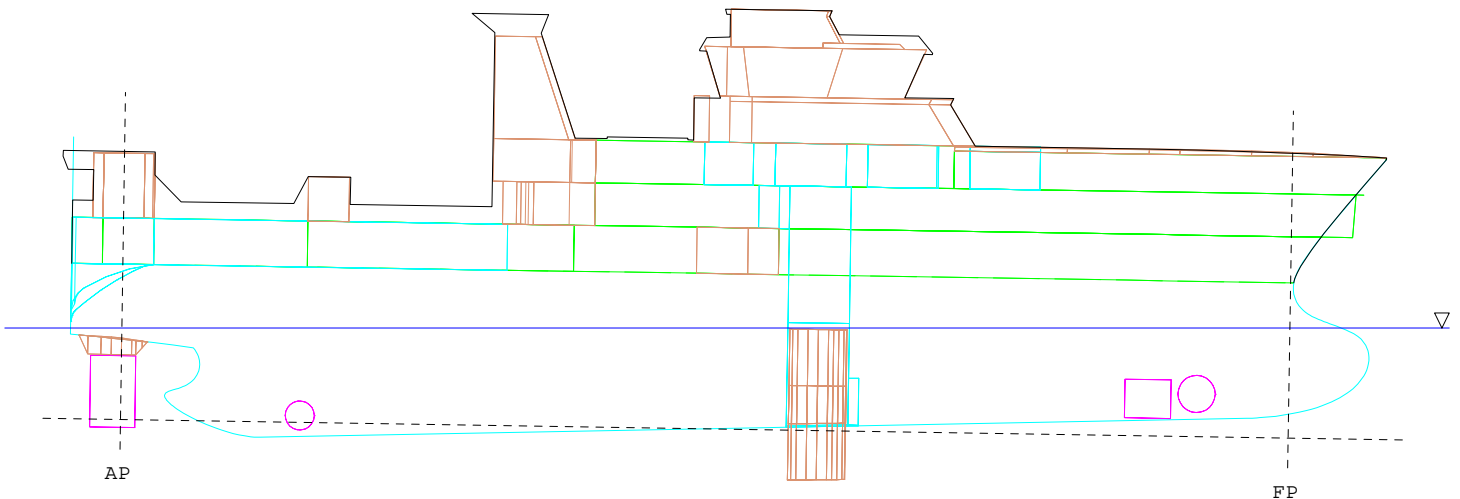
STABILITY DATA

KG (incl. FSC) : 7.491 m
 Free Surface Correction: 0.008 m
 KM (metacentre) : 8.449 m
 GM (incl. FSC) : 0.958 m

 KGmax, intact, calc. . : 7.944 m

WEIGHT SUMMARY

FO - DOCKING : 81.5 MT
 FW - DOCKING : 171.2 MT
 MISC - DOCKING : 40.7 MT
 WB - DOCKING : 419.5 MT
 SCIENTIFIC EQUIPMENT : 44.7 MT
FISHING EQUIPMENT - DOCKING : 63.7 MT
 Total DEADWEIGHT : 821.3 MT

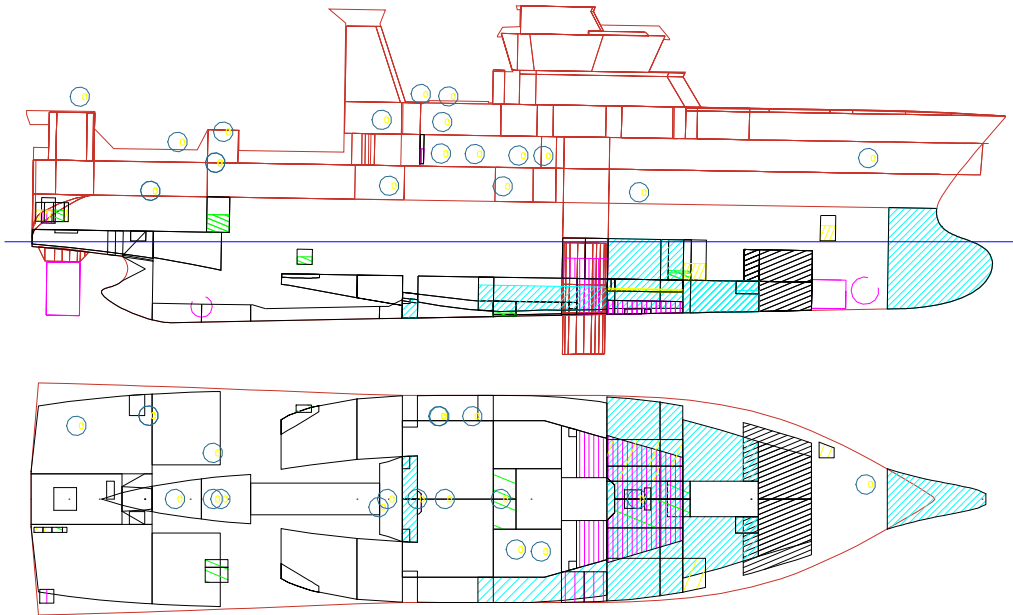


Water Density = 1.025 t/m3

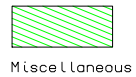
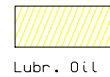
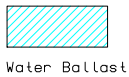
Please note 1

-Floating data are based on hydrostatic for upright vessel (zero heel). List is found by use of GM.

Loading Condition no. : 30
 Condition Id. text : DOCKING CONDITION



○ - UNIT LOADS



WEIGHT LOADS

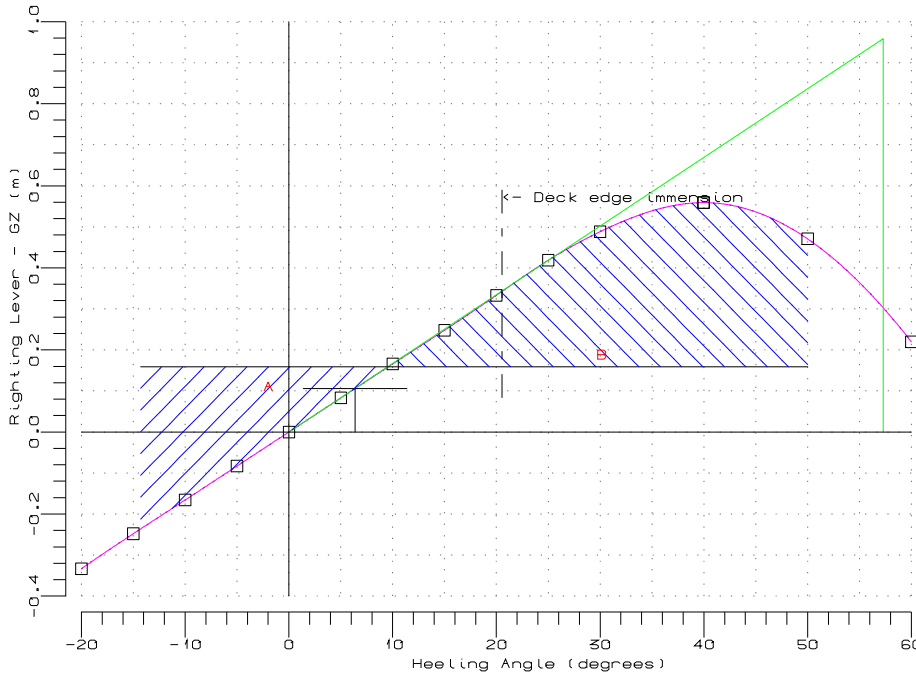
Part no.	Id.text	Weight (MT)	Load (%)	Density (MT/m3)	Distribution		LCG (m)	TCG (m)	VCG (m)	FSCT Moment (MT*m)
					Aft (m)	Fore (m)				
1 FO - DOCKING										
- TK 9	FO HIGH PS	34.598	100.0	0.8500	40.20	48.60	43.279	-2.740	1.394	
- TK 9	FO HIGH SB	34.598	100.0	0.8500	40.20	48.60	43.279	2.740	1.394	
- TK 21	FO SETTling TK SB	5.654	50.0	0.8500	39.00	40.80	39.891	6.904	3.928	1.72
- TK 22	FO DAY TANK SB	5.366	50.0	0.8500	40.80	42.60	41.687	6.827	3.949	1.49
- TK 41	FO HARB. GEN SB	0.848	50.0	0.8500	-2.30	-1.20	-1.750	7.580	7.497	0.10
- TK 47	FO EM. GEN.	0.479	50.0	0.8500	27.60	27.90	27.743	0.300	12.575	0.10
		81.541					42.380	1.008	1.867	3.41
2 FW - DOCKING										
- TK 2	FW HIGH PS	85.590	100.0	1.0000	53.40	58.80	56.235	-2.228	3.697	
- TK 2	FW HIGH SB	85.590	100.0	1.0000	53.40	58.80	56.235	2.228	3.697	
		171.181					56.235	0.000	3.697	
3 MISC - DOCKING										
-	PROVISION	5.000					63.100	-1.150	13.000	
-	CREW & EFFECTS	1.000					45.000	0.000	10.000	
-	LOOSE GRATING DECK 3RD DK	3.420					11.400	0.000	11.800	
- TK 4	SEWAGE TANK SB	1.800	22.8	1.0000	47.40	49.20	48.300	0.700	3.464	0.41
- TK 5	GREY WATER TANK PS	1.400	17.7	1.0000	47.40	49.20	48.300	-0.700	3.383	0.41
- TK 11	COOLING WATER DR PS	1.600	33.2	1.0000	33.60	35.40	34.477	-1.125	0.249	2.07
- TK 20	CROSSOVER TANK	9.178	100.0	1.0250	26.40	27.60	27.014	0.000	0.567	

.... to be continued on next page

Part no.	Id.text	Weight (MT)	Load (%)	Density (MT/m3)	Distribution					FSCT Moment (MT*m)
					Aft (m)	Fore (m)	LCG (m)	TCG (m)	VCG (m)	
- TK 23	LO MAIN ENGINE SB	4.200	41.8	0.9000	48.60	50.40	49.461	5.559	3.933	1.09
- TK 26	BILGE WATER TANK SB	2.200	18.2	1.0000	42.60	48.60	45.777	1.178	2.237	5.76
- TK 28	LO DROP TK M.E. PS	0.900	15.0	0.9000	42.60	48.60	45.618	-2.003	2.221	0.77
- TK 29	LO USED PS	2.300	22.4	0.9000	42.60	48.60	45.600	-3.547	2.267	3.63
- TK 30	FO DRAIN TANK SB	0.900	22.0	0.8500	33.60	35.40	34.464	1.087	0.184	1.76
- TK 31	HO STORAGE SB	2.607	50.0	0.8800	10.80	12.60	11.700	6.000	7.000	0.23
- TK 32	HO STORAGE SB	1.304	50.0	0.8800	10.80	12.60	11.700	5.100	7.000	0.03
- TK 40	SW DRAIN TANK SB	0.588	25.0	1.0250	52.80	54.60	53.700	2.050	2.225	0.34
- TK 42	LO TANK SB	0.222	60.0	0.9000	-2.75	-2.05	-2.400	2.450	7.399	0.00
- TK 43	LO TANK SB	0.222	60.0	0.9000	-2.05	-1.35	-1.700	2.450	7.399	0.00
- TK 44	HO TANK SB	0.264	60.0	0.8800	-1.35	-0.50	-0.925	2.450	7.400	0.00
- TK 45	LO TANK SB	0.111	60.0	0.9000	-0.50	-0.15	-0.325	2.450	7.401	0.00
- TK 46	GREY WATER TANK PS	0.423	50.0	1.0000	18.00	19.20	18.600	-7.150	4.170	0.02
- TK 48	LO THRUSTER PS	1.073	60.0	0.9000	59.40	60.60	59.942	-3.654	7.081	0.07
		40.712					36.619	0.694	5.032	16.61
4 WB - DOCKING										
- TK 1	WB TRIM TANK	115.158	100.0	1.0250	64.80	73.06	67.351	0.000	5.086	
- TK 3	WB DB PS	42.053	100.0	1.0250	48.60	54.60	51.148	-2.890	2.127	
- TK 3	WB DB SB	39.703	100.0	1.0250	48.60	54.60	50.997	2.940	2.098	
- TK 7	WB INTERING TK FWD	49.211	100.0	1.0250	46.80	48.60	47.676	0.000	3.550	
- TK 8	WB INTERING TK AFT	140.665	100.0	1.0250	42.60	46.80	44.632	0.000	3.540	
- TK 13	WB HEELING SB	32.700	76.0	1.0250	32.40	42.60	37.594	6.697	1.798	11.36
		419.491					51.933	0.511	3.552	11.36
5 SCIENTIFIC EQUIPMENT										
- CABLE	W102	6.800					29.260	-6.550	12.820	
- CABLE	W103	6.800					31.940	-6.550	12.820	
- CABLE	W104	5.500					29.330	-6.550	15.320	
- CABLE	W105	0.700					37.380	4.150	12.760	
- CABLE	W106	2.400					35.400	4.000	12.760	
- CABLE	W107	5.500					11.400	-3.650	11.820	
- CABLE	W108	5.000					24.530	0.650	15.410	
- MISC.	SCIENTIFIC	10.000					34.200	0.000	10.300	
- FOCUS	WINCH	2.000					29.780	0.000	17.350	
		44.700					28.535	-2.895	12.929	
6 FISHING EQUIPMENT - DOCKING										
- PELAGIC	TRAWLWIRE	28.770					8.400	0.000	13.400	
- DEMERSAL	TRAWLWIRE	25.512					12.000	0.000	14.270	
- SWEEPS		2.480					25.200	0.000	10.200	
- GILSON	WIRE	0.408					27.600	0.000	17.500	
- NETSOUNDER	CABLE	4.000					0.600	-5.800	16.860	
- ROPES		1.500					6.300	-6.600	9.500	
- SHACKLES	ETC.	1.000					6.300	-6.600	9.500	
		63.670					10.047	-0.624	13.714	
DEAD WEIGHT		821.295					46.601	0.189	4.786	31.38
LIGHT WEIGHT		3036.790					31.370	-0.051	8.212	
TOTAL WEIGHT		3858.085					34.612	0.000	7.483	31.38

Loading Condition no. : 30
 Condition Id. text : DOCKING CONDITION

INTACT STABILITY DATA (GZ-curve, Areas, Particulars & Criteria Control)



Angle (degr.)	GZ (m)	Area (m*rad)
-20.000	-0.333	-0.0578
-15.000	-0.248	-0.0325
-10.000	-0.166	-0.0145
-5.000	-0.083	-0.0036
0.000	0.000	0.0000
5.000	0.083	0.0036
10.000	0.166	0.0145
15.000	0.248	0.0325
20.000	0.333	0.0578
25.000	0.418	0.0907
30.000	0.488	0.1304
39.950	0.559	0.2230
40.000	0.559	0.2235
50.000	0.471	0.3159
60.000	0.220	0.3784

Deck immersion : 20.527 °
 Maximum GZ at : 39.950 °
 Area, 0 - 30 : 0.1304 m*rad
 Area, 0 - 40 : 0.2235 m*rad
 Area, 30 - 40 : 0.0932 m*rad
 Area, 0 - maxGZ : 0.2230 m*rad
 GM : 0.958 m

Heel to starboard side
 Applied VCG : 7.491 m
 TCG : 0.000 m

IMO - WIND & ROLLING DATA

Heel from wind : 6.372 °
 Heeling lever : 0.106 m
 -Proj.lat.Area : 845.516 m
 -Wind mom. arm : 9.385 m
 -Wind Speed : 29.000 m/s
 -Wind Pressure : 504.000 N/m2

Rolling angle : 20.679 °
 - X1: 0.934 , X2: 0.912
 - r: 0.891 , s: 0.056
 - k: 1.000

Area A : 0.0824 m*rad
 Area B : 0.1908 m*rad

Table of intact stability criteria

TYPE : STANDARD > 50 TONNES + WIND IMO A.562

Code	Id. text		Actual value	Concl-usion	KGmax (m)
GZMil	Minimum GZ at angle greater than 30.0°	: 0.20 m	0.559	OK	8.082
GZAng	Minimum heel angle for GZmax, δ	: 25.00 °	40.000	OK	8.477
GMMin	Minimum GM	: 0.15 m	0.958	OK	8.299
GZArl	Minimum GZarea (0.0-30.0)°	: 0.055 m*rad	0.130	OK	8.053
GZArl	Minimum GZarea (0.0-40.0)°	: 0.090 m*rad	0.224	OK	8.062
GZArl	Minimum GZarea (30.0-40.0)°	: 0.030 m*rad	0.093	OK	8.123
A.562	IMO A.562(14), Severe wind & rolling	Wind pressure = 504.0 Pa	----	OK	7.944

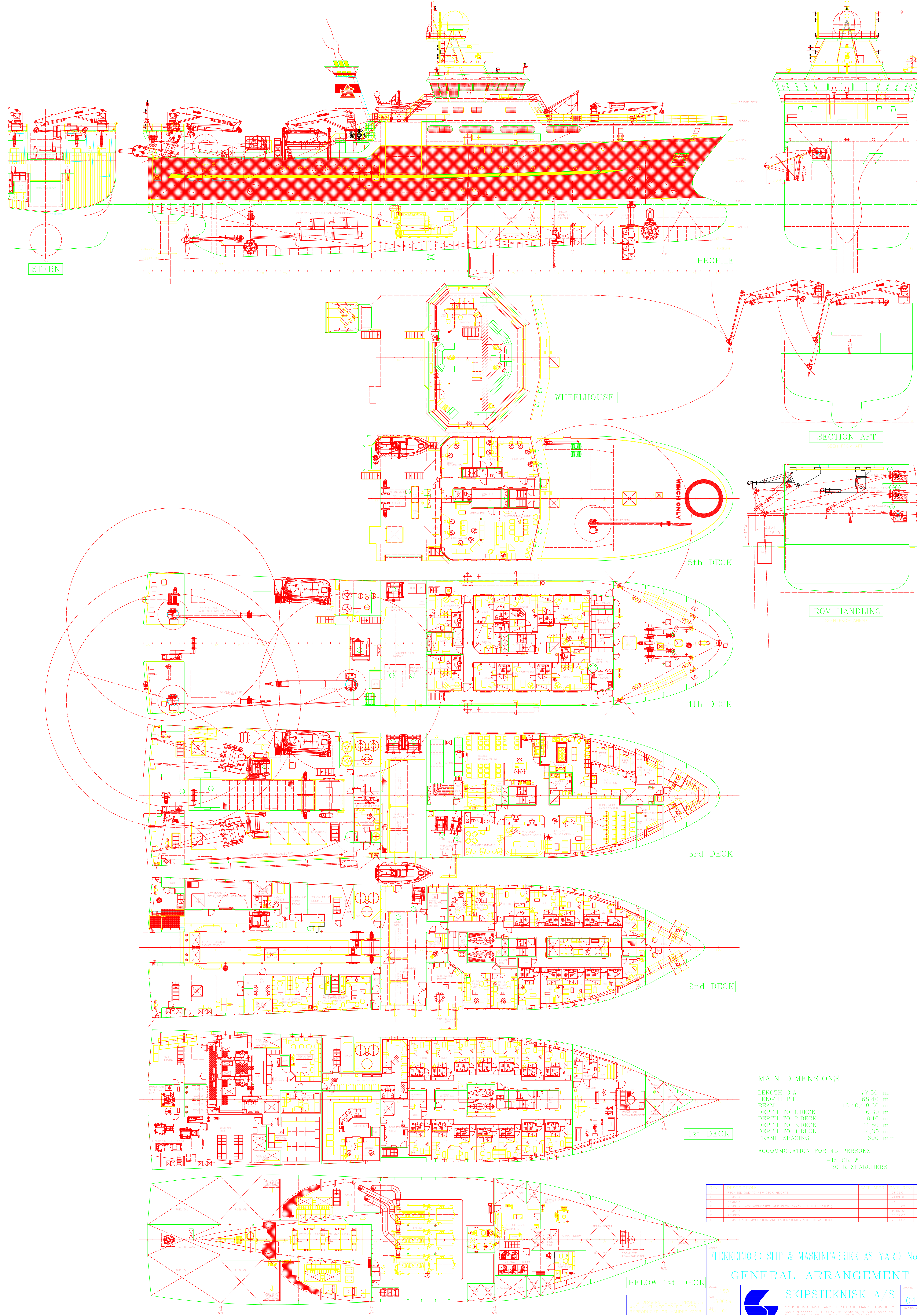
δ : angle for maximum GZ
 GZarea : area of righting lever

Intact Stability conclusion : OK

Resulting KGmax (m): 7.944
 KG (incl. correction) (m): 7.491
 Intact stability margin (m): 0.453

Please note !

-GM is calculated based on metacentric height (KMT) for upright vessel (zero heel)
 -IMO Wind & Roll: Recommended max angle of heel from wind is 16 degrees or 80% of angle for deck immersion



MAIN DIMENSIONS:

LENGTH O.A. 77.50 m
 LENGTH P.P. 68.40 m
 BEAM 16.40/18.60 m
 DEPTH TO 1 DECK 6.30 m
 DEPTH TO 2 DECK 9.10 m
 DEPTH TO 3 DECK 11.80 m
 DEPTH TO 4 DECK 14.30 m
 FRAME SPACING 600 mm

ACCOMMODATION FOR 45 PERSONS
 -15 CREW
 -30 RESEARCHERS

NO.	DESCRIPTION	UNIT	QUANTITY
1	STEEL STRUCTURE	m³	1200
2	WOODWORK	m²	500
3	PAINTWORK	m²	1000
4	ELECTRICAL INSTALLATION	h	200
5	MECHANICAL INSTALLATION	h	150
6	PLUMBING INSTALLATION	h	100
7	WELDING	h	300
8	LABOUR	h	1000
9	PROFIT	h	100
10	TOTAL	h	2550

FLEKKEFJORD SLIP & MASKINFABRIKK AS YARD No.17

GENERAL ARRANGEMENT

DATE: 201209
 SCALE: 1:100
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

SKIPSTEKNISK A/S

CONSULTING NAVAL ARCHITECTS AND MARINE ENGINEERS
 Skovveien 3, P.O. Box 36, Sjøtorp, N-2001 Askvoll

PROJECT NO. 04650

SHIPSHAPE - VERSION 4.1 / 2000, DATE : 2002-10-30

PAGE

SKIPSTEKNISK AS/T.HILDRE

Project : G.O.SARS

File : 99057B

H Y D R O S T A T I C A L R E S U L T S

Displ. = Displacement in tonnes
LCB = Long. centre of buoyancy from AP (+/- = Fore/Aft)
VCB = Vert. centre of buoyancy above base line
KMT = Transverse metacenter above base line
Immersion = Displacement change pr. cm
MT1 = Moment to trim
LCF = Long. centre of flotation from AP (+/- = Fore/Aft)
WSurf = Wet surface of hull (separate/external volumes not included)

NOTE: Calculations apply for water with density : 1.025 tonnes/m³
Shell plating = 12 mm thickness

All draughts are moulded.

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H Y D R O S T A T I C S

SHEET 1

TRIM = -1.00 m (Pos=Aft)

Draught m	Displ. t	LCB m	VCB m	KMT m	Immersion t/cm	MT1 t*m/cm	LCF m	WSurf m2
4.800	2835.08	35.656	2.818	8.349	8.608	34.12	33.570	1262.20
4.850	2878.31	35.623	2.848	8.347	8.671	34.84	33.400	1274.27
4.900	2921.84	35.589	2.878	8.344	8.734	35.57	33.228	1285.97
4.950	2965.47	35.555	2.908	8.346	8.798	36.31	33.054	1296.26
5.000	3009.65	35.517	2.938	8.341	8.861	37.06	32.879	1308.53
5.050	3054.40	35.475	2.968	8.340	8.925	37.82	32.701	1320.84
5.100	3099.23	35.433	2.999	8.343	8.989	38.59	32.522	1333.62
5.150	3144.02	35.394	3.029	8.346	9.054	39.38	32.341	1346.54
5.200	3190.03	35.343	3.059	8.350	9.119	40.21	32.157	1359.56
5.250	3235.03	35.305	3.089	8.353	9.185	41.05	31.969	1372.39
5.300	3281.11	35.257	3.119	8.358	9.252	41.90	31.776	1385.51
5.350	3327.53	35.208	3.150	8.365	9.320	42.76	31.579	1399.20
5.400	3374.32	35.156	3.180	8.372	9.390	43.64	31.378	1412.97
5.450	3421.37	35.104	3.210	8.379	9.460	44.53	31.173	1426.56
5.500	3468.85	35.049	3.241	8.386	9.531	45.41	30.965	1440.21
5.550	3516.71	34.992	3.271	8.396	9.600	46.22	30.763	1454.05
5.600	3564.92	34.934	3.301	8.405	9.666	47.04	30.571	1467.42
5.650	3613.45	34.874	3.332	8.415	9.727	47.86	30.393	1480.31
5.700	3662.29	34.813	3.362	8.426	9.785	48.69	30.228	1492.97
5.750	3711.43	34.751	3.393	8.439	9.839	49.53	30.076	1504.97
5.800	3760.84	34.688	3.423	8.451	9.889	50.39	29.940	1516.73
5.850	3810.51	34.624	3.454	8.463	9.934	51.24	29.817	1527.96
5.900	3860.42	34.560	3.484	8.475	9.977	51.67	29.705	1539.05
5.950	3910.29	34.499	3.515	8.472	10.016	52.10	29.599	1550.09
6.000	3960.47	34.436	3.545	8.481	10.051	52.53	29.499	1560.61
6.050	4010.83	34.373	3.575	8.489	10.084	52.95	29.404	1570.88
6.100	4061.36	34.311	3.605	8.496	10.112	53.37	29.316	1581.22
6.150	4112.03	34.249	3.636	8.503	10.138	53.78	29.235	1591.46
6.200	4162.85	34.187	3.666	8.509	10.160	54.19	29.160	1601.28
6.250	4213.71	34.126	3.696	8.513	10.181	54.44	29.092	1610.82
6.300	4264.67	34.065	3.726	8.517	10.201	54.67	29.029	1620.46

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H Y D R O S T A T I C S

SHEET 2

TRIM = 0.00 m (Pos=Aft)

Draught m	Displ. t	LCB m	VCB m	KMT m	Immersion t/cm	MT1 t*m/cm	LCF m	WSurf m2
4.800	2853.73	34.348	2.822	8.618	9.115	40.43	31.828	1299.29
4.850	2898.90	34.314	2.853	8.616	9.194	41.48	31.623	1313.63
4.900	2945.04	34.271	2.885	8.619	9.272	42.54	31.422	1327.96
4.950	2991.50	34.226	2.917	8.624	9.348	43.63	31.225	1342.65
5.000	3038.46	34.178	2.949	8.628	9.424	44.73	31.031	1356.99
5.050	3085.85	34.128	2.980	8.633	9.498	45.85	30.841	1371.17
5.100	3133.63	34.075	3.012	8.639	9.571	46.98	30.656	1384.71
5.150	3181.76	34.022	3.044	8.645	9.642	48.03	30.476	1397.69
5.200	3230.24	33.966	3.076	8.653	9.710	48.69	30.306	1410.24
5.250	3279.05	33.910	3.108	8.663	9.772	49.36	30.148	1422.55
5.300	3328.16	33.852	3.140	8.673	9.830	50.03	30.004	1434.23
5.350	3377.56	33.794	3.172	8.683	9.882	50.70	29.874	1445.77
5.400	3426.97	33.738	3.204	8.677	9.930	51.37	29.759	1456.88
5.450	3476.74	33.681	3.236	8.680	9.972	52.05	29.659	1467.69
5.500	3526.71	33.624	3.268	8.682	10.010	52.69	29.575	1478.49
5.550	3576.87	33.566	3.299	8.683	10.044	53.05	29.499	1489.05
5.600	3627.21	33.509	3.331	8.684	10.077	53.40	29.427	1499.05
5.650	3677.71	33.453	3.362	8.685	10.109	53.74	29.359	1508.94
5.700	3728.36	33.397	3.394	8.685	10.138	54.07	29.294	1518.90
5.750	3779.15	33.341	3.425	8.684	10.167	54.39	29.233	1528.78
5.800	3830.08	33.286	3.456	8.683	10.194	54.71	29.176	1538.44
5.850	3881.14	33.232	3.487	8.682	10.219	55.01	29.122	1548.02
5.900	3932.31	33.178	3.519	8.680	10.243	55.21	29.072	1557.52
5.950	3983.59	33.124	3.550	8.677	10.264	55.40	29.023	1566.86
6.000	4034.98	33.072	3.580	8.674	10.284	55.57	28.976	1576.12
6.050	4086.46	33.020	3.611	8.669	10.302	55.73	28.931	1585.39
6.100	4138.03	32.969	3.642	8.664	10.317	55.88	28.887	1594.52
6.150	4189.69	32.918	3.673	8.660	10.331	56.02	28.846	1603.74
6.200	4241.42	32.869	3.703	8.655	10.343	56.14	28.807	1612.91
6.250	4293.22	32.820	3.733	8.651	10.353	56.24	28.769	1622.02
6.300	4345.10	32.771	3.764	8.646	10.364	56.33	28.734	1631.08

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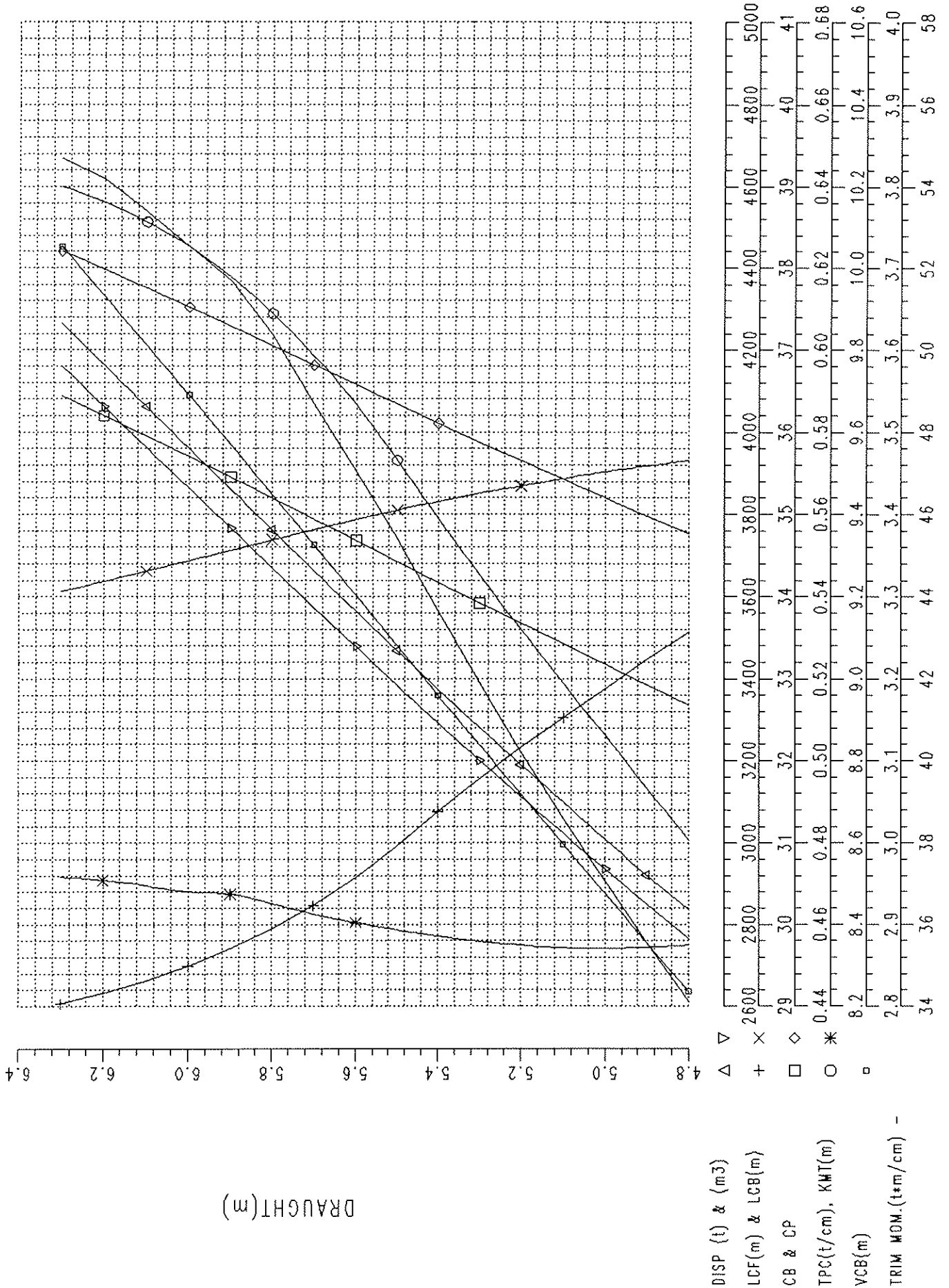
H Y D R O S T A T I C S

SHEET 3

TRIM = 1.00 m (Pos=Aft)

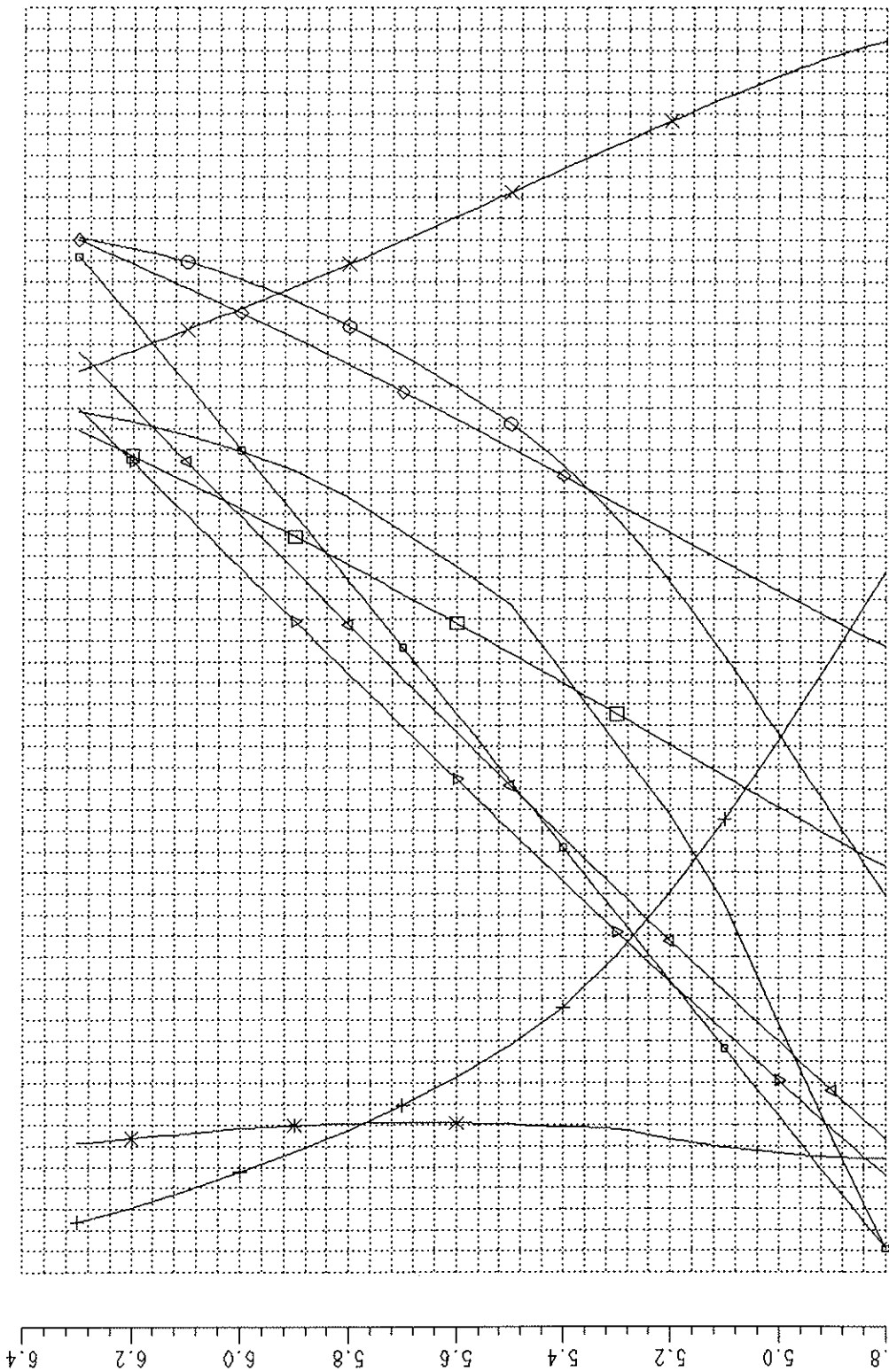
Draught m	Displ. t	LCB m	VCB m	KMT m	Immersion t/cm	MT1 t*m/cm	LCF m	WSurf m2
4.800	2900.66	32.782	2.866	9.014	9.686	48.83	29.819	1351.92
4.850	2949.13	32.734	2.899	9.002	9.743	49.40	29.714	1363.54
4.900	2998.01	32.683	2.933	9.002	9.796	49.98	29.615	1375.08
4.950	3047.15	32.633	2.966	9.001	9.845	50.55	29.525	1386.39
5.000	3096.52	32.583	2.999	8.998	9.891	51.12	29.442	1396.99
5.050	3146.12	32.533	3.032	8.993	9.934	51.68	29.369	1407.43
5.100	3195.91	32.483	3.065	8.987	9.974	52.24	29.303	1417.78
5.150	3245.90	32.434	3.098	8.979	10.010	52.75	29.247	1427.84
5.200	3296.06	32.385	3.131	8.970	10.044	53.09	29.196	1437.72
5.250	3346.38	32.336	3.163	8.960	10.076	53.42	29.148	1447.58
5.300	3396.86	32.289	3.196	8.951	10.107	53.75	29.102	1457.24
5.350	3447.50	32.242	3.228	8.941	10.136	54.05	29.060	1466.84
5.400	3498.27	32.195	3.260	8.931	10.163	54.35	29.021	1476.30
5.450	3549.17	32.149	3.292	8.921	10.190	54.63	28.985	1485.59
5.500	3600.21	32.104	3.324	8.911	10.214	54.89	28.951	1494.96
5.550	3651.36	32.060	3.356	8.900	10.238	55.11	28.921	1504.26
5.600	3702.62	32.016	3.388	8.890	10.260	55.30	28.892	1513.52
5.650	3753.99	31.973	3.420	8.879	10.281	55.49	28.866	1522.75
5.700	3805.46	31.931	3.451	8.868	10.301	55.66	28.841	1531.77
5.750	3857.03	31.890	3.483	8.856	10.319	55.81	28.818	1540.72
5.800	3908.69	31.849	3.514	8.844	10.337	55.95	28.797	1549.67
5.850	3960.43	31.809	3.545	8.833	10.353	56.08	28.778	1558.75
5.900	4012.25	31.770	3.576	8.821	10.368	56.20	28.760	1567.86
5.950	4064.14	31.731	3.607	8.810	10.383	56.31	28.742	1576.89
6.000	4116.09	31.693	3.638	8.800	10.396	56.40	28.725	1585.86
6.050	4168.12	31.656	3.669	8.790	10.409	56.48	28.707	1594.65
6.100	4220.21	31.620	3.700	8.781	10.420	56.54	28.689	1603.34
6.150	4272.36	31.584	3.730	8.772	10.430	56.59	28.671	1612.21
6.200	4324.57	31.549	3.761	8.763	10.440	56.62	28.653	1621.19
6.250	4376.83	31.514	3.791	8.754	10.449	56.68	28.636	1630.18
6.300	4429.15	31.480	3.822	8.745	10.457	56.72	28.618	1639.19

HYDROSTATICAL CURVES, TRIM (pos=aft): -1.00 m



HYDROSTATICAL CURVES, TRIM (pos=aft):

0.00 m



Parameter	2600	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000
DISP (t) & (m³)	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5
LCF (m) & LCB (m)	0.44	0.46	0.48	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68
CB & CP	8.4	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.2	10.4	10.6	10.8
TPC (t/cm), KWT (m)	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
VCB (m)	40	42	44	46	48	50	52	54	56	58	60	62	64
TRIM MOM. (t+m/cm)													

DRAUGHT (m)

DISP (t) & (m³)

LCF (m) & LCB (m)

CB & CP

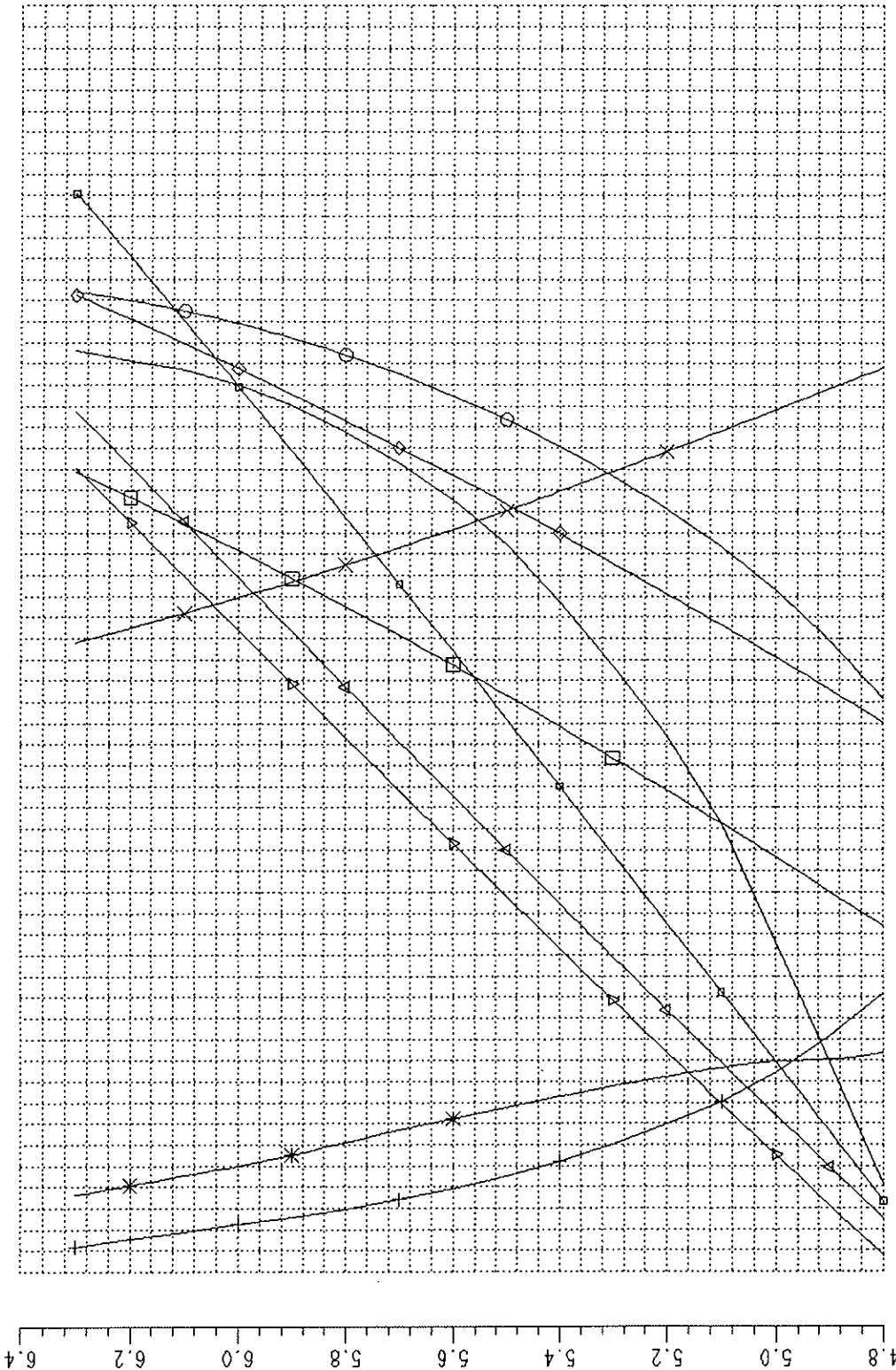
TPC (t/cm), KWT (m)

VCB (m)

TRIM MOM. (t+m/cm)

HYDROSTATICAL CURVES, TRIM (pos=aft):

1.00 m



Symbol	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200
△	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5
×	0.46	0.48	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.70
□	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.2	10.4	10.6	10.8	11.0
○	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
◇	48	49	50	51	52	53	54	55	56	57	58	59	60

DRAUGHT(m)

DISP (t) & (m³)

LCF(m) & LCB(m)

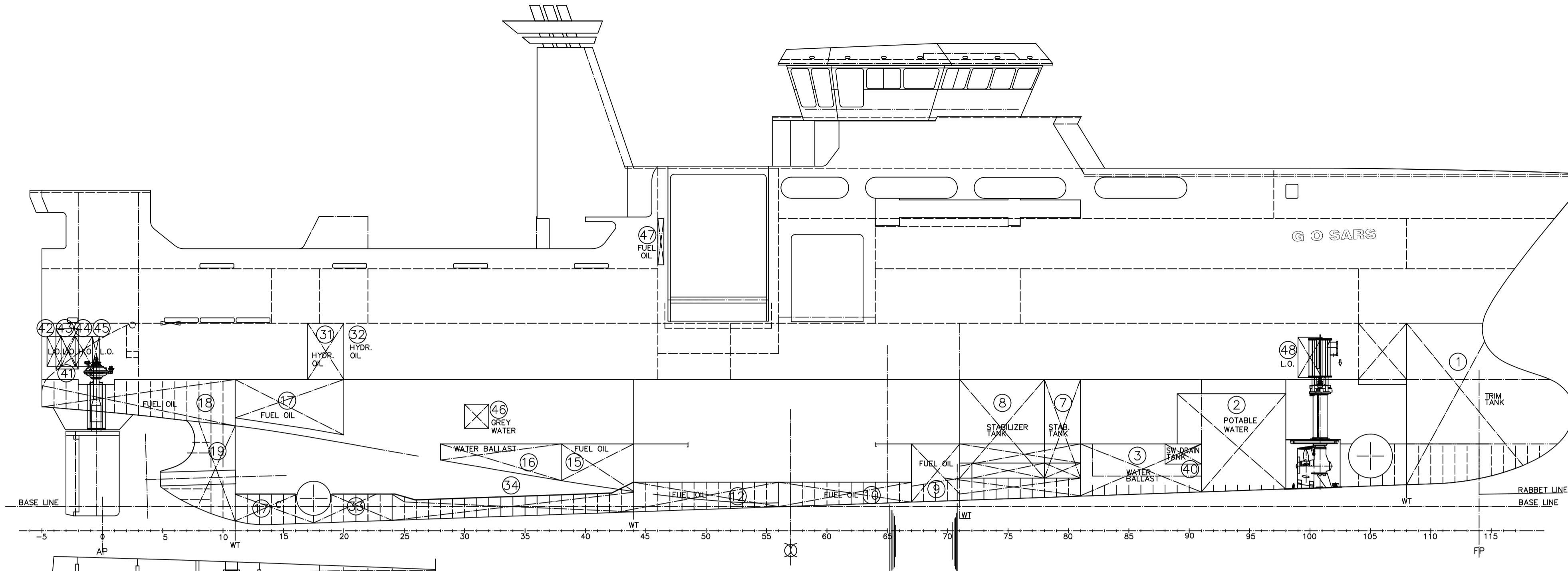
CB & CP

TPC(t/cm), KMT(m)

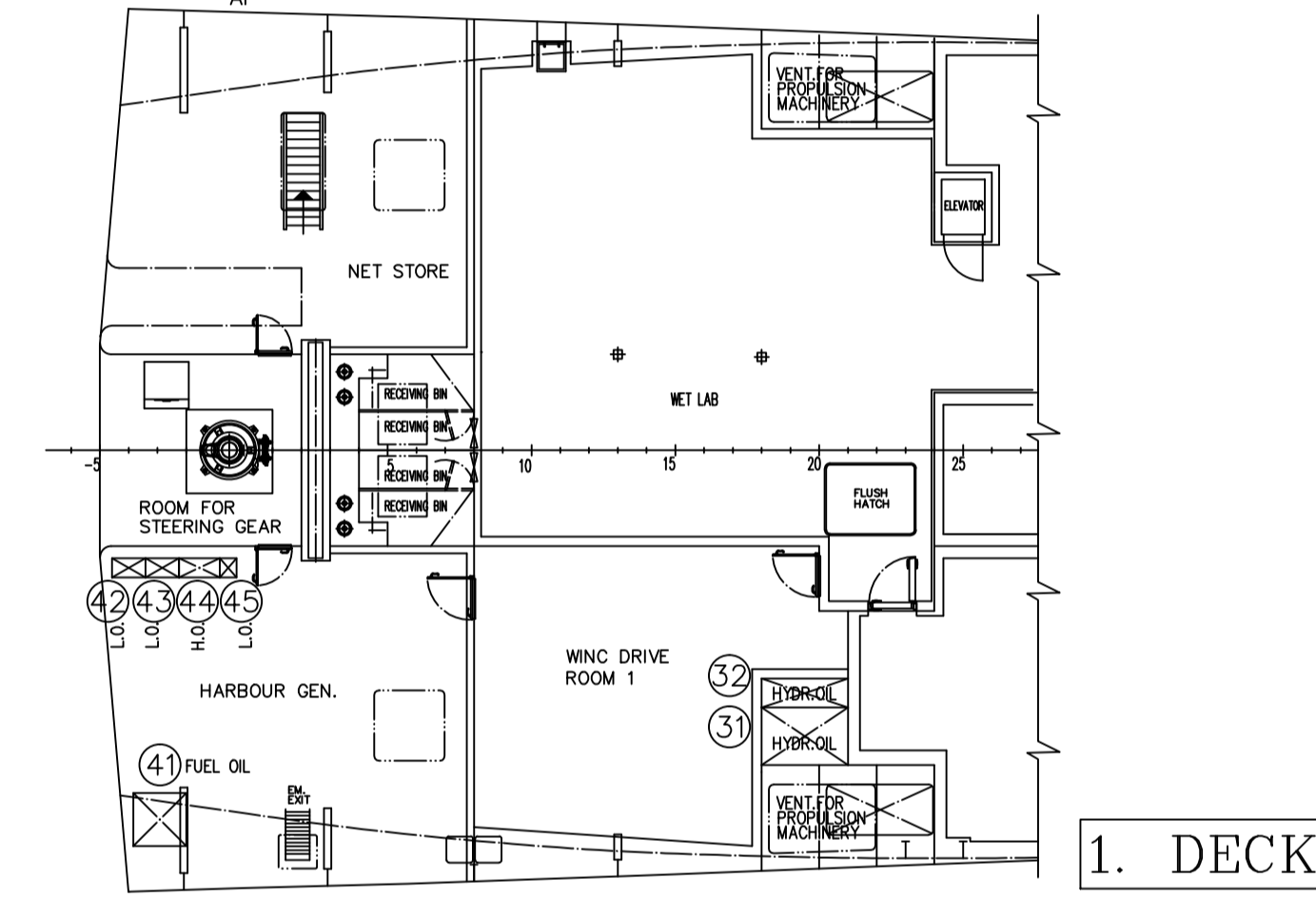
VCB(m)

TRIM MOM.(t*m/cm) -

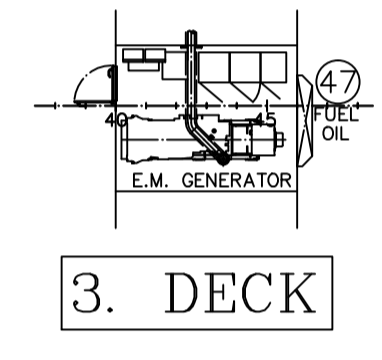
TANK CAPACITY PLAN



WHEELHOUSE
5. DECK
4. DECK
3. DECK
2. DECK
1. DECK
TANK TOP
PROFILE



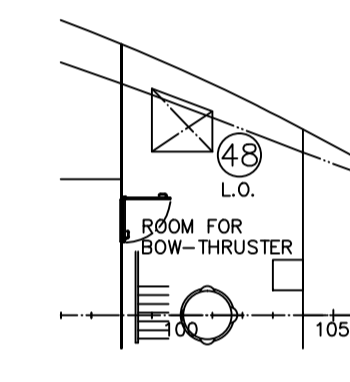
1. DECK



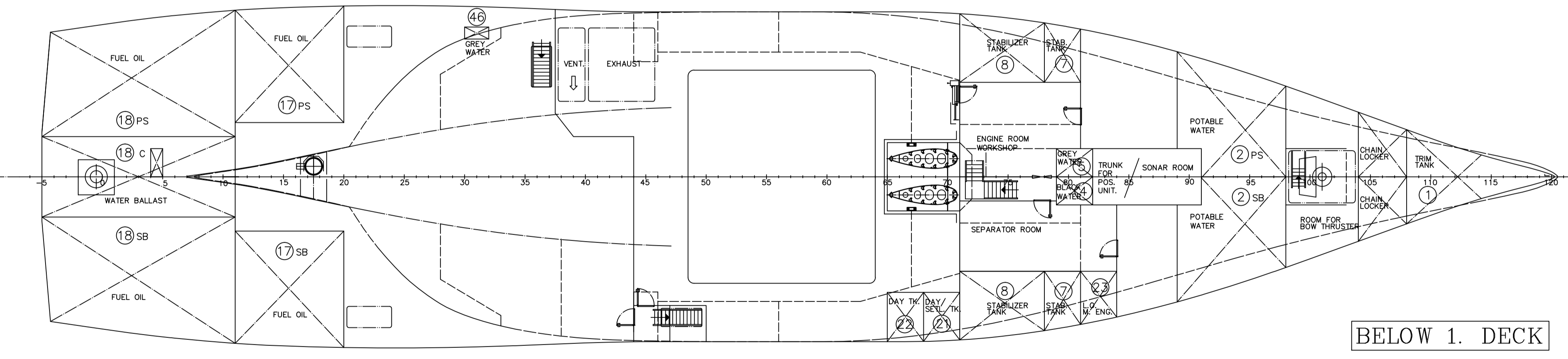
3. DECK

MAIN DIMENSIONS:

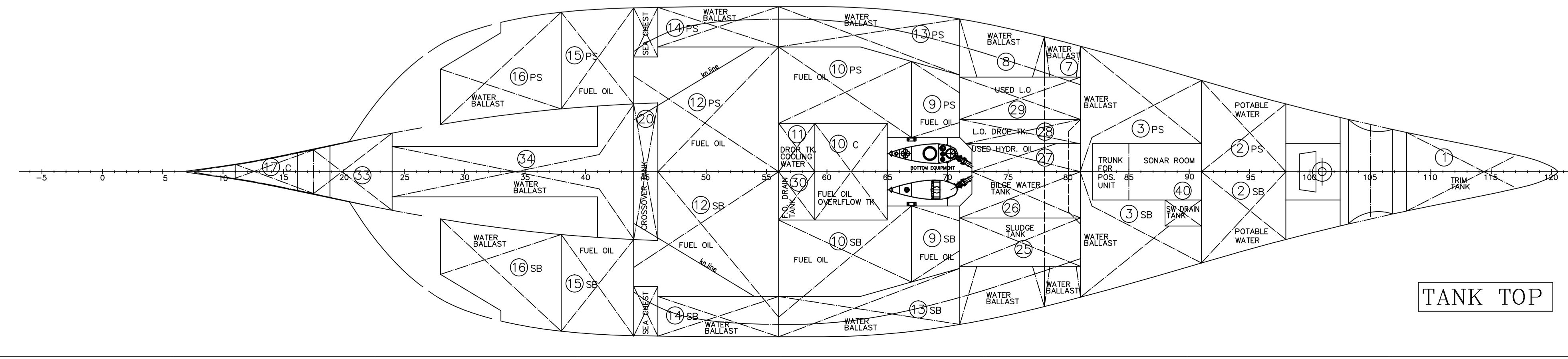
LENGTH O.A	77.50 m
LENGTH P.P.	68.40 m
BEAM	16.40/18.60 m
DEPTH TO 1. DECK	6.30 m
DEPTH TO 2. DECK	9.10 m
DEPTH TO 3. DECK	11.80 m
DEPTH TO 4. DECK	14.30 m
FRAME SPACING	600 mm



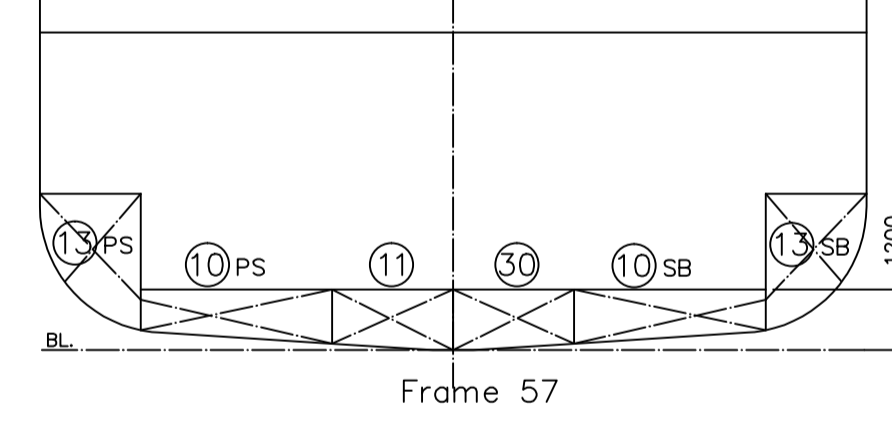
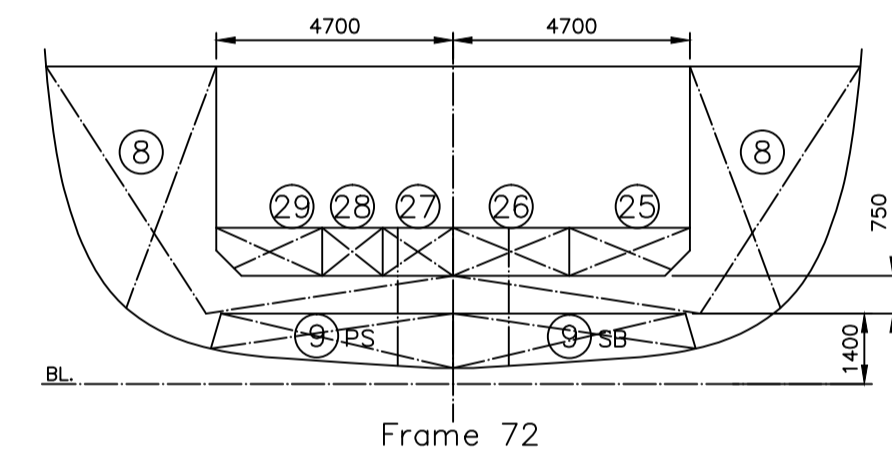
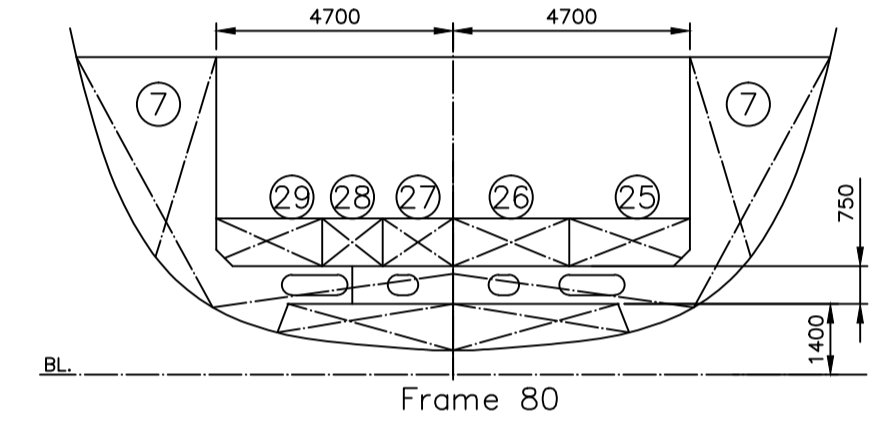
1st DECK



BELOW 1. DECK



TANK TOP



MARINE DIESEL OIL - (0.85T/m³)

TK.	HEIGHT OF AIR PIPE ABOVE BL. (m)	DESCRIPTION	VOL. (m ³)	LCG FWD ABOVE BL. (m)	VCG ABOVE BL. (m)	MAX I ₁ (m)
9SB	15.060	FO HIGH TANK SB	40,70	43,28	1,39	55,0
9PS	15.060	FO HIGH TANK PS	40,70	43,28	1,39	55,0
10PS	15.060	FO DOUBLE BOTTOM TANK	21,18	36,75	0,76	31,4
10SB	15.060	FO DOUBLE BOTTOM TANK	21,18	36,75	0,76	31,4
10C	15.060	FO OVERFLOW TK.	17,72	37,17	0,68	33,1
12PS	15.060	FO DOUBLE BOTTOM TANK	38,53	30,48	0,71	125,7
12SB	15.060	FO DOUBLE BOTTOM TANK	38,53	30,48	0,71	125,7
15PS	15.060	FO WING TANK PS	26,08	24,71	2,25	33,3
15SB	15.060	FO WING TANK SB	26,08	24,71	2,25	33,3
17PS	15.060	FO WING TANK PS	57,22	9,50	5,25	84,4
17SB	15.060	FO WING TANK SB	57,22	9,50	5,25	84,4
18PS	15.060	FO STERN TANK PS	59,44	2,58	5,63	147,9
18SB	15.060	FO STERN TANK SB	60,65	2,64	5,64	160,9
21	15.060	FO DAY TANK (SETL.)	13,30	39,89	4,72	2,1
22	15.060	FO DAY TANK	12,63	41,69	4,74	2,0
41	-	FO HARB. GEN. SB	1,99	-1,75	7,95	0,1
47	-	FO EM. GEN.	1,13	27,74	13,15	0,1
TOTAL VOLUME			534,28			

WATER BALLAST (1.025 T/m³)

TK.	HEIGHT OF AIR PIPE ABOVE BL. (m)	DESCRIPTION	VOL. (m ³)	LCG FWD ABOVE BL. (m)	VCG ABOVE BL. (m)	MAX I ₁ (m)
1	15.060	FOREPEAK TANK	112,35	67,35	5,09	20,7
3PS	15.060	WB HIGH TANK PS	41,03	51,15	2,13	42,1
3SB	15.060	WB HIGH TANK SB	38,74	51,00	2,10	37,4
7	15.060	INTERING TANK FWD	48,01	47,68	3,55	386,2
8	15.060	INTERING TANK AFT	137,23	44,63	3,54	1092,2
13PS	12.560	WB HEELING TANK PS	41,98	37,65	2,05	11,7
13SB	12.560	WB HEELING TANK SB	41,98	37,65	2,05	11,7
14PS	12.560	WB WING TANK PS	22,22	30,75	2,08	3,9
14SB	12.560	WB WING TANK SB	22,22	30,75	2,08	3,9
16PS	12.560	WB WING TANK PS	22,23	20,41	2,57	43,8
16SB	12.560	WB WING TANK SB	22,23	20,41	2,57	43,8
18C	12.560	WB STERN TANK C	53,19	1,94	5,37	56,7
34	12.560	WB DOUBLE BOTTOM TK.	32,60	21,18	0,10	31,2
TOTAL VOLUME			638,30			

LUBRICATING OIL (0.90 T/m³)

TK.	HEIGHT OF AIR PIPE ABOVE BL. (m)	DESCRIPTION	VOL. (m ³)	LCG FWD ABOVE BL. (m)	VCG ABOVE BL. (m)	MAX I ₁ (m)
23	15.060	LO TANK MAIN ENG.	11,17	49,47	4,85	2,3
28	15.060	L.O. MAIN ENG. DROP TK.	6,66	45,62	2,63	0,8
29	15.060	USED LUB. OIL	11,42	45,60	2,64	4,6
42	-	LO TANK THRUSTER AFT	0,41	-2,40	7,70	0,0
43	-	LO TANK HARB. GEN.	0,41	-1,70	7,70	0,0
45	-	LO TANK GUN COMPR.	0,21	-0,33	7,70	0,0
48	-	LO TANK THRUSTER FWD	1,99	59,95	7,47	0,1
TOTAL VOLUME			32,27			

HYDRAULIC OIL (0.88 T/m³)

TK.	HEIGHT OF AIR PIPE ABOVE BL. (m)	DESCRIPTION	VOL. (m ³)	LCG FWD ABOVE BL. (m)	VCG ABOVE BL. (m)	MAX I ₁ (m)
31	12.560	HYDR. OIL STORAGE	5,93	11,70	7,70	0,2
32	12.560	USED HYDR. OIL	2,96	11,70	7,70	0,0
17 C	12.560	HYDR. OIL DROP TK.	8,88	8,41	-0,05	4,1
27	15.060	USED HYDR. OIL	7,08	45,88	2,63	1,2
44	-	HYDR. OIL STEERING GEAR	0,50	-0,93	7,70	0,0
TOTAL VOLUME			25,35			

POTABLE WATER (1.00 T/m³)

TK.	HEIGHT OF AIR PIPE ABOVE BL. (m)	DESCRIPTION	VOL. (m ³)	LCG FWD ABOVE BL. (m)	VCG ABOVE BL. (m)	MAX I ₁ (m)
2PS	15.060	FW HIGH TANK PS	85,59	56,24	3,70	61,4
2SB	15.060	FW HIGH TANK SB	85,59	56,24	3,70	61,4
TOTAL VOLUME			171,18			

MISCELLANEOUS TANKS

TK.	HEIGHT OF AIR PIPE ABOVE BL. (m)	DESCRIPTION	VOL. (m ³)	LCG FWD ABOVE BL. (m)	VCG ABOVE BL. (m)	MAX I ₁ (m)
4	22.960	SEWAGE TANK	7,90	48,30	4,70	0,4
5	22.960	GREY WATER TANK	7,90	48,30	4,70	0,4
11	12.560	DROP TK. COOLING WATER	4,82	34,49	0,63	2,0
19	12.560	VOID	8,84	5,45	1,35	0,7
20	12.560	CROSSOVER TANK	8,95	27,01	0,57	31,2
25	15.060	SLUDGE TANK	13,10	45,60	2,63	6,9
26	15.060	BILGE WATER TANK	12,07	45,78	2,63	5,7
30	15.060	FO DRAIN TANK	4,82	34,49	0,63	2,0
33	12.560	VOID	12,26	12,77	-0,01	12,6
40	-	SW DRAIN TANK SB	2,29	53,70	2,60	0,3
46	-	GREY WATER TANK PS	0,85	18,60	4,47	0,0

CLASS: DNV 1A1, ICE Class C, E0, Dynpos AUT, Clean

REV.	DESCRIPTION:	DATE	APPR.	DATE	REV.	SIGN:
A	Updated height's of air pipes acc to Tank Vent/Filling Diag.			29.06.01		ST/Rmi
B	Modified Stab. tk. 7 & 8			21.08.01		ST/RMI
C	Changed height of vent pipe for tk 13 & 14 SB/PS. Tk. 19 converted to void.			28.10.01		ST/RMI
D	Updated volumes, LCG & VCG			09.10.02		ST/RMI
E	Tanks 41 to 48 added			31.03.03		ST/TH

ORDER

FLEKKEFJORD SLIP & MASKINFABRIKK AS YARD No. 175

TANK CAPACITY PLAN

SCALE: 1:150

DATE: 02.12.99

FILE: 75101007

SIGN: G. Eide, R. Misund

SKIPSTEKNISK AS

CONSULTING NAVAL ARCHITECTS AND MARINE ENGINEERS
Klaus Nilsenstgt. 4, P.O.Box 36 Sentrum, N-6001 Aalesund
Tel:+47 70 10 33 44, Telefax:+47 70 10 33 48
E-mail: office@skipsteknisk.no

DRAWING No. 1-4672

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