

FISHING VESSEL FV-R70



DATA SHEET - [VARIANT 2]

REVIEWED



06 APRIL, 2021

SEE LETTER: E-121682-165941

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1 MAIN PARTICULARS



Description	Abbreviation		Unit
Length Overall	LOA	22.70	m
LBP	LBP	20.25	m
Breadth (Max.)	B	6.40	m
Depth	D	3.00	m
Draught (Max.)	T	1.64	m
Speed	V	8.00	knots
Displacement	Δ	110.2	tonnes
Lightship Weight	Lwt	58.7	tonnes
Complement		12	Nos.

Table 1 : Main Particular

2 SPECIFICATION

2.1 Main Engine & Generator

- Main Engine : 180 ~ 200 HP approx. [@ maximum Continuous Rating (MCR)]
- Diesel Generator : Adequate size suitable for load.

2.2 Fishing Gear

- Long-liner Winch : Suitable to haul 3 mm monoline and to put 350-600 hooks at a time.
- Gillnet Hauler : Suitable for hauling and releasing gill net.

2.3 Fish Hold

- Insulated Fish Hold : 70 cu. m approx.
- Refrigeration : a part or Full of the Fish Hold Volume (-4 Deg)

2.4 Fish Net Hold

Fish Net will be stored at main deck as shown in General Arrangement.

2.5 Capacities

- Diesel oil tank : 8,000 L approx.
- Fresh water tank : 10,000 L approx.
- F.W overhead tank (FRP) : 250 L approx.

2.6 Hull & Accommodation Structure

The vessel will be constructed using IS grade 2062 Grade B steel (3rd Party certification by IRS) or equivalent and with good quality welding consumables. Thickness of the plating shall be in accordance with Indian Register of Shipping (IRS) "Rules and Regulation for Construction and Classification of Steel Ships".

The superstructure will be made of FRP material as required, with scantlings designed meeting Indian Register of Shipping (IRS) rules.

2.7 Bollards and Anchor

MS Fabricated / Casted anchor (1 no.) with rope of sufficient length will be provided as a loose item. Anchor will be operated manually from over-board.

MS fabricated T type bollard with adequate stiffening at underside will be provided at aft (2 nos.) and forward portion (1 no.) as shown in General Arrangement.

2.8 Navigation and Communication

- Global Positioning System (GPS)
- Automatic identification system (AIS)
- Very high frequency with digital selective calling (VHF-DSC)
- Distress Alert Transmitter (DAT)
- Fish Finder (Eco-Sounder)
- Magnetic Compass

2.9 Mast/ Navigation and Signal Lights Arrangements

S.No.	Description	Quantity	Shade in Color
1	Masthead Light	1	White
2	Anchor Light	1	White
3	Port Side Light	1	Red
4	Starboard Side Light	1	Green
5	Stern Light	1	White
6	NUC	2	Red
7	NUC/ All Round Light Red	2	Red
8	All Round Light White	2	White
9	Black Ball	2	
10	Cones	2	

Table 2 : Light Arrangement

2.10 Life Saving Appliances

The vessel will be fitted with following LSA items and installed as per the lifesaving appliance plan.

- Life Jackets : 14 nos. (As per SOLAS standard)
- Life Buoy : 2 nos. (As per SOLAS standard)

2.11 Fire Fighting Appliances

- Portable Fire Extinguisher : 4 nos.

2.12 Pumps

The Freshwater and bilge/General Service pump [IS / BIS standard or equivalent] will be fitted in the vessel.

2.13 Doors/ Windows/ Hatches

Following access hatches are arranged as shown in the general arrangement plan.

Sl. No.	Description	Number	Type	Coaming Height
1	Flush Type Hatch	2	Watertight	0 mm
2	Normal Hatch	2	Weathertight	380 mm

Table 3 : Hatch Detail

Good quality weathertight FRP Doors will be provided at entrances of wheel house, crew accommodation, toilet, galley, etc. The sill height of doors on the main deck is to be at least 380 mm.

2.14 Materials and Workmanship

2.14.1 Materials

All materials and equipment to be used for the construction of the Vessel shall be good quality and suitable for intended purpose.

2.14.2 Workmanship

All workmanship used for the construction of the vessel shall be of good quality and in accordance with standard of normal shipbuilding practice for this type of ship. The workmanship shall be such as to assure reasonable fair lines and smooth surfaces.

2.15 Painting Schemes

The painting schedule of the vessel will be as per normal ship building standards with good quality marine paint shall be provided, as per the guidelines and the painting scheme as recommended by the paint manufacturer. Necessary alteration may be made by the Yard based on manufacturers recommendation /site requirement. However, following indicative painting schedule is given as guidance.

Location	Description	No. of Coats	Dry film thickness *
Hull Exterior Surface: Under water hull	Surface tolerant High build epoxy	1	150
	Epoxy tie coat	1	100
	TBT Free Self-Polishing AF.	1	100
	TBT Free Self-Polishing AF	1	100
Hull Exterior Surface: Topsides	Surface tolerant High build epoxy	1	100
	Surface tolerant High build epoxy	1	100
	poly urethane/ Polysiloxane	1	50
Fresh Water Tanks	Phenolic Epoxy	1	200
Fish holds, Void tanks	Ballast tank epoxy coatings	1	160
	Ballast tank epoxy coatings	1	160
Bulwarks inside, Hatch covers, Coamings	Surface tolerant High build epoxy	1	125
	Surface tolerant High build epoxy	1	125
	poly urethane/ Polysiloxane	1	50
Deck fittings, Davits etc.	Surface tolerant High build epoxy	1	125
	poly urethane/ Polysiloxane	1	50
Inside Engine Room, SGR, Stores-Sides & overhead, Interior of vent trunk	Alkyd primer/ Acylic Primer	1	40
	Alkyd primer/ Acylic Primer	1	40
	Alkyd primer/ Acylic Primer	1	40
Engine Room, SGR, Stores - floor and foundations	Alkyd primer/ Acylic Primer	1	40
	Alkyd primer/ Acylic Primer	1	40
	Alkyd primer/ Acylic Primer	1	40
Anchor	Surface tolerant epoxy	1	125

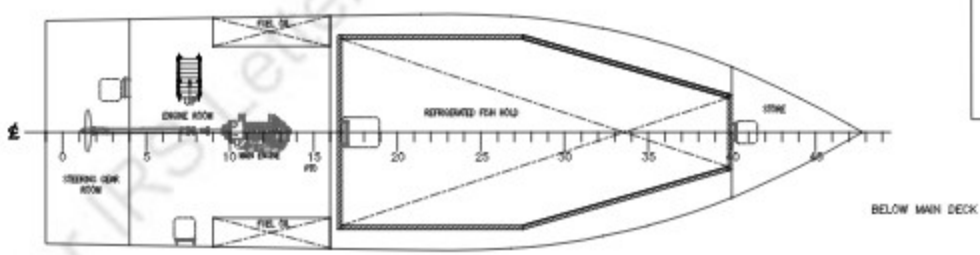
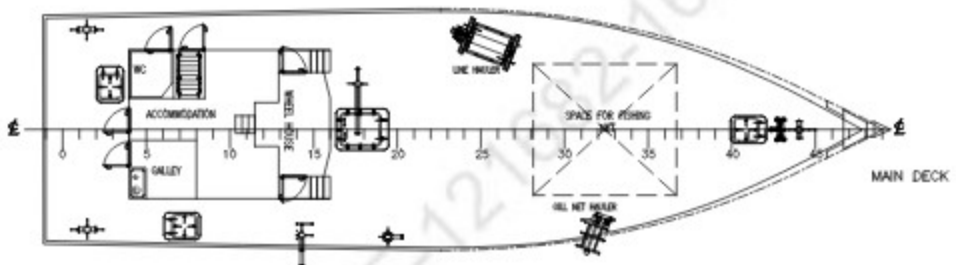
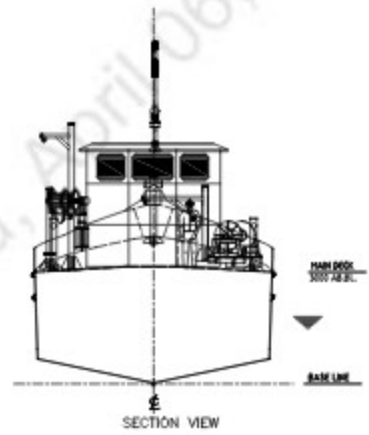
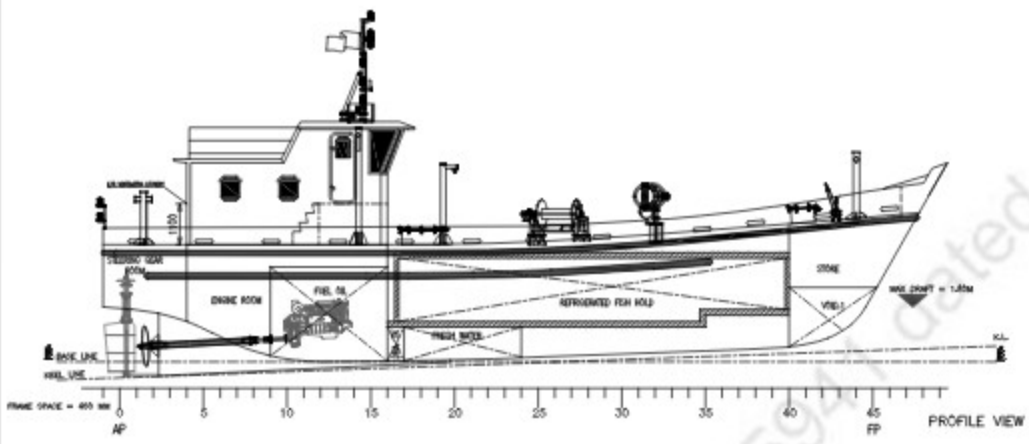
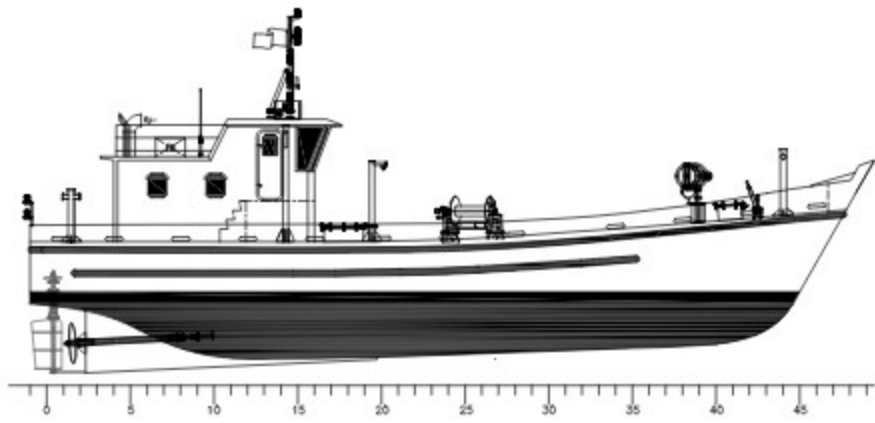
	Surface tolerant epoxy	1	125
Space for fishing net	Surface tolerant High build epoxy	1	125
	Surface tolerant High build epoxy	1	125
Fuel oil tanks & other oil tanks	Epoxy primer	1	50
Draft Marks	Alkyd finish	1	70
Exhaust pipes	HR aluminium	1	25
	HR aluminium	1	25
Vessel Name, Port of registry, Marking	PU	1	70

Table 4 : Paint Scheme

3 RULES & REGULATION

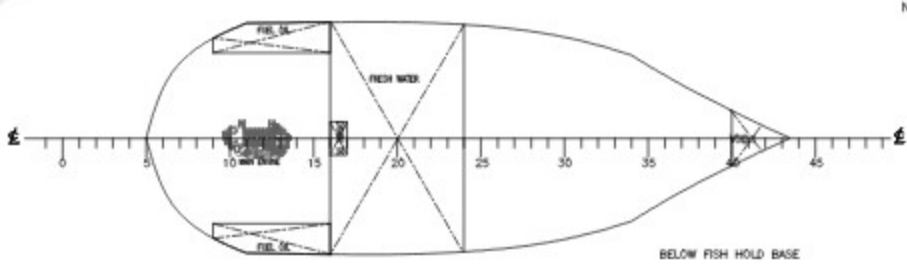
- I. Vessel hull is built according to Rules and Regulation for the construction and classification of steel ships by the Indian Register of Shipping (IRS) or/and to corresponding regulations of respective administrative regulation body.
 - o Steel: IS 2062 Grade B (3rd Party certification by IRS) or equivalent.
- II. Intact Stability Criteria in accordance with IS code 2008.

4 GENERAL ARRANGEMENT



MAIN PARTICULARS :

LENGTH O.A.	abt 22.70 M.
LENGTH B.P.	abt 20.35M.
BREADTH (MID)	abt 6.40 M.
DEPTH (MIDSHIP)	abt 3.00 M.
DRAFT (MAX.)	abt 1.80 M.
FRAME SPACING	450 MM
SPEED	8 KNOTS.
REFRIGERATED FISH HOLD	abt 70 Cu m.



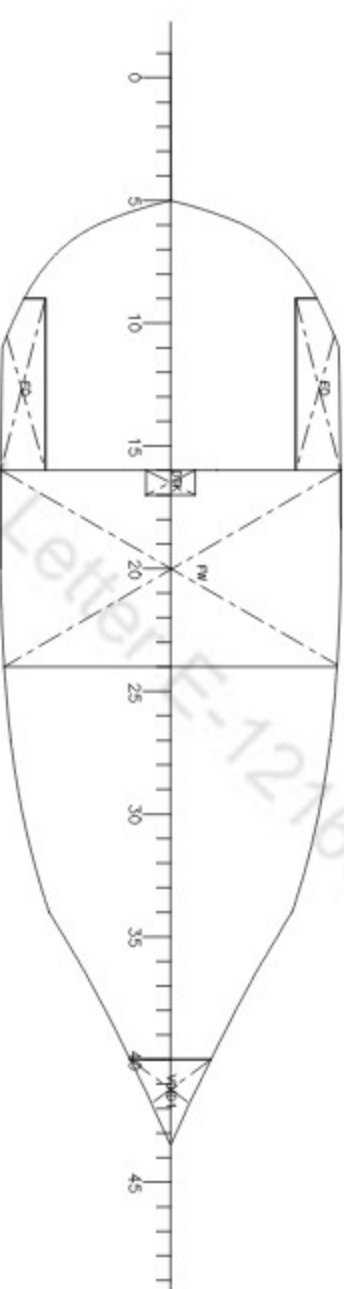
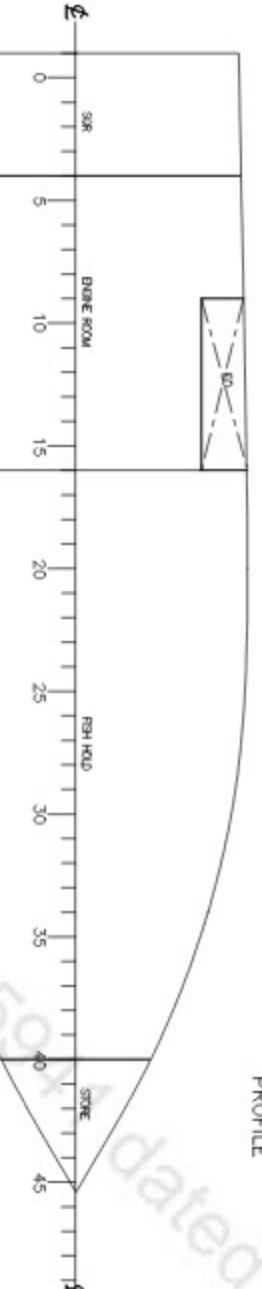
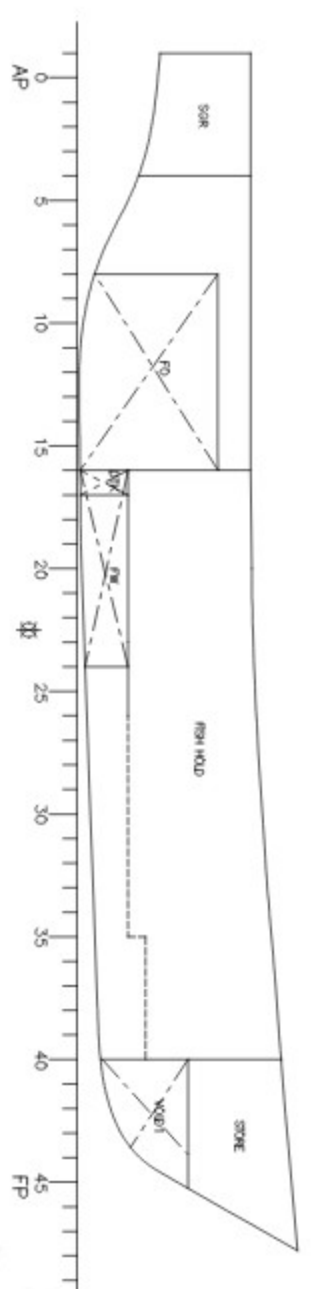
- NOTE:**
1. DRAWING ONLY FOR IN PRINCIPLE APPROVAL.
 2. DETAILED DRAWING SHALL BE SUBMITTED BY THE RESPECTIVE YARD.
 3. * MINIMUM HEIGHT OF VENTILATION LOUVER IS 2.30 M FROM WATERLINE.
 4. SUITABLE ACCESS IS PROVIDED FOR ALL COMPARTMENT.

VARIANT 2

Rev. 01 (2021-03-21)	INTER-COMING 80 COMMENTS					
Rev. 02 (17/04/2021)	PRELIMINARY					
No.	Date	Description	Drawn	Checked	Approved	
DATE/SCALE	TED	FISHING VESSEL P.V.270				
1/500 100/4 TED		TITLE GENERAL ARRANGEMENT				
OCEAN SHIPYARD LIMITED 100/4, WILSON STR., SINGAPORE 100477.		1:150	AD	PL/REV	P/REV/REV/REV	1/101
		Scale	Format	Project No.	Dep. No.	Sheet No.

5 TANK PLAN

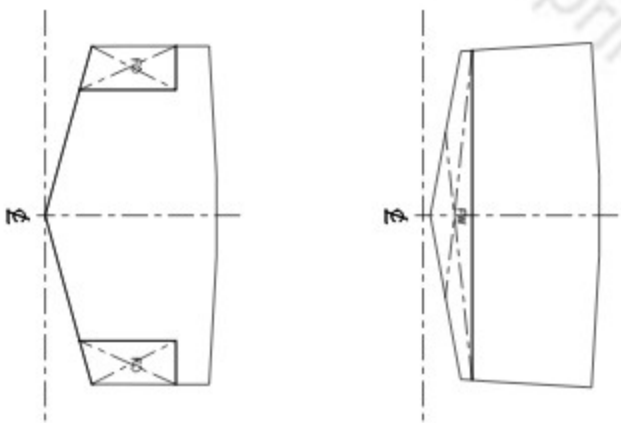
Refer IRS Letter E-121682-165941 dated, April 06, 2021



TANK SUMMARY												
NO.	NAME	DESCRIPTION	CONCRETE	DEPTH	NET VOLUME	WGT	FR-001	FR-002	COB	COF	CO2	REMARKS
			Yield	m3	m3	TONNE	m	m	m	m	m	
1001	(1) B.L.P. (2)	10	0.0000	4.1	3.25	3.0	3.0	4.1	4.1	3.0	1.57	
1002	(1) B.L.P. (3)	10	0.0000	4.1	3.25	3.0	3.0	4.1	4.1	3.0	1.57	
Total Panel 03 8.2 7.00												
1003	FR 30.1	FR	1.0000	11.3	11.3	10.0	10.0	11.3	11.3	10.0	5.01	
1004	FR 1	FR	1.0000	12.0	12.0	10.0	10.0	12.0	12.0	10.0	5.01	
1005	FR 2	FR	1.0000	12.0	12.0	10.0	10.0	12.0	12.0	10.0	5.01	

NOTE:
 1. DRAWING ONLY FOR IN PRINCIPLE APPROVAL
 2. DETAILED DRAWING SHALL BE SUBMITTED BY THE RESPECTIVE YARD.

VARIANT 2



MAIN PARTICULARS	
LENGTH O.A.	44.1 22.270 M.
LENGTH B.P.	44.1 20.254 M.
BREADTH (MID)	6.40 M.
DEPTH (AVERAGE)	4.1 3.00 M.
DEPTH (MAX.)	4.1 1.80 M.
FRAME SPACING	450 MM
SPEED	8 KNOTS
REPRESENTATIVE FISH HOLD	44.1 7.0 Cu m.

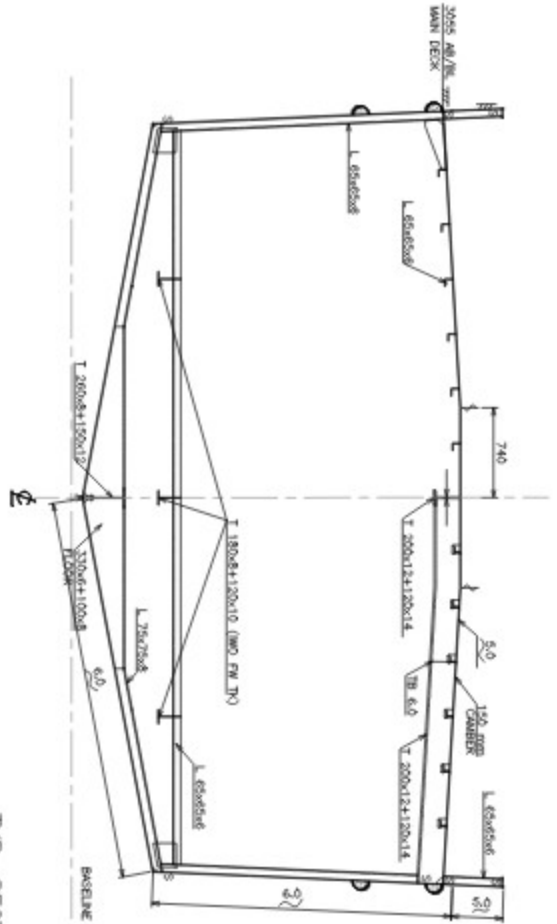
Build	Subject	Prevalent	Shipyard	Year	Approval	Rev
100	1001	1001	1001	1001	1001	1001

Client	Project	Contract	Draw No.	Sheet No.
OSCAR SINGAPORE LIMITED	FISHING VESSEL PV-4710	1501	43	PV-4710
1501	1501-1514-001	01/01		

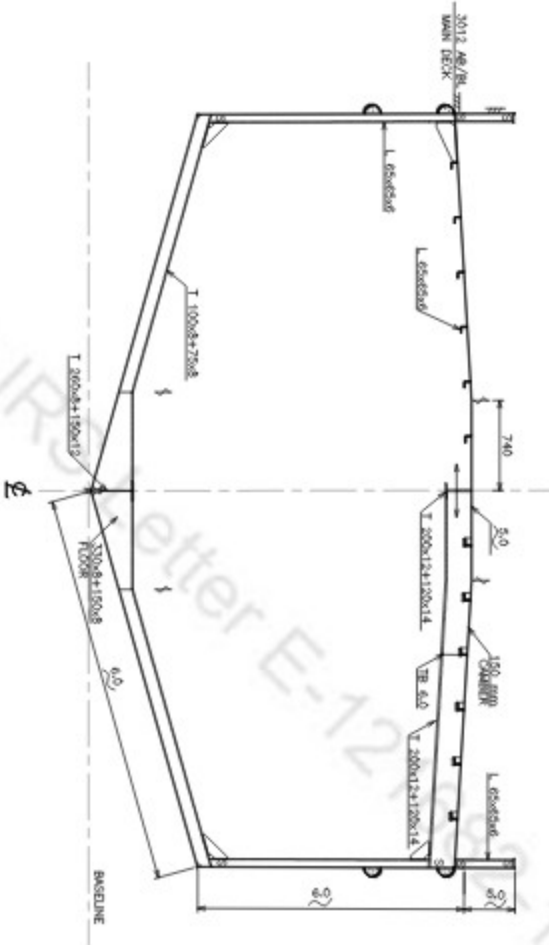
6 MIDSHIP SECTION

Refer IRS Letter E-121682-165941 dated, April 06, 2021

TYP. SECTION IWO FISH HOLD



TYP. SECTION IWO ENGINE ROOM



MANUFACTURERS

LENGTH O.A.	Ø1 22.70 M
LENGTH B.P.	Ø1 20.25 M
BREADTH (A.B.D.)	Ø1 6.40 M
DEPTH (A.C.S.P.)	Ø1 3.00 M
DEPTH (A.C.S.)	Ø1 1.80 M
FRAME STRUCTURE	Ø1 400 MM
SPRINGS	Ø 200TTS
REFRIGERATED FISH HOLD	Ø1 70 CU M

NOTE:

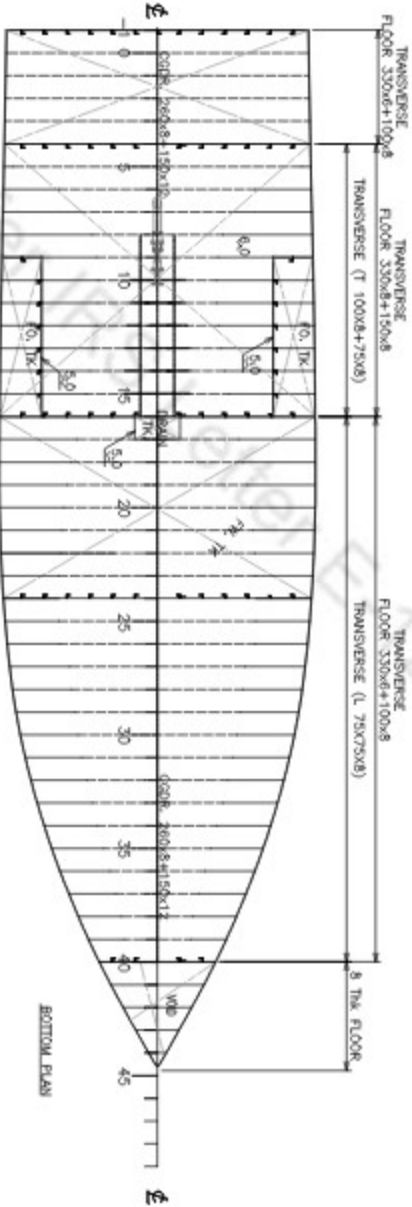
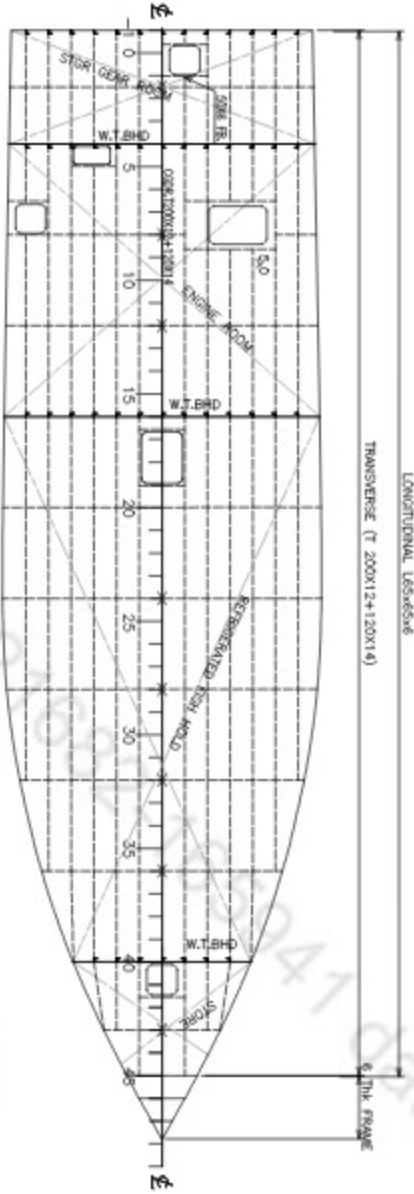
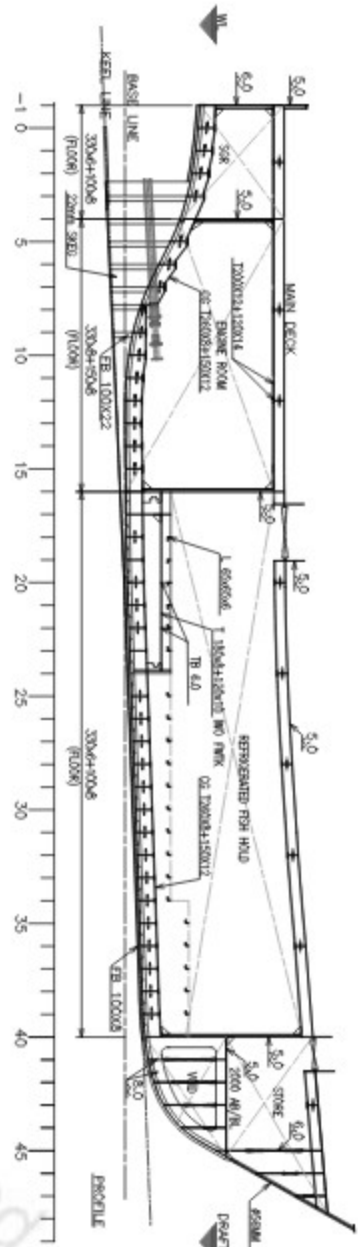
1. DRAWING ONLY FOR IN PRINCIPLE APPROVAL.
2. DETAILED DRAWING SHALL BE SUBMITTED BY THE RESPECTIVE YARD.
3. MATERIAL: ALL PLATES & STEELS: 1 IS 2002 GRADE B/EQUIVALENT [S&P PARTY CERTIFICATION BY IRS]
4. ALL DIMENSIONS ARE IN mm. (EXC. NOTED)

VARIANT 2

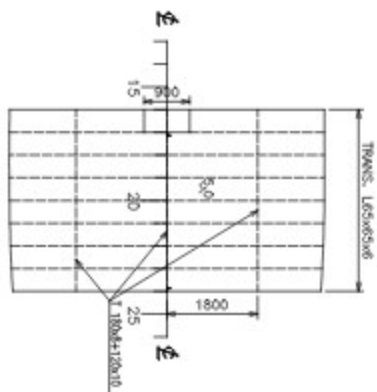
Rev.1	25-Nov-2021	Interpreting B/E Contract				
Rev.0	02-Nov-2021	Preliminary				
No.	Date	Description	Drawn	Checked	Approved	
CUSTOMER: TED						
Yard No.: 1710						
TITLE: Midship Section						
FISHING VESSEL: FV-R70						
NO	NO	NO	NO	NO	NO	NO
<p>COCLIN SHIPYARD LIMITED 14 A3 FV-R70 P/NO.200/001 01/01 12 The Wharf, Coimbatore 641 001</p> <p>APPROVED BY: [Signature] TITLE: [Title] DATE: [Date]</p> <p>ACCEPTED BY: [Signature] TITLE: [Title] DATE: [Date]</p>						

7 PROFILE & DECK

Refer IRS Letter E-121682-165941 dated, April 06, 2021



1. DRAWING ONLY FOR IN PRINCIPLE APPROVAL.
2. DETAILED DRAWING SHALL BE SUBMITTED BY THE RESPECTIVE YARD.
3. MATERIAL: ALL PLATES & STIFFERS : IS 2062 GRADE B/ EQUIVALENT [3RD PARTY CERTIFICATION BY IRIS]
4. SUITABLE INSERT PLATES OF HIGHER THICKNESS WILL BE PROVIDED IRMO DECK FITTING
5. FISH HOLD BOTTOM ARRANGEMENT WILL BE DESIGNED BASED ON FISH HOLD MAX. LOAD
6. ALL DIMENSIONS ARE IN MM. (EXC. NOTED)



MAIN PARTICULARS.]

LENGTH O.A.....	amt 22.70 M.
LENGTH B.P.....	amt 20.25 M.
BREADTH (MID).....	amt 6.40 M.
DEPTH (MIDSHIP).....	amt 3.00 M.
DRAHT (MAX.).....	amt 1.80 M.
FRAME SPACING.....	amt 450 MM
SPEED.....	8 KNOTS.
REFRIGERATED FISH HOLD....	amt 70 Cu m.

VARIANT 2

<p>Rev.2 02 Apr 2021 Incorporating IS Comments</p> <p>Rev.1 25 Mar 2021 Incorporating IS Comments</p> <p>Rev.0 17 Nov 2020 Preliminary</p>		<p>No.</p> <p>Date</p> <p>Description</p> <p>Drawn</p> <p>Checked</p> <p>Approved</p>
<p>CUSTOMER: TBD</p>		<p>TITLE</p> <p>Profile and Deck Plan</p>
<p>Yard Nos.: TBD</p>		

COCHIN SHIPYARD LIMITED

1/32 A3 PV-R70 FV-R70-200-04 01/01

SCALE: 1:32

DATE: 01/01/2021

DWG NO. FV-R70-200-04

SHEET NO. 01/01

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8 STABILITY CALCULATION

Refer IRS Letter E-121682-165941 dated, April 06, 2021

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6. CROSS CURVE	6-1

1. INSTRUCTIONS TO THE MASTER

This stability information shows that the ship complies with definite intact stability requirements in all designed conditions and gives the data deemed necessary for the calculation and evaluation of stability to the master in order that he can take suitable measures for securing the stability in any service condition.

- Compliance with the stability criteria does not ensure immunity against capsizing, regardless of the circumstances, or absolve the master from his responsibilities. Masters should therefore exercise prudence and good seamanship having regard to the season of the year, weather forecasts and the navigational zone and should take the appropriate action as to speed and course warranted by the prevailing circumstances.
- Care should be taken that the cargo allocated to the ship is capable of being stowed so that compliance with the criteria can be achieved. If necessary, the amount should be limited to the extent that ballast weight may be required.
- Before a voyage commences, care should be taken to ensure that the cargo and sizeable pieces of equipment have been properly stowed or lashed so as to minimize the possibility of both longitudinal and lateral shifting, while at sea, under the effect of acceleration caused by rolling and pitching.
- The number of partially filled or slack tanks should be kept to a minimum because of their adverse effect on stability.
- All doorways and other openings, through which water can enter into the hull or deckhouses, forecabin, etc., should be suitably closed in adverse weather conditions and accordingly all appliances for this purpose should be maintained on board and in good condition.
- Weather tight and watertight hatches, doors, etc., should be kept closed during navigation, except when necessarily opened for the working of the ship and should always be ready for immediate closure and be clearly marked to indicate that these fittings are to be kept closed except for access. Hatch cover in fishing vessels should be kept properly secured when not in use during fishing operations.

Apart from general precautions, the following measures should be considered as preliminary guidance on matters influencing safety as related to stability.

- All fishing gear and other large weights should be properly stowed and placed as low as possible.
 - Particular care should be taken when pull from fishing gear might have a bad effect on stability, e.g., when nets are hauled by power-block.
-

- Gear for releasing deck load in fishing vessels carrying catch on deck, e.g., herring, should be kept in good working condition for use when necessary.
- Fish should never be carried in bulk without first being sure that the portable divisions in the holds are properly installed;
- Reliance on automatic steering may be dangerous as this prevents changes to course which may be needed in bad weather.
- In all conditions of loading necessary care should be taken to maintain a seaworthy freeboard.
- Particular care should be taken when the pull from fishing gear results in dangerous heel angles. This may occur when fishing gear fastens onto an underwater obstacle or when handling fishing gear, particularly on purse seiners. The heel angles caused by the fishing gear in these situations may be eliminated by employing devices which can relieve or remove excessive forces applied through the fishing gear. Such devices should not impose a danger to the vessel through operating in circumstances other than those for which they were intended.

All longitudinal levers, namely LCB, LCG, and LCF are computed with reference to the transom of the ship.

Notes on use of Cross Curves of stability

The purpose of the cross curves of stability is to enable stability curves to be drawn for the ship in any loading condition. Intact stability is then determined on the basis of this curve.

Yard No. TBD

Main Particulars

2. MAIN PARTICULARS

Ship Name : TBD
Ship Type : Fishing vessel
Owner :
Builder's Name : TBD
Yard No. : TBD
Port of Registry :
Classification : Indian Register of Shipping

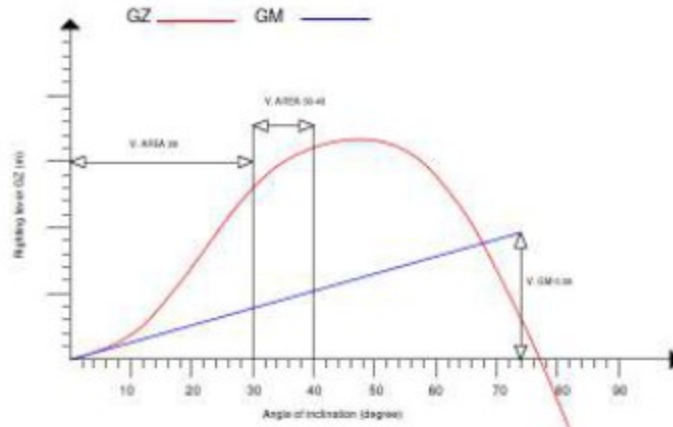
Length overall : 22.70 m
Length between perpendiculars : 20.25 m
Breadth (Moulded) : 6.40 m
Draught (Scantling) : 1.80 m
Draught (Max. Design) : 1.64 m
Depth moulded at side : 3.00 m
Displacement at design draught : 110.2 MT
Speed : 8.00 knots

3. STABILITY CRITERIA

Intact Stability Criteria

Regulation

Intact Stability Criteria in accordance with IS code 2008.



- Initial Metacentric height GM_0 not less than 0.35 m.
- The area under the righting lever curve (GZ curve) up to $\phi = 30^\circ$ angle of heel shall be not less than 0.055 m-rad.
- The area under the righting lever (GZ) curve shall not be less than 0.090 m-rad up to an angle of flooding (ϕ_f) or 40° , whichever is less.
- The area under the righting lever (GZ) curve shall not be less than 0.030 m-rad between the angle of heel 30° & angle of flooding (ϕ_f) or 40° , whichever is less.
- The righting lever GZ should be at least 0.20 m at an angle of heel equal to or greater than 30° .
- The maximum righting lever should occur at an angle of heel preferably exceeding 30° , but not less than 25° .

For the purpose of calculating the heeling moments the following assumptions shall be made:

Moments due to wind pressure:

1. A wind pressure may be taken as

h (m)	1	2	3	4	5	6 and over
P (Pa)	316	386	429	460	485	504

Where h is the vertical distance from the centre of the projected vertical area of the vessel above the waterline, to the waterline

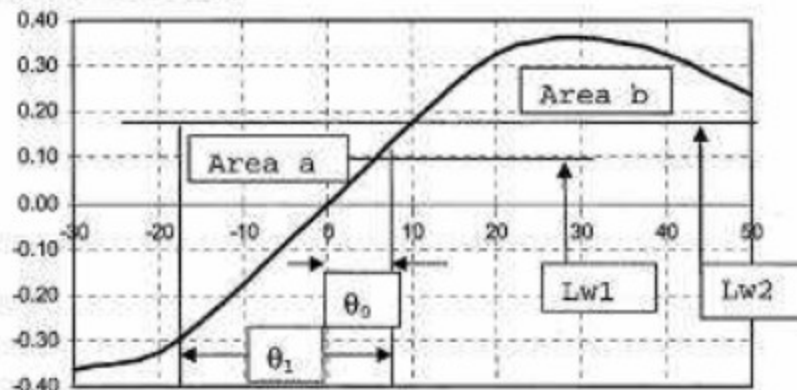
2. The area applicable shall be the projected lateral area of the ship above the waterline corresponding to the intact condition;
3. The moment arm shall be the vertical distance from a point at one half of the mean draught corresponding to the intact condition to the centre of gravity of the lateral area.

Recommended weather criterion (IS CODE 2008)

The ability of a ship to withstand the combined effects of beam wind and rolling should be demonstrated for each standard condition of loading, with reference to the figure as follows:

1. The ship is subjected to a steady wind pressure acting perpendicular to the ship's centreline which results in a steady wind heeling level ($Lw1$).
2. From the resultant angle of equilibrium (θ_0), the ship is assumed to roll owing to wave action to an angle of roll (θ_1) to windward. The angle of heel under action of steady wind (θ_0) should not exceed 16° or 80% of the angle of deck edge immersion, whichever is less. Attention should be paid to the effect of steady wind so that excessive resultant angles of heel are avoided.
3. The ship is then subjected to a gust wind pressure which results in a gust wind heeling lever ($Lw2$).
5. Under these circumstances, area "b" should be equal to or greater than area "a".
6. Free surface effects should be accounted for in the standard conditions of loading.

Weather Criteria



7. The angles are defined as follows:

- θ_0 = angle of heel under action of steady wind

- θ_1 = angle of roll to windward due to wave action
- θ_2 = angle of down flooding (θ_f) or 50° or θ_c , whichever is less

Where:

- θ_f = angle of heel at which openings in the hull, superstructures or deckhouses which cannot be closed weather tight immerse. In applying this criterion, small openings through which progressive flooding cannot take place need not be considered as open.
- θ_c = angle of second intercept between wind heeling lever lw_2 and GZ curves.

The wind heeling levers lw_1 and lw_2 are constant values at all angles of inclination and should be calculated as follows:

$$\begin{aligned} lw_1 &= (P \cdot A \cdot Z / (1000 \cdot g \cdot \Delta)) \\ lw_2 &= 1.5 \cdot lw_1 \end{aligned}$$

- P = wind pressure of 504 Pa. The value of P used for ships in restricted service may be reduced subject to the approval of the Administration
- A = projected lateral area of the portion of the ship and deck cargo above the waterline (m^2).
- Z = vertical distance from the centre of A to the centre of the underwater lateral area or approximately to a point at one half the mean draught (m)
- Δ = displacement (t)
- g = gravitational acceleration of 9.81 m/s^2

The angle of roll (θ_1) should be calculated as follows:

$$\theta_1 = 109kX_1X_2\sqrt{rs} \text{ (degrees)}$$

Where:

- X_1 = factor as shown in table 1
- X_2 = factor as shown in table 2
- k = factor as follows:
- $k = 1.0$ for round-bilged ship having no bilge or bar keels

Yard No. TBD

Stability Criteria

- $k = 0.7$ for a ship having sharp bilges
- $k =$ as shown in table 3 for a ship having bilge keels, a bar keel or both

$$r = 0.73 \pm 0.6 \text{ OG}/d$$

With:

- OG = distance between the centre of gravity and the waterline (m) (+ if centre of gravity is above the waterline, - if it is below)
- $d =$ mean moulded draught of the ship (m)
- $s =$ factor as shown in table 4.

Table 1 Values of factor X1

B/d	X1
≤ 2.4	1.0
2.5	0.98
2.6	0.96
2.7	0.95
2.8	0.93
2.9	0.91
3.0	0.90
3.1	0.88
3.2	0.86
3.3	0.84
3.4	0.82
≥ 3.5	0.80

Table 2 Values of factor X2

CB	X2
≤ 0.45	0.75
0.50	0.82
0.55	0.89
0.60	0.95
0.65	0.97
≥ 0.70	1.0

Table 3 Values of factor X3

Ak.100/(LB)	K
0	1.0
1.0	0.98
1.5	0.95
2.0	0.88
2.5	0.79
3.0	0.74
3.5	0.72
≥ 4.0	0.70

Table 4 Values of factor X4

T	S
≤6	0.100
7	0.098
8	0.093
12	0.065
14	0.053
16	0.044
18	0.038
≥20	0.035

(Intermediate values in tables 1-4 should be obtained by linear interpolation.)

$$\text{Rolling period } T = \frac{2CB}{\sqrt{GM}} \text{ (s)}$$

Where:

- $C = 0.373 + 0.023 (B/d) - 0.043 (L/100)$
- L = length of the ship at waterline (m)
- B = moulded breadth of the ship (m)
- d = mean moulded draught of the ship (m)
- CB = block coefficient
- A_k = total overall area of bilge keels, or area of the lateral projection of the bar keel, or sum of these areas (m²)
- GM = metacentric height corrected for free surface effect (m).

100658/2021/Fisheries-DOF

FV-R70

Yard No.- TBD

Preliminary Stability Manual

Loading Conditions

Chapter 4

Fishing Vessel

02-04-2021

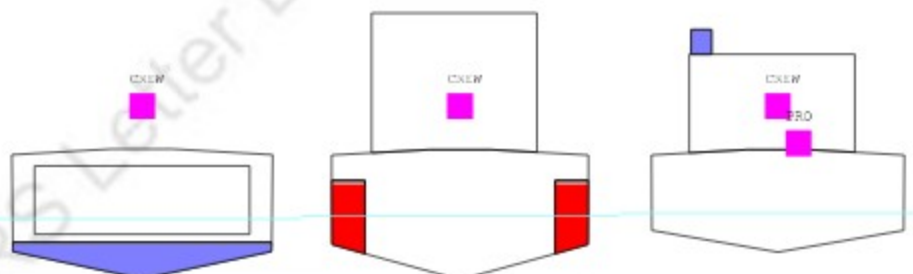
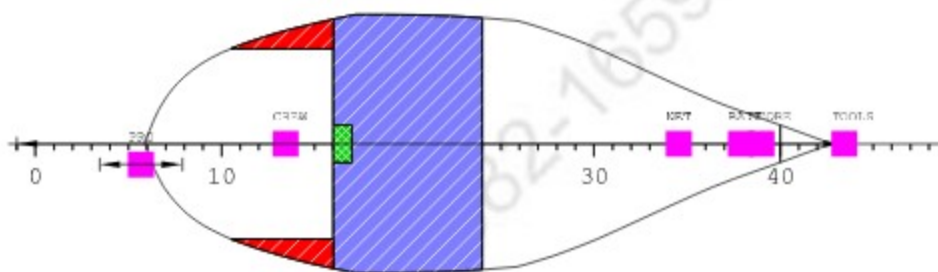
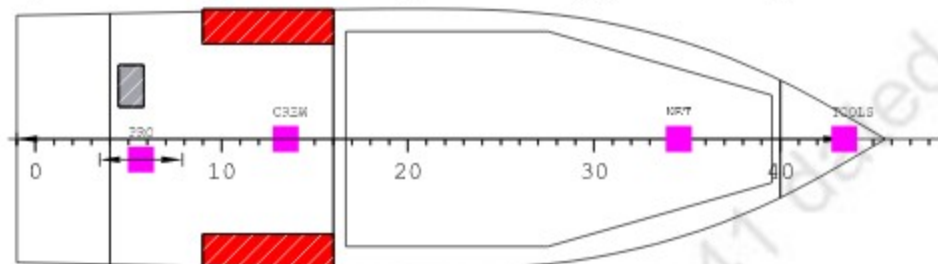
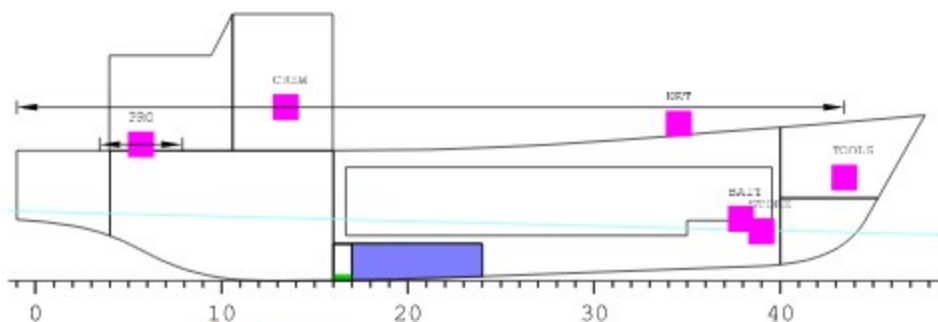
4. LOADING CONDITIONS

Refer IRS Letter E-121682-165941 dated, April 06, 2021

LOADING CONDITIONS SUMMARY TABLE

LOADING CONDITION	T m	TR m	HEEL deg	GM m	DISP t	KG m
FULL LOAD DEPART. W/O ICE	1.424	-0.528	0.0	1.963	90.2	2.043
FULL LOAD ARR. W/O ICE	1.504	-0.037	0.4	1.637	95.0	2.225
FULL LOAD DEPART. WITH ICE	1.644	-0.019	0.0	1.531	110.2	2.059
FULL LOAD ARR. WITH ICE	1.504	-0.037	0.4	1.637	95.0	2.225
DEPT. 50% CONS & 100% CATCH W/O ICE	1.589	-0.051	0.2	1.568	104.5	2.122
DEPT. 50% CONS & 100% CATCH WITH ICE	1.589	-0.051	0.2	1.568	104.5	2.122
ARR. 10% CONS & 40% CATCH W/O ICE	1.338	-0.427	0.4	2.077	80.0	2.242
ARR. 10% CONS & 40% CATCH WITH ICE	1.449	-0.165	0.4	1.767	90.0	2.230
ARR. 10% CONS & 20% CATCH W/O ICE	1.282	-0.564	0.4	2.257	75.0	2.250
ARR. 10% CONS & 20% CATCH WITH ICE	1.394	-0.295	0.4	1.920	85.0	2.236
ARR. 10% CONS & 0% CATCH W/O ICE	1.223	-0.706	0.4	2.457	70.0	2.258
ARR. 10% CONS & 0% CATCH WITH ICE	1.338	-0.427	0.4	2.077	80.0	2.242

FULL LOAD DEPART. W/O ICE



Machinery Sp.	Cold Room Store	Diesel Oil
Shop Store	Void	Fresh Water
Ballast Water	BIO TOILET	Accommodation
Wheelhouse		

FULL LOAD DEPART. W/O ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.688 m
Draught at FP (moulded)	1.161 m
Mean Draught (moulded)	1.424 m

Trim (+ by Bow)	-0.528 m
Heel (+ PS)	0.0 deg

KM above moulded BL	4.365 m
KG above moulded BL	2.043 m
GM0 (solid)	2.322 m
Free Surface Correction	0.360 m
GM (liquid)	1.963 m
Density of Water	1.025 t/m3

LCB : 9.0825820919585 m Fwd of AP
 LCF : 8.7837761765434 m Fwd of AP
 MCT : 1.41 tm/cm
 TPC : 1.09 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.2	17.500	0.000	1.500
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.0	7.874	0.000	0.108
CREW	0.9	6.500	0.000	4.200
Diesel Oil	6.7	6.135	0.000	1.525
Fresh Water	11.0	9.319	0.042	0.709
FISH NET	6.0	16.000	0.000	3.800
PROVISION	2.5	3.000	-0.500	3.300
STORE	2.5	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	31.5	10.303	-0.002	1.900
Lightweight	58.7	8.470	0.002	2.120
Deadweight	31.5	10.303	-0.002	1.900
Total weight	90.2	9.110	0.001	2.043

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	95.0	3.4	3.9	0.00
R.FOTK.1P	DO	95.0	3.4	3.9	0.00
TOTAL			6.7	7.8	0.00

Fresh Water 1.00 t/m3

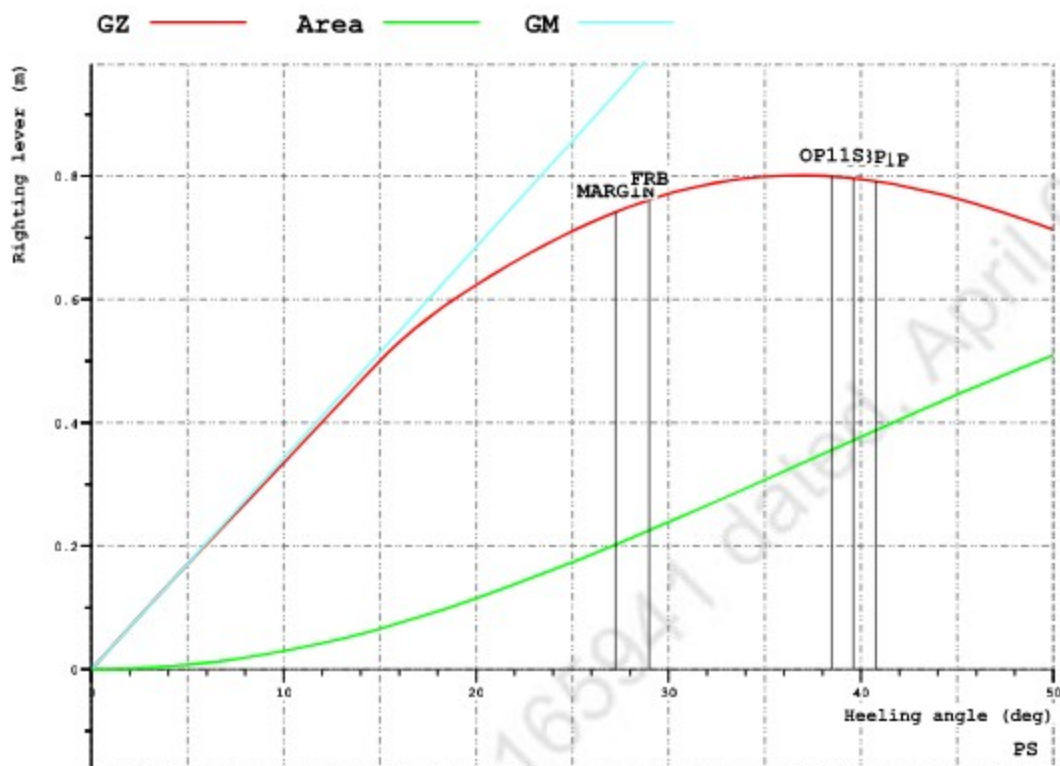
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	95.0	10.8	10.8	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			11.0	11.0	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	10.0	0.0	0.0	0.03
TOTAL			0.0	0.0	0.03

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.239	mrاد	OK
V.AREA40	0.356	mrاد	OK
V.AREA3040	0.118	mrاد	OK
V.GZ0.2	0.801	m	OK
V.MAXGZ25	36.834	deg	OK
V.GM0.35	1.963	m	OK
V.IMOWEATHER	1.955		OK
2008IS-A2.3.1.2	2.041	deg	OK

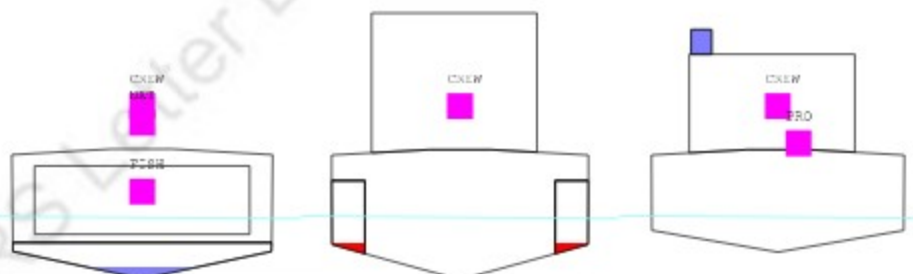
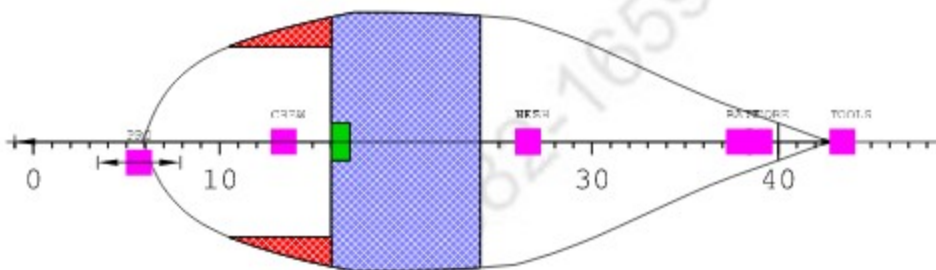
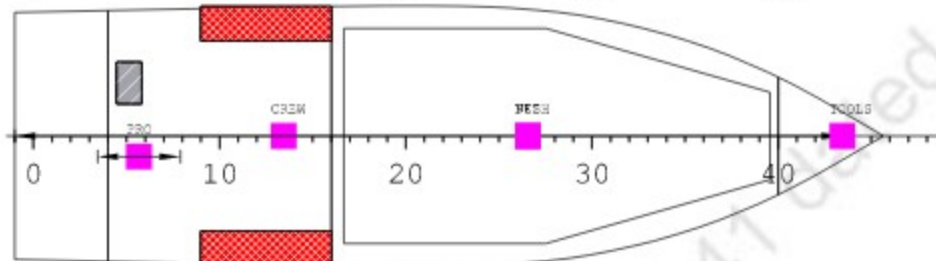
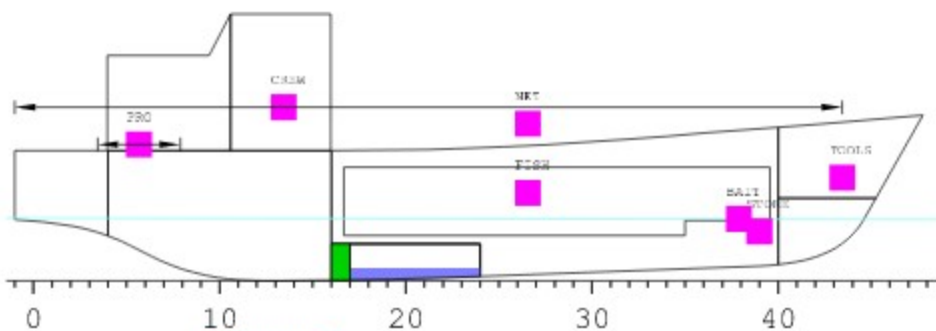
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.424	-0.528	0.000	0.000
5.0	1.418	-0.526	0.170	0.007
10.0	1.397	-0.494	0.334	0.030
15.0	1.356	-0.431	0.500	0.066
20.0	1.286	-0.355	0.623	0.115
30.0	1.060	-0.176	0.771	0.239
40.0	0.767	-0.037	0.795	0.377
50.0	0.445	0.048	0.713	0.510

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	40.8	1.936
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	1.936
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	39.6	1.978
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	1.978
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.650
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.445
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.479
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.479
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.479
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.866
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	38.5	1.965
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.477

FULL LOAD ARR. W/O ICE



Machinery Sp.	Cold Room Store	Diesel Oil
Shop Store	Void	Fresh Water
Ballast Water	BIO TOILET	Accommodation
Wheelhouse		

FULL LOAD ARR. W/O ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.523 m
Draught at FP (moulded)	1.486 m
Mean Draught (moulded)	1.504 m

Trim (+ by Bow)	-0.037 m
Heel (+ PS)	0.4 deg

KM above moulded BL	4.202 m
KG above moulded BL	2.225 m
GM0 (solid)	1.978 m
Free Surface Correction	0.341 m
GM (liquid)	1.637 m
Density of Water	1.025 t/m ³

LCB	: 9.8085000513251 m Fwd of AP
LCF	: 8.8947106777501 m Fwd of AP
MCT	: 1.44 tm/cm
TPC	: 1.1 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	0.7	6.501	0.000	0.786
FISH	25.0	12.400	0.000	2.130
Fresh Water	1.3	8.146	0.350	1.270
FISH NET	6.0	12.400	0.000	3.800
PROVISION	0.2	3.000	-0.500	3.300
STORE	0.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	36.3	11.979	0.029	2.394
Lightweight	58.7	8.470	0.002	2.120
Deadweight	36.3	11.979	0.029	2.394
Total weight	95.0	9.811	0.012	2.225

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	9.5	0.3	0.4	0.00
R.FOTK.1P	DO	9.5	0.3	0.4	0.00
TOTAL			0.7	0.8	0.00

Fresh Water 1.00 t/m3

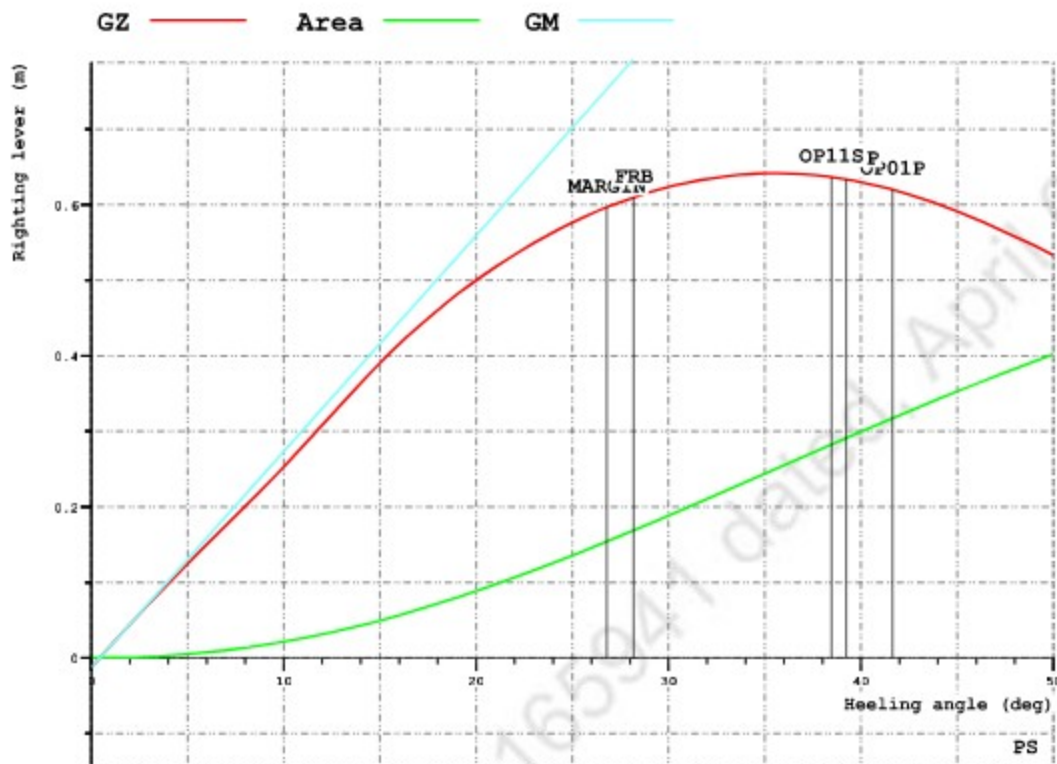
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	9.5	1.1	1.1	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			1.3	1.3	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.188	mrاد	OK
V.AREA40	0.283	mrاد	OK
V.AREA3040	0.094	mrاد	OK
V.GZ0.2	0.642	m	OK
V.MAXGZ25	35.584	deg	OK
V.GM0.35	1.637	m	OK
V.IMOWEATHER	1.762		OK
2008IS-A2.3.1.2	2.778	deg	OK

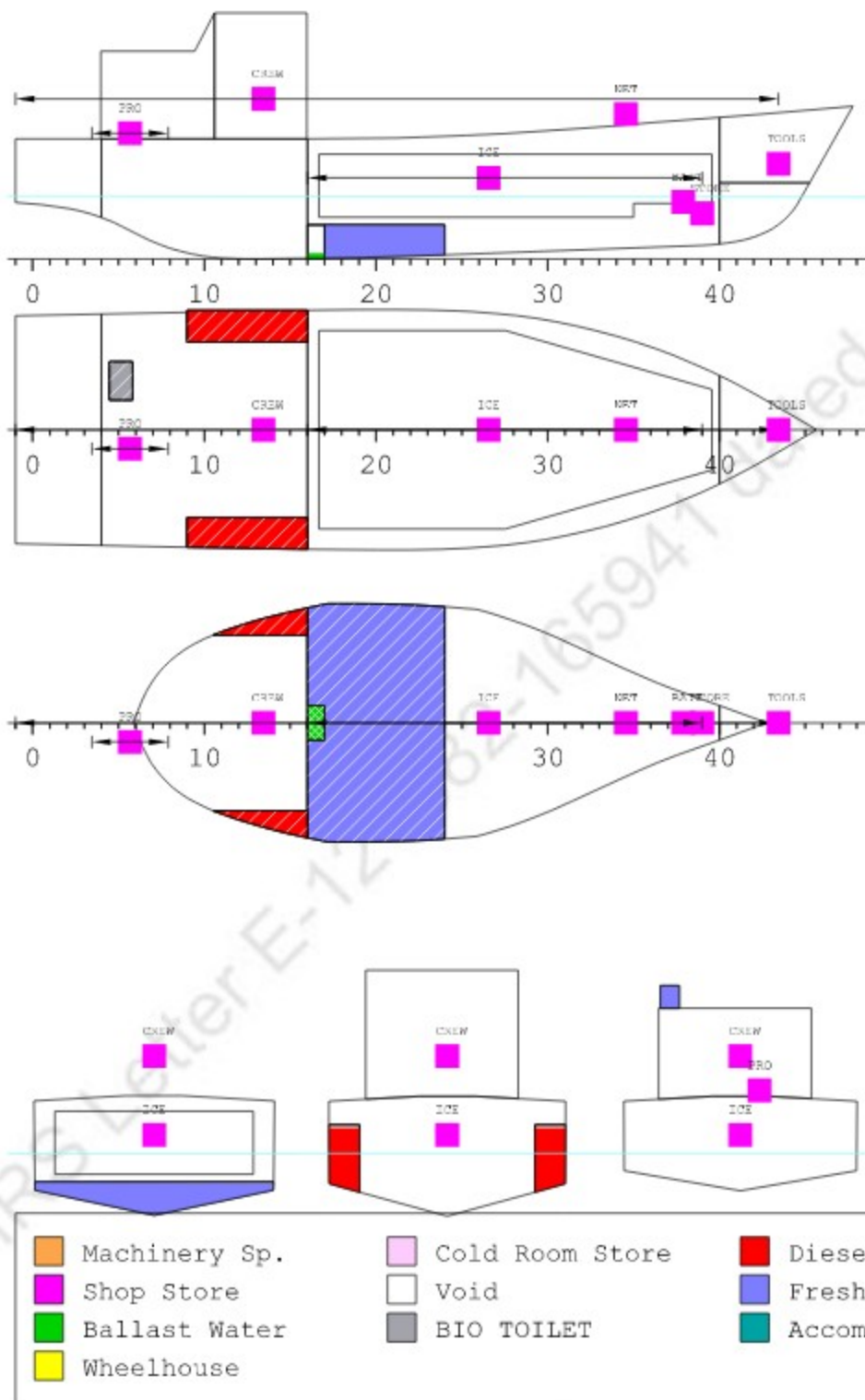
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.504	-0.037	-0.012	0.000
0.4	1.504	-0.037	0.000	0.000
5.0	1.496	-0.017	0.125	0.005
10.0	1.471	0.038	0.253	0.021
15.0	1.429	0.122	0.390	0.050
20.0	1.360	0.223	0.500	0.089
30.0	1.136	0.432	0.623	0.188
40.0	0.841	0.621	0.630	0.299
50.0	0.518	0.749	0.533	0.402

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	41.6	1.918
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	1.961
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	39.2	1.920
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	1.965
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.689
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.553
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.593
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.593
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.593
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.536
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	38.5	1.918
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.596

FULL LOAD DEPART. WITH ICE



FULL LOAD DEPART. WITH ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.653 m
Draught at FP (moulded)	1.634 m
Mean Draught (moulded)	1.644 m

Trim (+ by Bow)	-0.019 m
Heel (+ PS)	0.0 deg

KM above moulded BL	3.884 m
KG above moulded BL	2.059 m
GM0 (solid)	1.825 m
Free Surface Correction	0.294 m
GM (liquid)	1.531 m
Density of Water	1.025 t/m ³

LCB : 9.7060077982216 m Fwd of AP
 LCF : 8.9022553053785 m Fwd of AP
 MCT : 1.47 tm/cm
 TPC : 1.1 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.2	17.500	0.000	1.500
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.0	7.874	0.000	0.108
CREW	0.9	6.500	0.000	4.200
Diesel Oil	6.7	6.135	0.000	1.525
Fresh Water	11.0	9.319	0.042	0.709
ICE	20.0	12.400	0.000	2.130
FISH NET	6.0	16.000	0.000	3.800
PROVISION	2.5	3.000	-0.500	3.300
STORE	2.5	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	51.5	11.117	-0.001	1.989
Lightweight	58.7	8.470	0.002	2.120
Deadweight	51.5	11.117	-0.001	1.989
Total weight	110.2	9.707	0.001	2.059

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	95.0	3.4	3.9	0.00
R.FOTK.1P	DO	95.0	3.4	3.9	0.00
TOTAL			6.7	7.8	0.00

Fresh Water 1.00 t/m3

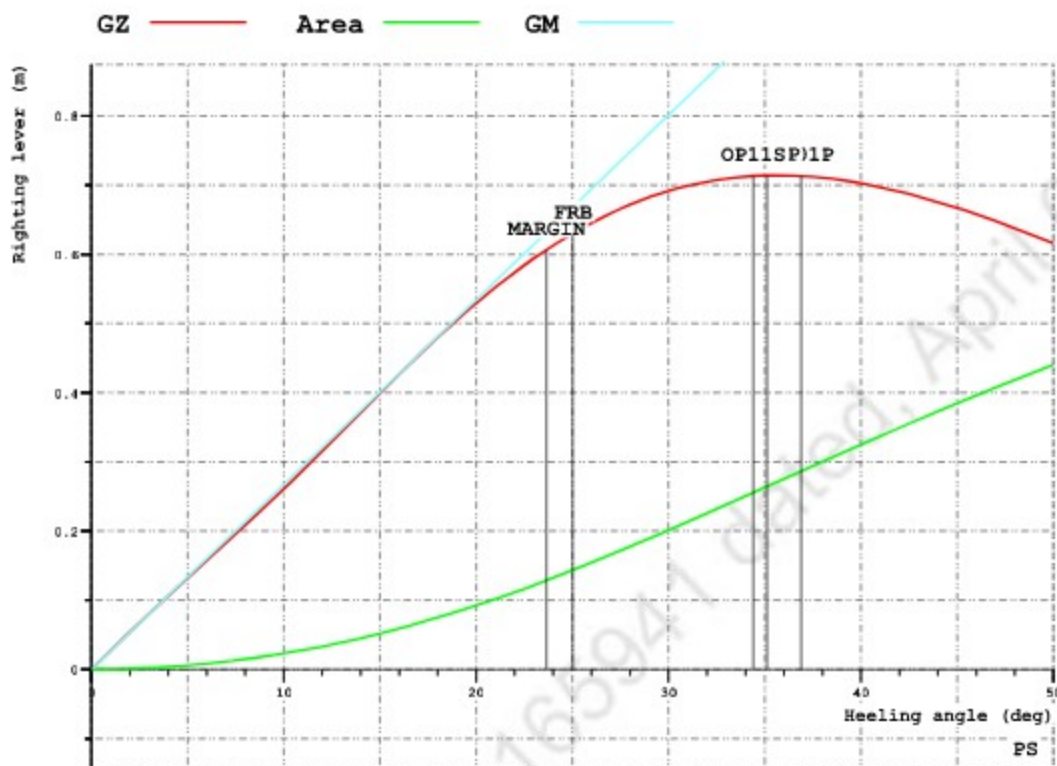
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	95.0	10.8	10.8	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			11.0	11.0	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	10.0	0.0	0.0	0.03
TOTAL			0.0	0.0	0.03

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.201	mrاد	OK
V.AREA40	0.255	mrاد	OK
V.AREA3040	0.054	mrاد	OK
V.GZ0.2	0.713	m	OK
V.MAXGZ25	35.637	deg	OK
V.GM0.35	1.531	m	OK
V.IMOWEATHER	1.804		OK
2008IS-A2.3.1.2	1.995	deg	OK

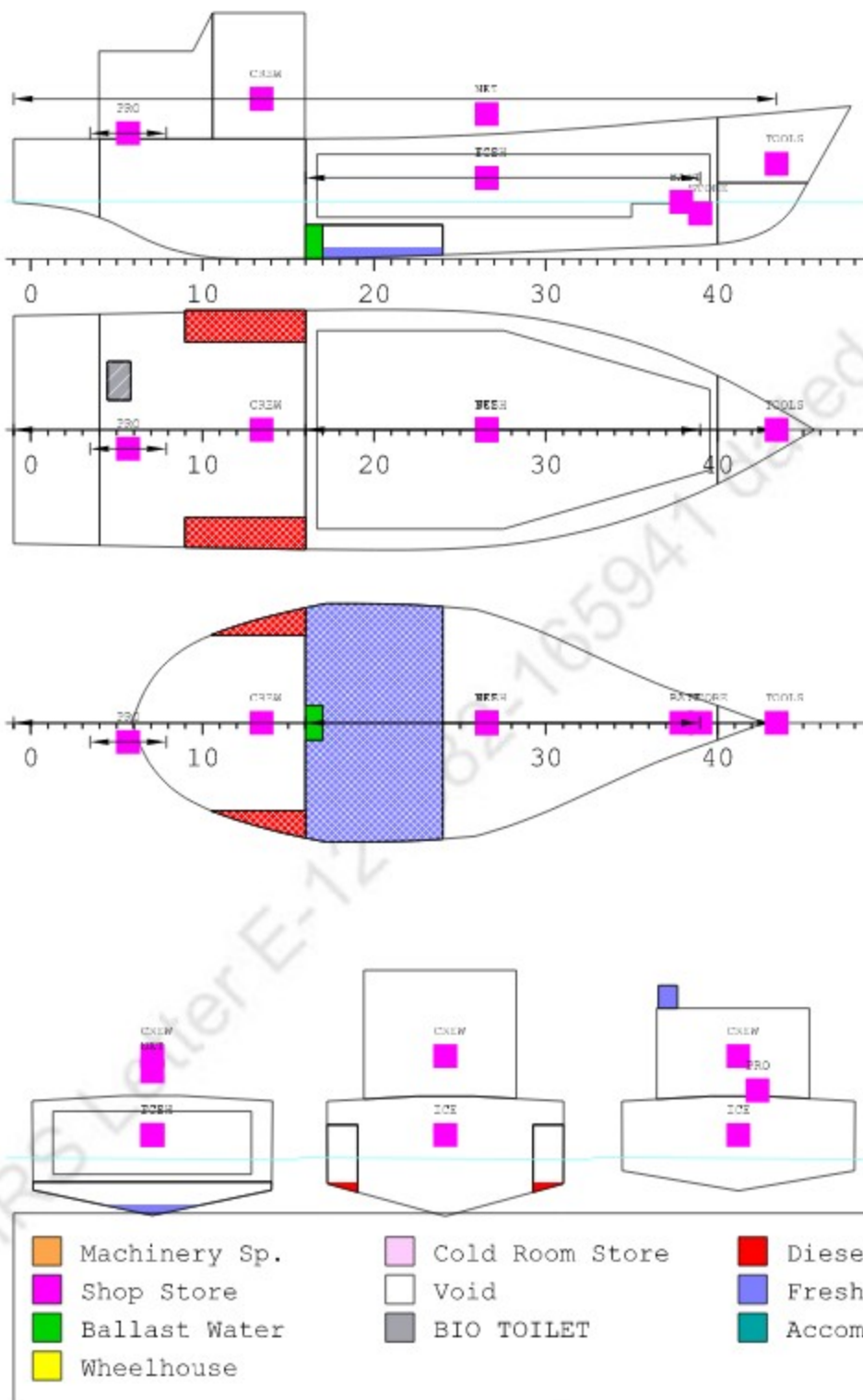
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.644	-0.019	0.000	0.000
5.0	1.636	-0.017	0.132	0.006
10.0	1.613	0.010	0.261	0.023
15.0	1.572	0.067	0.399	0.052
20.0	1.509	0.151	0.530	0.092
30.0	1.299	0.336	0.692	0.201
40.0	1.030	0.465	0.703	0.325
50.0	0.730	0.537	0.616	0.441

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	36.9	1.803
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	1.803
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	35.1	1.805
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	1.805
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.552
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.415
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.449
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.449
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.449
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.386
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	34.4	1.804
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.449

FULL LOAD ARR. WITH ICE



FULL LOAD ARR. WITH ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.523 m
Draught at FP (moulded)	1.486 m
Mean Draught (moulded)	1.504 m

Trim (+ by Bow)	-0.037 m
Heel (+ PS)	0.4 deg

KM above moulded BL	4.202 m
KG above moulded BL	2.225 m
GM0 (solid)	1.978 m
Free Surface Correction	0.341 m
GM (liquid)	1.637 m
Density of Water	1.025 t/m ³

LCB : 9.8085000513251 m Fwd of AP
 LCF : 8.8947106777501 m Fwd of AP
 MCT : 1.44 tm/cm
 TPC : 1.1 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	0.7	6.501	0.000	0.786
FISH	15.0	12.400	0.000	2.130
Fresh Water	1.3	8.146	0.350	1.270
ICE	10.0	12.400	0.000	2.130
FISH NET	6.0	12.400	0.000	3.800
PROVISION	0.2	3.000	-0.500	3.300
STORE	0.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	36.3	11.979	0.029	2.394
Lightweight	58.7	8.470	0.002	2.120
Deadweight	36.3	11.979	0.029	2.394
Total weight	95.0	9.811	0.012	2.225

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	9.5	0.3	0.4	0.00
R.FOTK.1P	DO	9.5	0.3	0.4	0.00
TOTAL			0.7	0.8	0.00

Fresh Water 1.00 t/m3

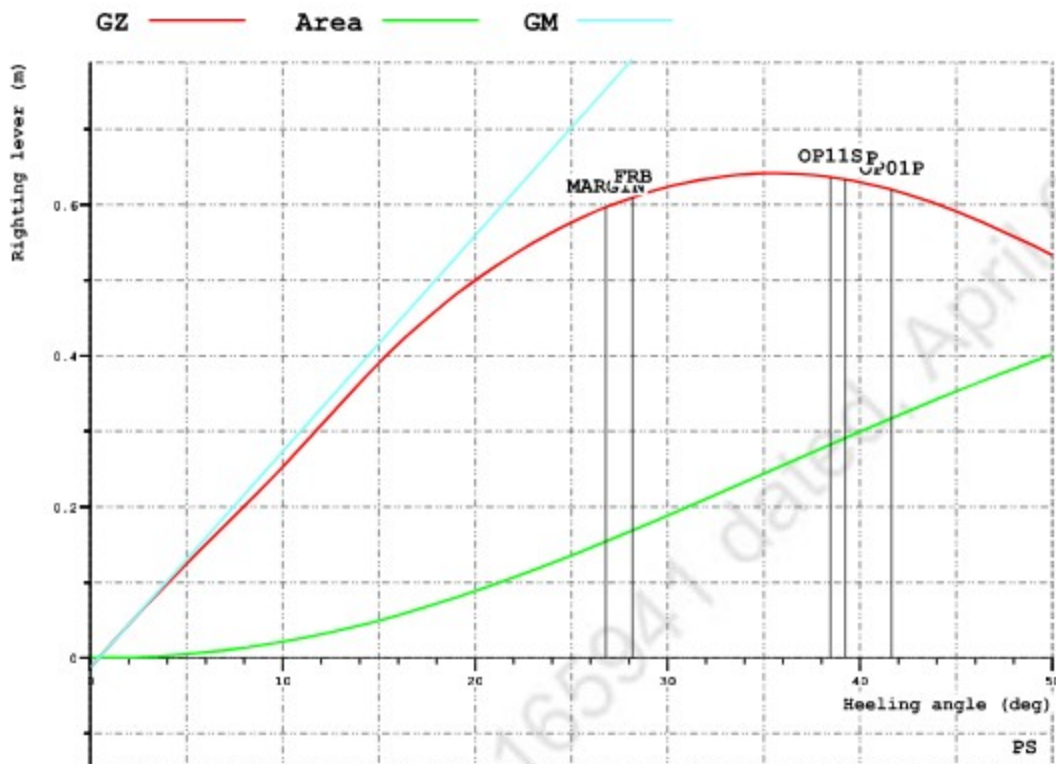
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	9.5	1.1	1.1	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			1.3	1.3	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.188	mrاد	OK
V.AREA40	0.283	mrاد	OK
V.AREA3040	0.094	mrاد	OK
V.GZ0.2	0.642	m	OK
V.MAXGZ25	35.584	deg	OK
V.GM0.35	1.637	m	OK
V.IMOWEATHER	1.762		OK
2008IS-A2.3.1.2	2.778	deg	OK

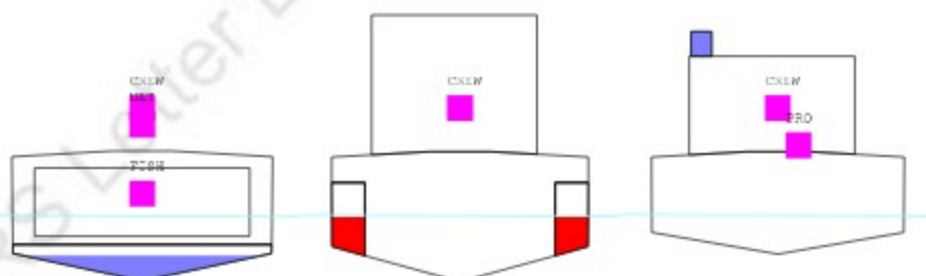
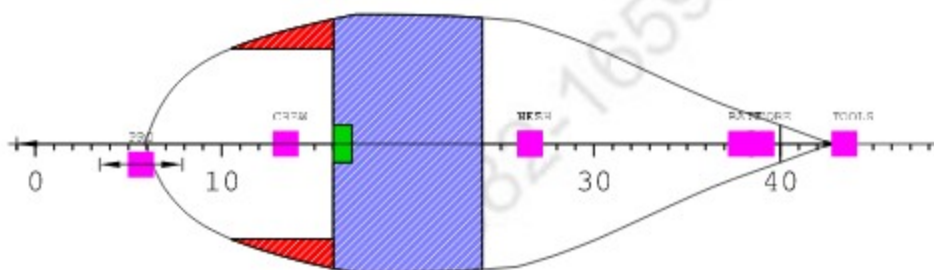
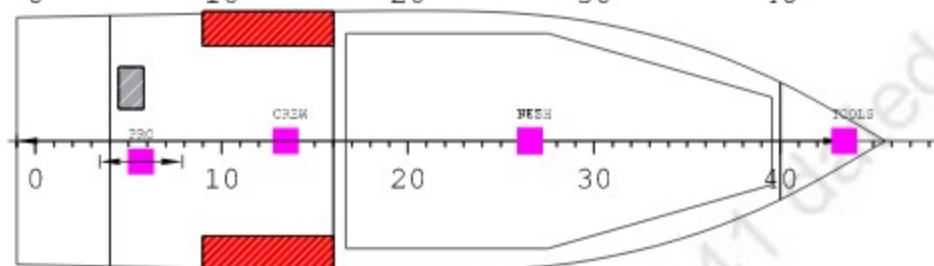
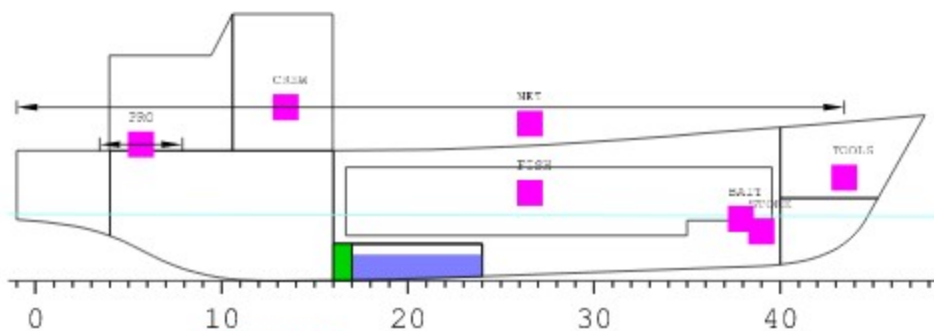
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.504	-0.037	-0.012	0.000
0.4	1.504	-0.037	0.000	0.000
5.0	1.496	-0.017	0.125	0.005
10.0	1.471	0.038	0.253	0.021
15.0	1.429	0.122	0.390	0.050
20.0	1.360	0.223	0.500	0.089
30.0	1.136	0.432	0.623	0.188
40.0	0.841	0.621	0.630	0.299
50.0	0.518	0.749	0.533	0.402

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	41.6	1.918
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	1.961
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	39.2	1.920
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	1.965
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.689
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.553
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.593
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.593
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.593
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.536
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	38.5	1.918
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.596

DEPT. 50% CONS & 100% CATCH W/O ICE



Machinery Sp.	Cold Room Store	Diesel Oil
Shop Store	Void	Fresh Water
Ballast Water	BIO TOILET	Accommodation
Wheelhouse		

DEPT. 50% CONS & 100% CATCH W/O ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.615 m
Draught at FP (moulded)	1.564 m
Mean Draught (moulded)	1.589 m

Trim (+ by Bow)	-0.051 m
Heel (+ PS)	0.2 deg

KM above moulded BL	4.000 m
KG above moulded BL	2.122 m
GM0 (solid)	1.879 m
Free Surface Correction	0.310 m
GM (liquid)	1.568 m
Density of Water	1.025 t/m ³

LCB	: 9.7049051824447 m Fwd of AP
LCF	: 8.8853062754282 m Fwd of AP
MCT	: 1.46 tm/cm
TPC	: 1.1 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	3.5	6.173	0.000	1.148
FISH	25.0	12.400	0.000	2.130
Fresh Water	5.9	9.183	0.079	0.669
FISH NET	6.0	12.400	0.000	3.800
PROVISION	1.2	3.000	-0.500	3.300
STORE	1.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	45.8	11.295	0.012	2.124
Lightweight	58.7	8.470	0.002	2.120
Deadweight	45.8	11.295	0.012	2.124
Total weight	104.5	9.708	0.007	2.122

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	50.0	1.8	2.1	0.00
R.FOTK.1P	DO	50.0	1.8	2.1	0.00
TOTAL			3.5	4.1	0.00

Fresh Water 1.00 t/m3

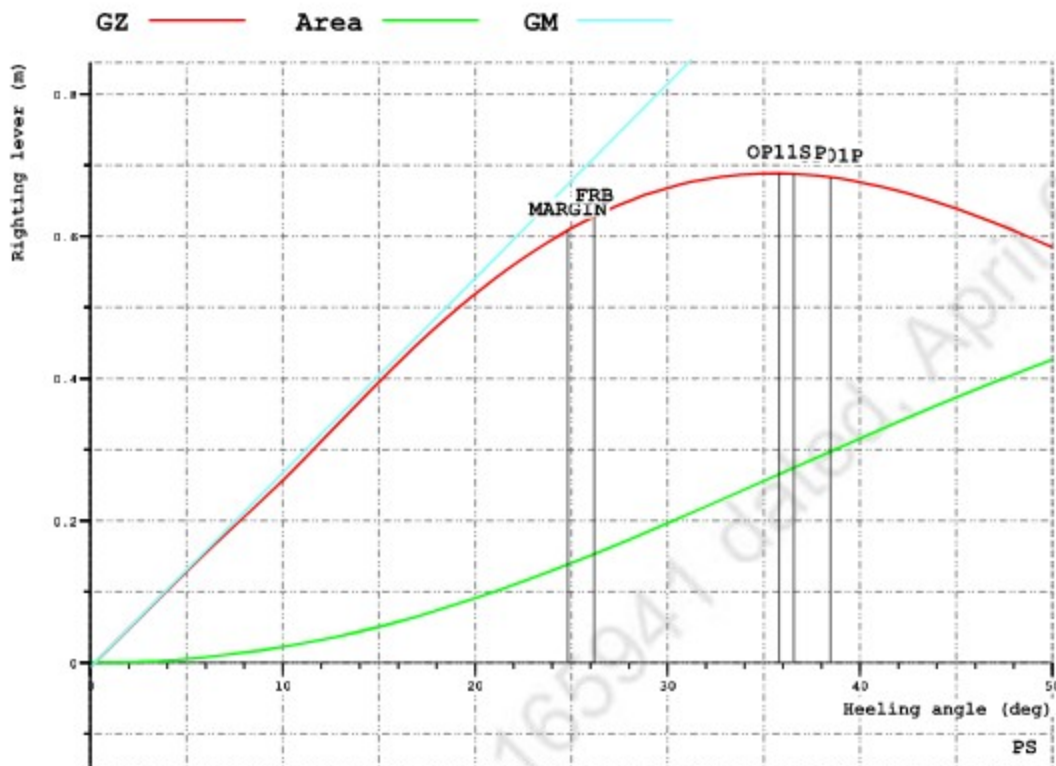
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	50.0	5.7	5.7	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			5.9	5.9	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.196	mrاد	OK
V.AREA40	0.265	mrاد	OK
V.AREA3040	0.069	mrاد	OK
V.GZ0.2	0.689	m	OK
V.MAXGZ25	35.524	deg	OK
V.GM0.35	1.568	m	OK
V.IMOWEATHER	1.787		OK
2008IS-A2.3.1.2	2.370	deg	OK

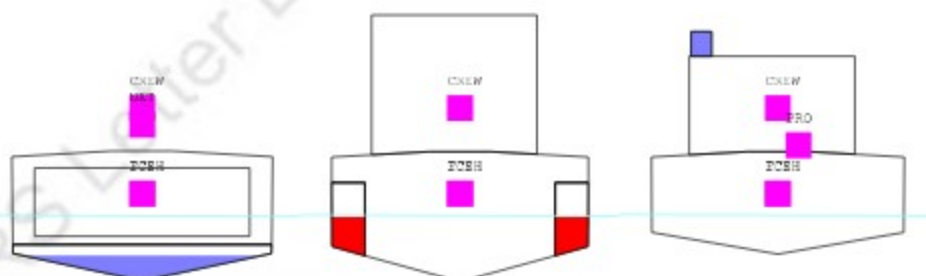
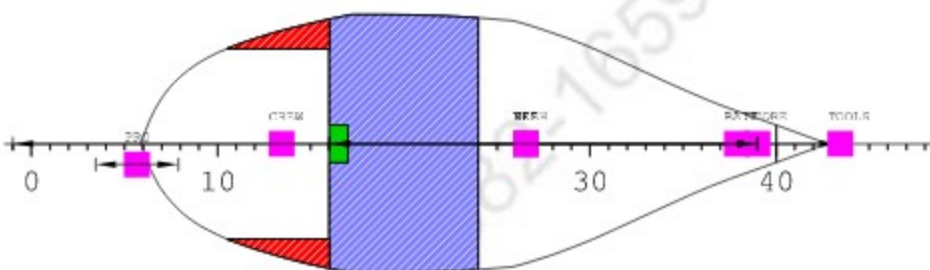
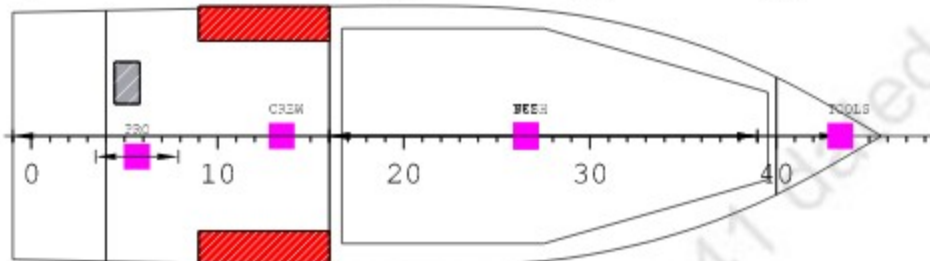
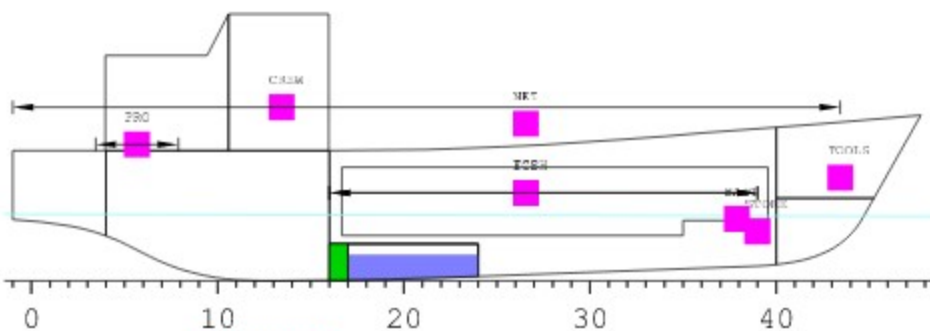
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.589	-0.051	-0.007	0.000
0.2	1.589	-0.051	0.000	0.000
5.0	1.582	-0.047	0.128	0.005
10.0	1.558	-0.011	0.257	0.022
15.0	1.517	0.055	0.395	0.051
20.0	1.453	0.146	0.519	0.091
30.0	1.237	0.339	0.668	0.196
40.0	0.958	0.489	0.677	0.315
50.0	0.650	0.578	0.585	0.427

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	38.5	1.840
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	1.864
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	36.6	1.844
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	1.869
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.600
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.461
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.498
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.498
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.498
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.458
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	35.8	1.842
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.499

DEPT. 50% CONS & 100% CATCH WITH ICE



Machinery Sp.	Cold Room Store	Diesel Oil
Shop Store	Void	Fresh Water
Ballast Water	BIO TOILET	Accommodation
Wheelhouse		

DEPT. 50% CONS & 100% CATCH WITH ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.615 m
Draught at FP (moulded)	1.564 m
Mean Draught (moulded)	1.589 m

Trim (+ by Bow)	-0.051 m
Heel (+ PS)	0.2 deg

KM above moulded BL	4.000 m
KG above moulded BL	2.122 m
GM0 (solid)	1.879 m
Free Surface Correction	0.310 m
GM (liquid)	1.568 m
Density of Water	1.025 t/m3

LCB : 9.7049051824447 m Fwd of AP
 LCF : 8.8853062754282 m Fwd of AP
 MCT : 1.46 tm/cm
 TPC : 1.1 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	3.5	6.173	0.000	1.148
FISH	15.0	12.400	0.000	2.130
Fresh Water	5.9	9.183	0.079	0.669
ICE	10.0	12.400	0.000	2.130
FISH NET	6.0	12.400	0.000	3.800
PROVISION	1.2	3.000	-0.500	3.300
STORE	1.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	45.8	11.295	0.012	2.124
Lightweight	58.7	8.470	0.002	2.120
Deadweight	45.8	11.295	0.012	2.124
Total weight	104.5	9.708	0.007	2.122

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	50.0	1.8	2.1	0.00
R.FOTK.1P	DO	50.0	1.8	2.1	0.00
TOTAL			3.5	4.1	0.00

Fresh Water 1.00 t/m3

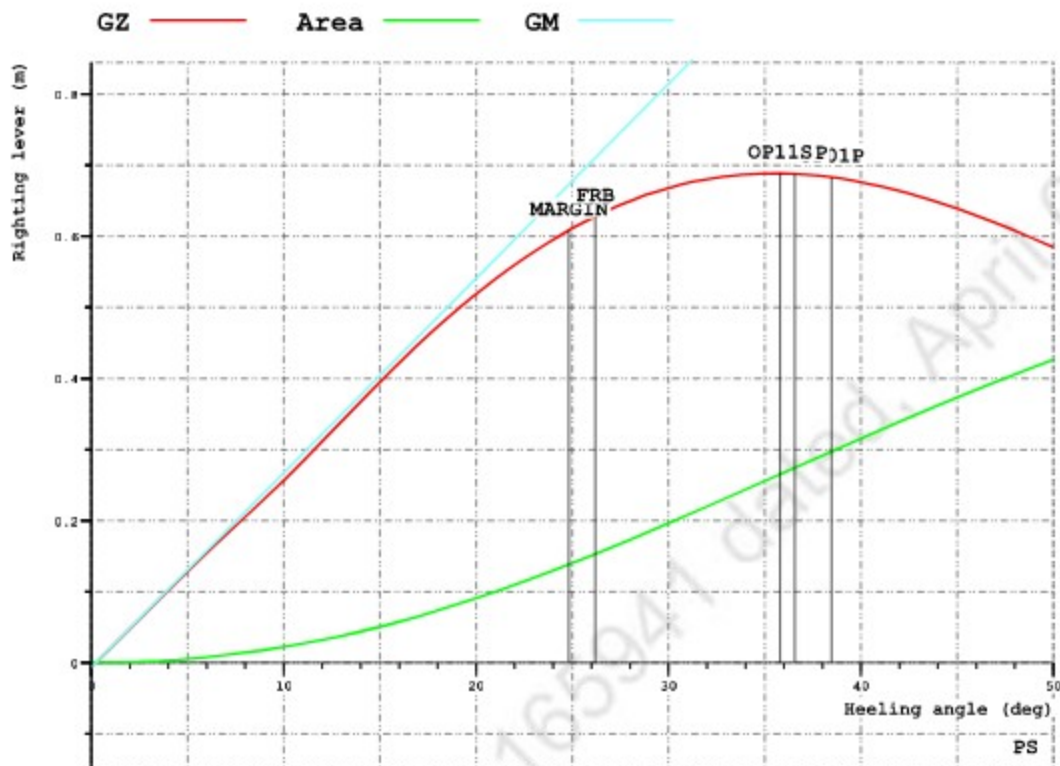
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	50.0	5.7	5.7	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			5.9	5.9	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.196	mrاد	OK
V.AREA40	0.265	mrاد	OK
V.AREA3040	0.069	mrاد	OK
V.GZ0.2	0.689	m	OK
V.MAXGZ25	35.524	deg	OK
V.GM0.35	1.568	m	OK
V.IMOWEATHER	1.787		OK
2008IS-A2.3.1.2	2.370	deg	OK

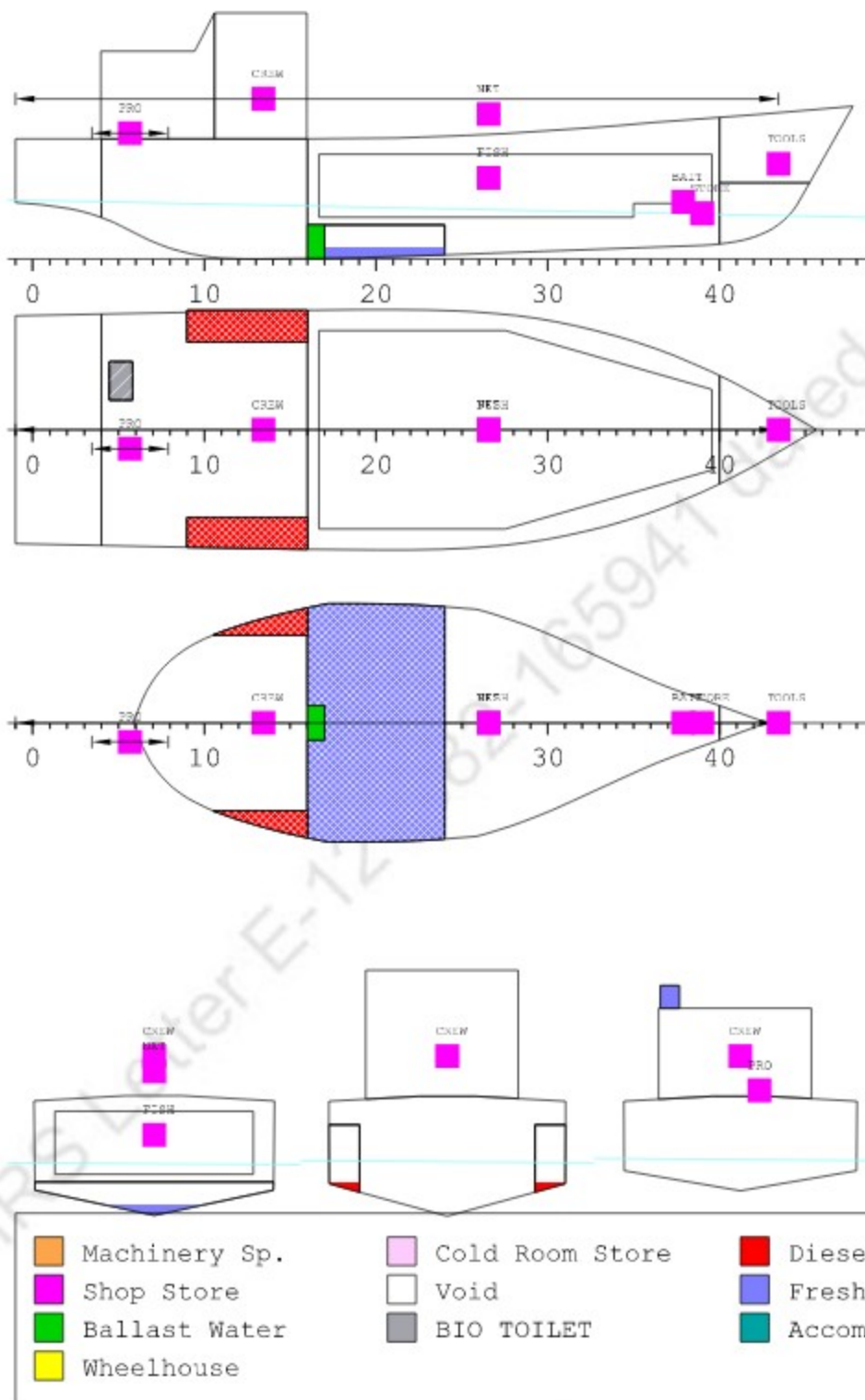
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.589	-0.051	-0.007	0.000
0.2	1.589	-0.051	0.000	0.000
5.0	1.582	-0.047	0.128	0.005
10.0	1.558	-0.011	0.257	0.022
15.0	1.517	0.055	0.395	0.051
20.0	1.453	0.146	0.519	0.091
30.0	1.237	0.339	0.668	0.196
40.0	0.958	0.489	0.677	0.315
50.0	0.650	0.578	0.585	0.427

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	38.5	1.840
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	1.864
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	36.6	1.844
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	1.869
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.600
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.461
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.498
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.498
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.498
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.458
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	35.8	1.842
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.499

ARR. 10% CONS & 40% CATCH W/O ICE



ARR. 10% CONS & 40% CATCH W/O ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.552 m
Draught at FP (moulded)	1.125 m
Mean Draught (moulded)	1.338 m

Trim (+ by Bow)	-0.427 m
Heel (+ PS)	0.4 deg

KM above moulded BL	4.724 m
KG above moulded BL	2.242 m
GM0 (solid)	2.482 m
Free Surface Correction	0.405 m
GM (liquid)	2.077 m
Density of Water	1.025 t/m ³

LCB : 9.2978953645706 m Fwd of AP
 LCF : 8.7708899336484 m Fwd of AP
 MCT : 1.4 tm/cm
 TPC : 1.09 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	0.7	6.501	0.000	0.786
FISH	10.0	12.400	0.000	2.130
Fresh Water	1.3	8.146	0.350	1.270
FISH NET	6.0	12.400	0.000	3.800
PROVISION	0.2	3.000	-0.500	3.300
STORE	0.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	21.3	11.683	0.050	2.579
Lightweight	58.7	8.470	0.002	2.120
Deadweight	21.3	11.683	0.050	2.579
Total weight	80.0	9.325	0.015	2.242

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	9.5	0.3	0.4	0.00
R.FOTK.1P	DO	9.5	0.3	0.4	0.00
TOTAL			0.7	0.8	0.00

Fresh Water 1.00 t/m3

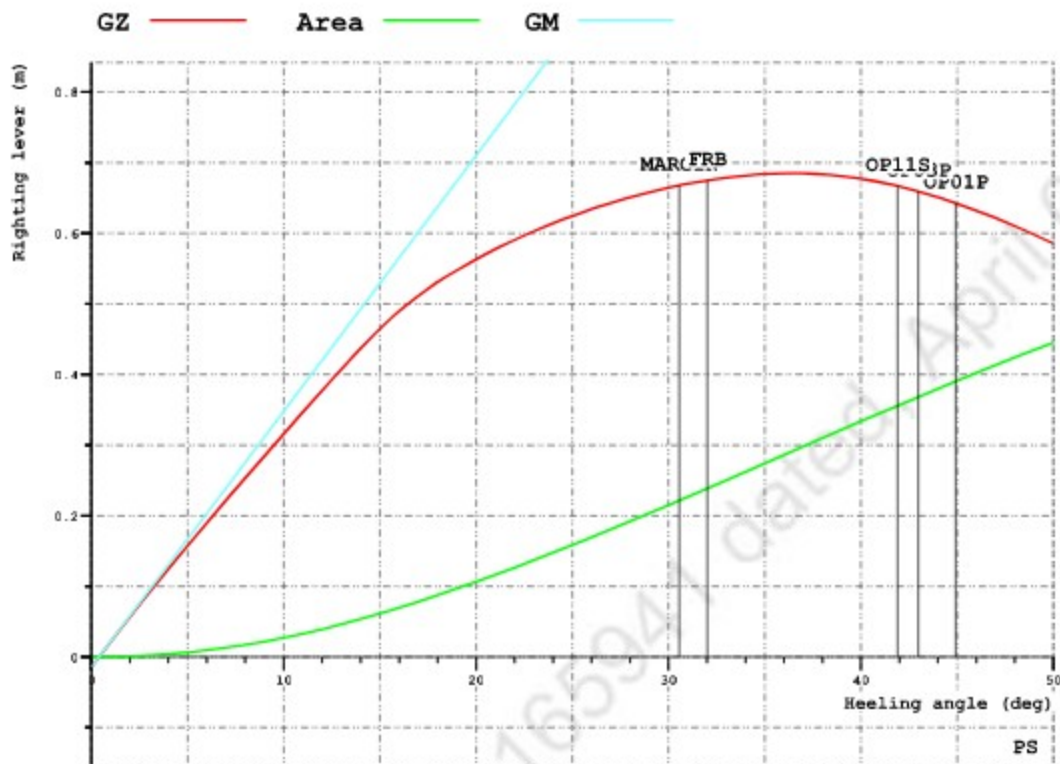
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	9.5	1.1	1.1	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			1.3	1.3	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.215	mrاد	OK
V.AREA40	0.334	mrاد	OK
V.AREA3040	0.119	mrاد	OK
V.GZ0.2	0.685	m	OK
V.MAXGZ25	36.400	deg	OK
V.GM0.35	2.077	m	OK
V.IMOWEATHER	1.751		OK
2008IS-A2.3.1.2	2.741	deg	OK

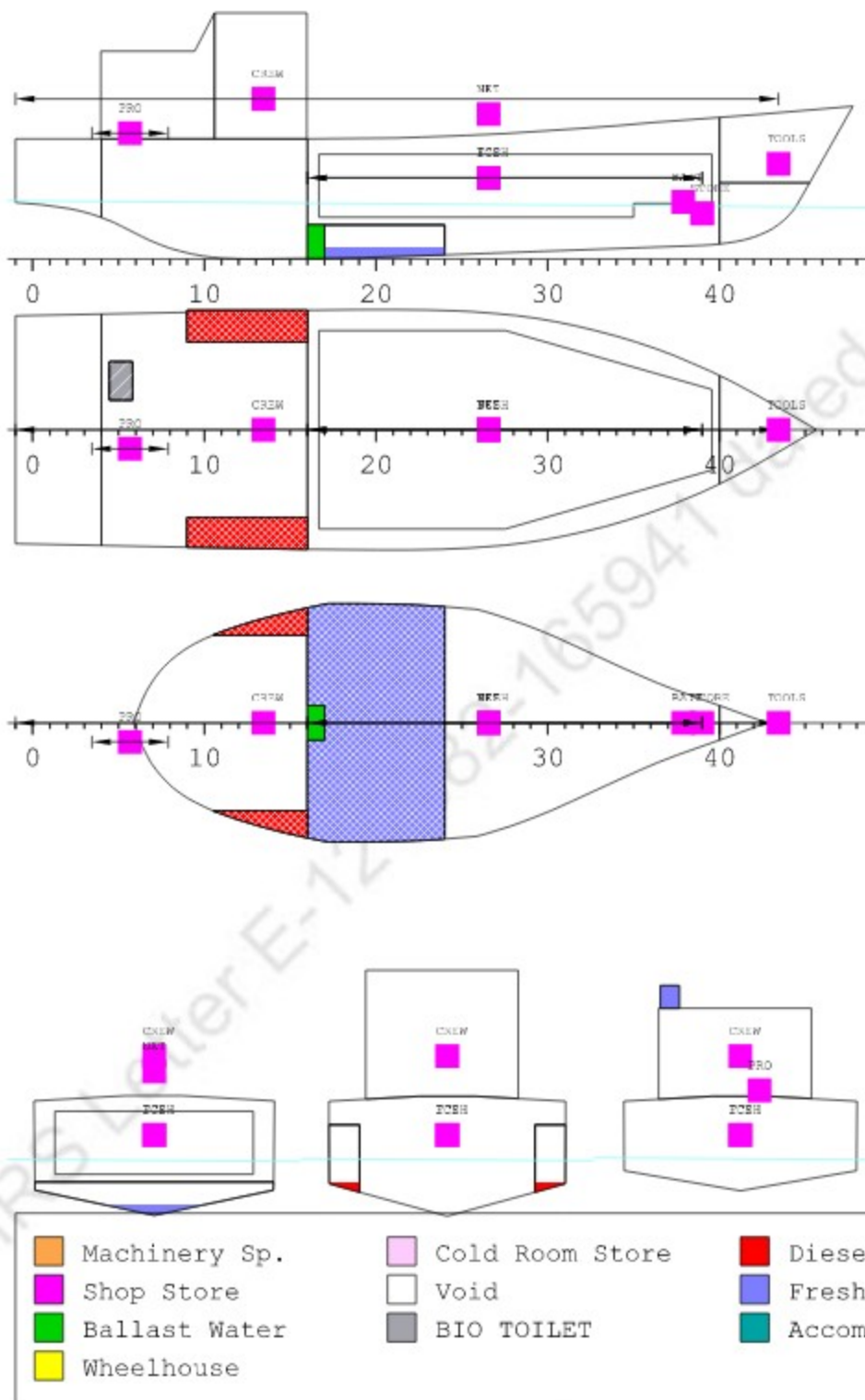
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.338	-0.427	-0.015	0.000
0.4	1.338	-0.427	0.000	0.000
5.0	1.331	-0.409	0.158	0.006
10.0	1.308	-0.349	0.316	0.027
15.0	1.262	-0.267	0.465	0.061
20.0	1.185	-0.175	0.563	0.107
30.0	0.953	0.027	0.665	0.215
40.0	0.642	0.227	0.677	0.334
50.0	0.303	0.367	0.585	0.445

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	44.9	2.019
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	2.060
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	43.0	2.052
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	2.094
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.763
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.574
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.613
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.613
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.614
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.902
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	41.9	2.041
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.615

ARR. 10% CONS & 40% CATCH WITH ICE



ARR. 10% CONS & 40% CATCH WITH ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.532 m
Draught at FP (moulded)	1.367 m
Mean Draught (moulded)	1.449 m

Trim (+ by Bow)	-0.165 m
Heel (+ PS)	0.4 deg

KM above moulded BL	4.357 m
KG above moulded BL	2.230 m
GM0 (solid)	2.127 m
Free Surface Correction	0.360 m
GM (liquid)	1.767 m
Density of Water	1.025 t/m ³

LCB : 9.6567925164652 m Fwd of AP
 LCF : 8.8616605565553 m Fwd of AP
 MCT : 1.43 tm/cm
 TPC : 1.09 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	0.7	6.501	0.000	0.786
FISH	10.0	12.400	0.000	2.130
Fresh Water	1.3	8.146	0.350	1.270
ICE	10.0	12.400	0.000	2.130
FISH NET	6.0	12.400	0.000	3.800
PROVISION	0.2	3.000	-0.500	3.300
STORE	0.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	31.3	11.912	0.034	2.436
Lightweight	58.7	8.470	0.002	2.120
Deadweight	31.3	11.912	0.034	2.436
Total weight	90.0	9.667	0.013	2.230

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	9.5	0.3	0.4	0.00
R.FOTK.1P	DO	9.5	0.3	0.4	0.00
TOTAL			0.7	0.8	0.00

Fresh Water 1.00 t/m3

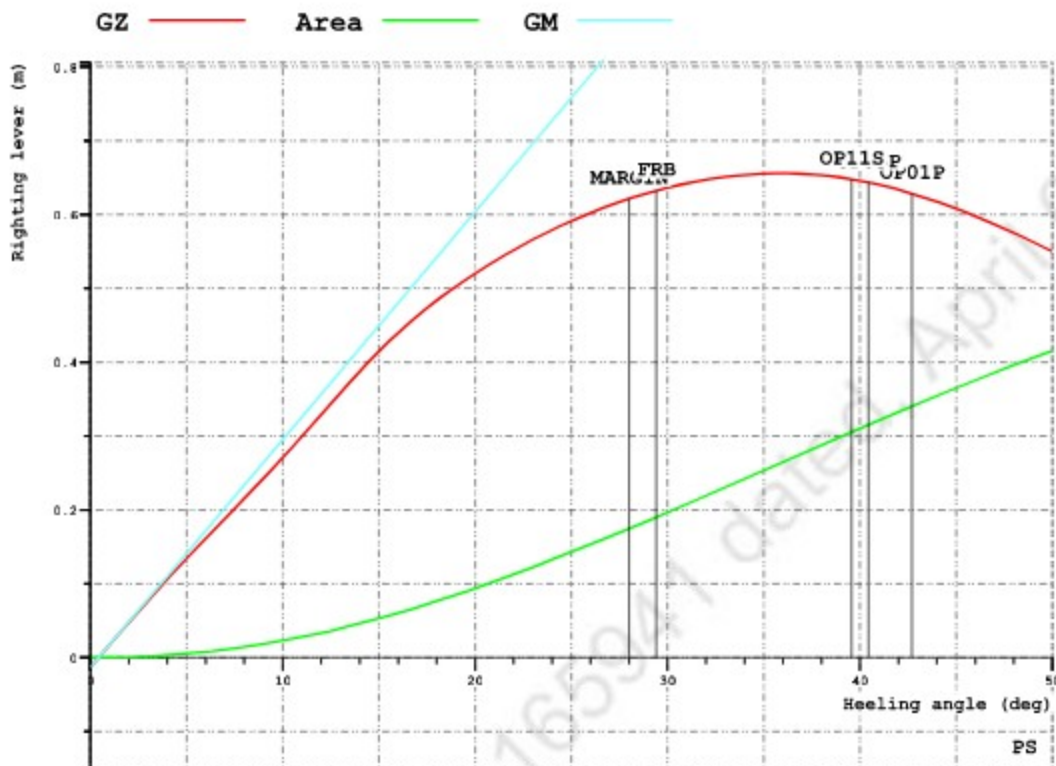
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	9.5	1.1	1.1	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			1.3	1.3	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.197	mrاد	OK
V.AREA40	0.305	mrاد	OK
V.AREA3040	0.109	mrاد	OK
V.GZ0.2	0.656	m	OK
V.MAXGZ25	35.893	deg	OK
V.GM0.35	1.767	m	OK
V.IMOWEATHER	1.766		OK
2008IS-A2.3.1.2	2.766	deg	OK

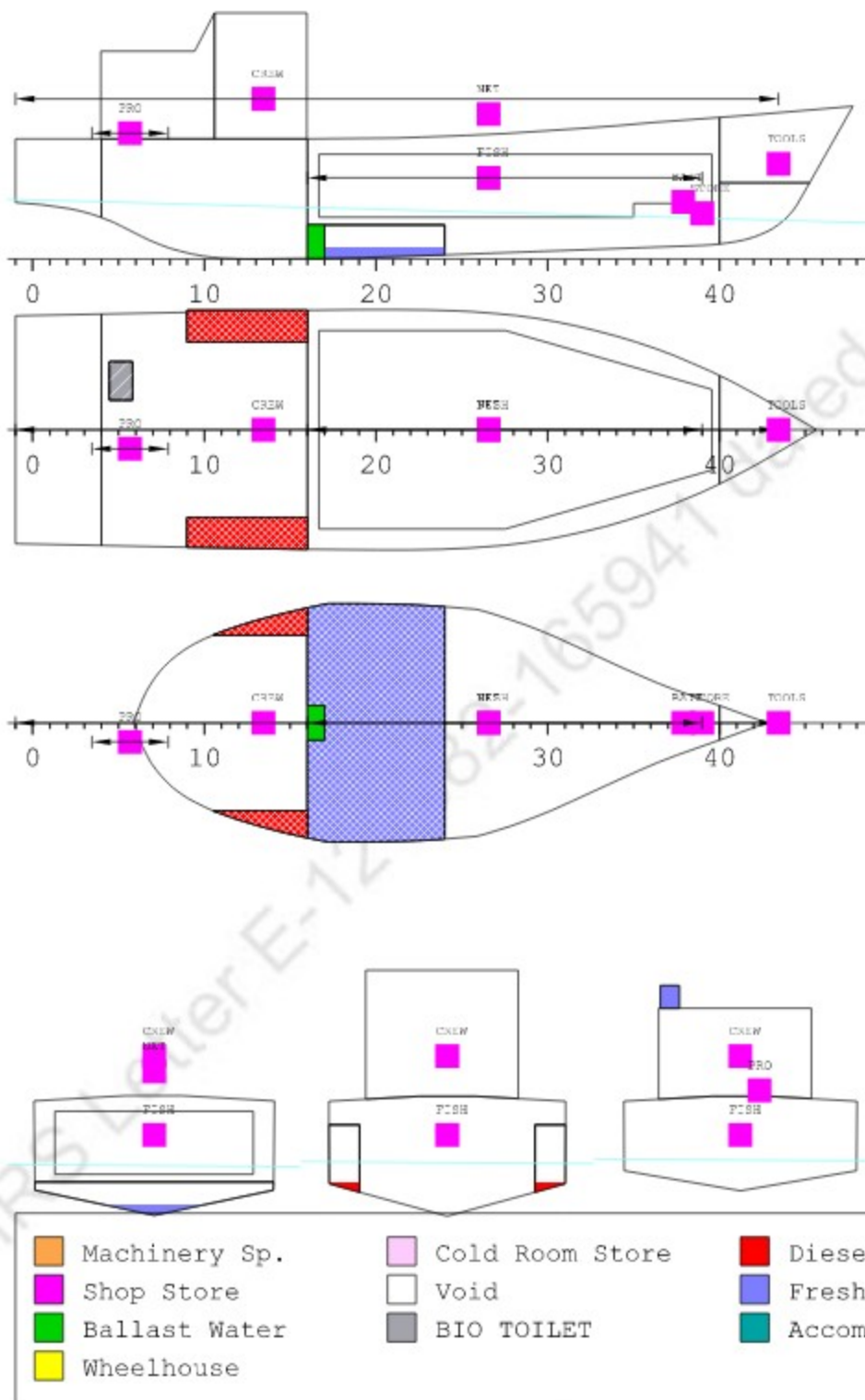
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.450	-0.165	-0.013	0.000
0.4	1.449	-0.165	0.000	0.000
5.0	1.442	-0.145	0.134	0.005
10.0	1.417	-0.088	0.271	0.023
15.0	1.375	-0.001	0.415	0.053
20.0	1.304	0.098	0.520	0.094
30.0	1.077	0.306	0.636	0.197
40.0	0.776	0.498	0.646	0.310
50.0	0.447	0.630	0.550	0.416

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	42.7	1.951
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	1.994
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	40.4	1.964
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	2.008
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.714
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.561
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.600
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.600
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.600
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.656
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	39.6	1.959
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.603

ARR. 10% CONS & 20% CATCH W/O ICE



ARR. 10% CONS & 20% CATCH W/O ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.563 m
Draught at FP (moulded)	1.000 m
Mean Draught (moulded)	1.282 m

Trim (+ by Bow)	-0.564 m
Heel (+ PS)	0.4 deg

KM above moulded BL	4.939 m
KG above moulded BL	2.250 m
GM0 (solid)	2.689 m
Free Surface Correction	0.432 m
GM (liquid)	2.257 m
Density of Water	1.025 t/m ³

LCB : 9.083369274011 m Fwd of AP
 LCF : 8.7048786747642 m Fwd of AP
 MCT : 1.37 tm/cm
 TPC : 1.08 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	0.7	6.501	0.000	0.786
FISH	5.0	12.400	0.000	2.130
Fresh Water	1.3	8.146	0.350	1.270
FISH NET	6.0	12.400	0.000	3.800
PROVISION	0.2	3.000	-0.500	3.300
STORE	0.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	16.3	11.463	0.065	2.717
Lightweight	58.7	8.470	0.002	2.120
Deadweight	16.3	11.463	0.065	2.717
Total weight	75.0	9.121	0.016	2.250

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	9.5	0.3	0.4	0.00
R.FOTK.1P	DO	9.5	0.3	0.4	0.00
TOTAL			0.7	0.8	0.00

Fresh Water 1.00 t/m3

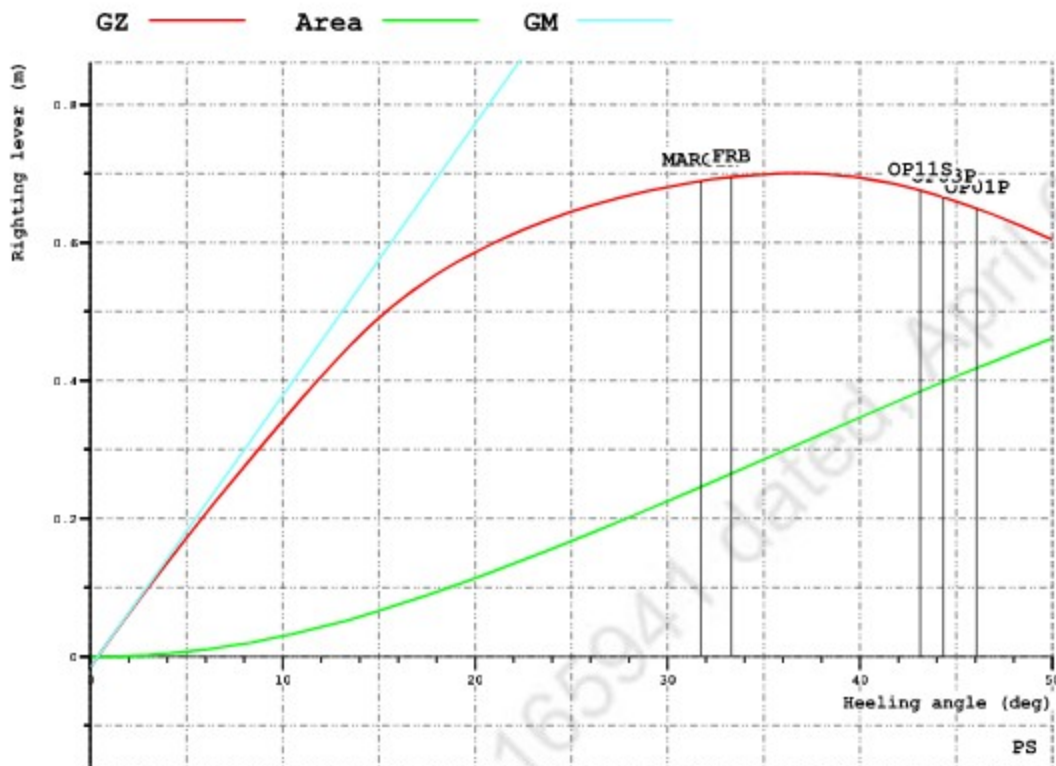
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	9.5	1.1	1.1	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			1.3	1.3	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.225	mrاد	OK
V.AREA40	0.347	mrاد	OK
V.AREA3040	0.121	mrاد	OK
V.GZ0.2	0.700	m	OK
V.MAXGZ25	36.613	deg	OK
V.GM0.35	2.257	m	OK
V.IMOWEATHER	1.685		OK
2008IS-A2.3.1.2	2.726	deg	OK

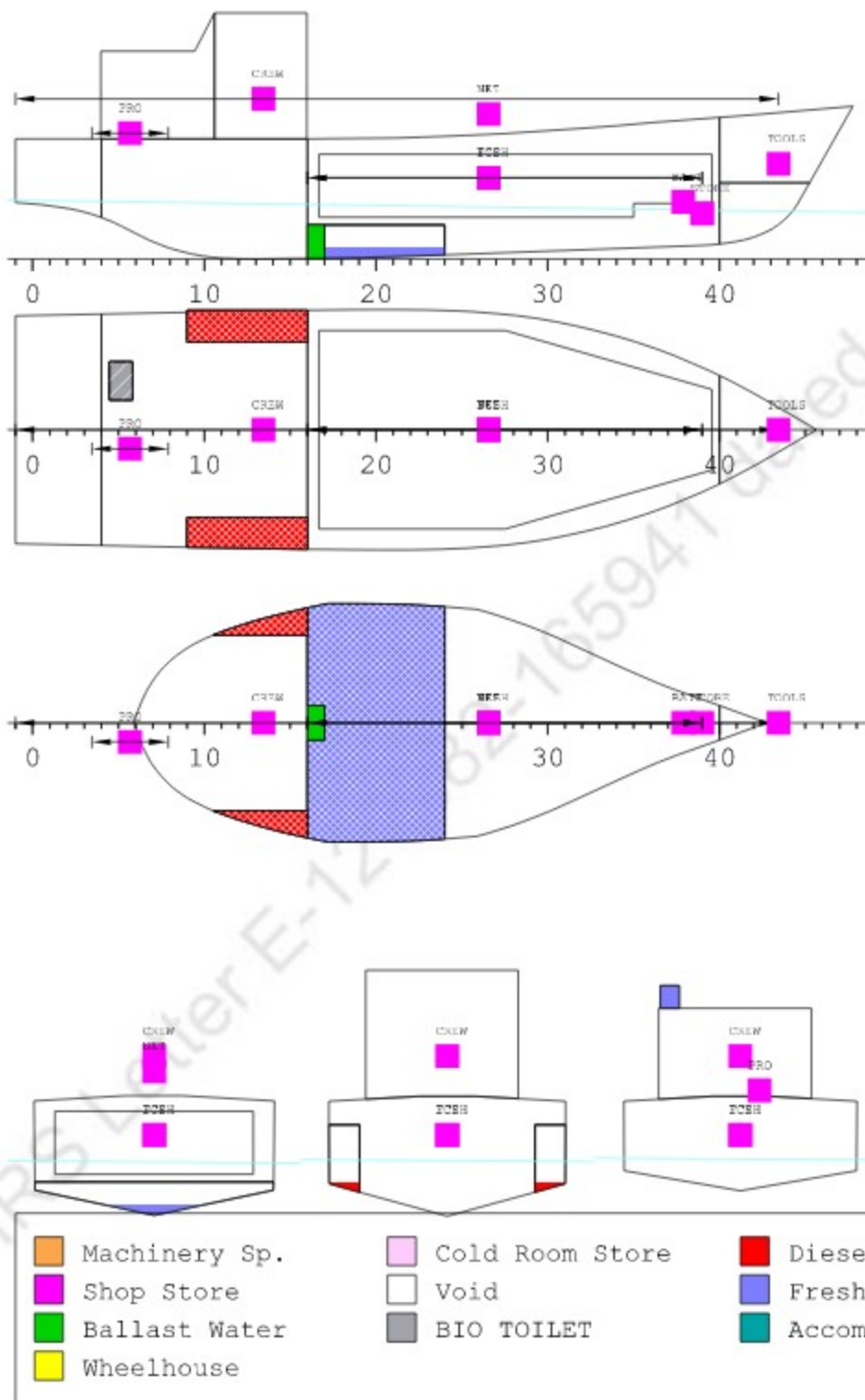
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.282	-0.564	-0.016	0.000
0.4	1.282	-0.564	0.000	0.000
5.0	1.274	-0.546	0.172	0.007
10.0	1.251	-0.489	0.342	0.029
15.0	1.202	-0.413	0.491	0.066
20.0	1.122	-0.326	0.586	0.113
30.0	0.886	-0.128	0.681	0.225
40.0	0.572	0.075	0.694	0.347
50.0	0.227	0.213	0.604	0.461

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	46.1	2.053
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	2.093
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	44.3	2.097
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	2.138
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.786
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.579
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.619
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.619
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.619
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	3.028
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	43.1	2.082
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.620

ARR. 10% CONS & 20% CATCH WITH ICE



ARR. 10% CONS & 20% CATCH WITH ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.542 m
Draught at FP (moulded)	1.247 m
Mean Draught (moulded)	1.394 m

Trim (+ by Bow)	-0.295 m
Heel (+ PS)	0.4 deg

KM above moulded BL	4.537 m
KG above moulded BL	2.236 m
GM0 (solid)	2.302 m
Free Surface Correction	0.381 m
GM (liquid)	1.920 m
Density of Water	1.025 t/m ³

LCB :	9.4876656734625 m Fwd of AP
LCF :	8.8256229337337 m Fwd of AP
MCT :	1.42 tm/cm
TPC :	1.09 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	0.7	6.501	0.000	0.786
FISH	5.0	12.400	0.000	2.130
Fresh Water	1.3	8.146	0.350	1.270
ICE	10.0	12.400	0.000	2.130
FISH NET	6.0	12.400	0.000	3.800
PROVISION	0.2	3.000	-0.500	3.300
STORE	0.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	26.3	11.819	0.041	2.494
Lightweight	58.7	8.470	0.002	2.120
Deadweight	26.3	11.819	0.041	2.494
Total weight	85.0	9.506	0.014	2.236

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	9.5	0.3	0.4	0.00
R.FOTK.1P	DO	9.5	0.3	0.4	0.00
TOTAL			0.7	0.8	0.00

Fresh Water 1.00 t/m3

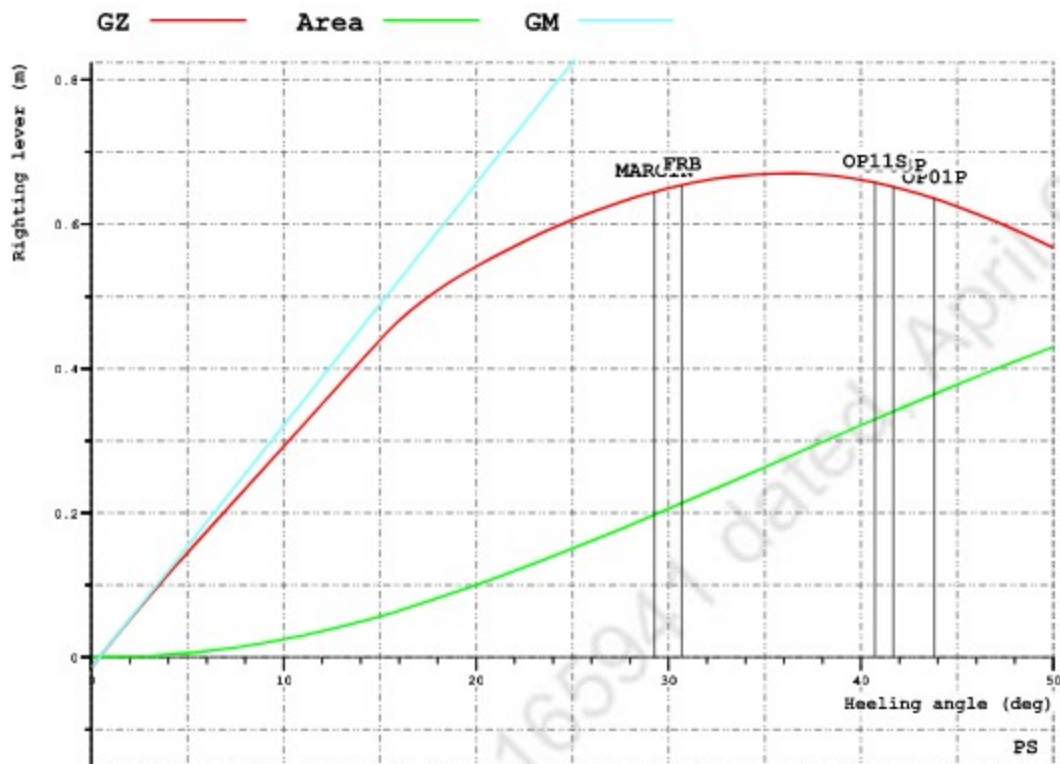
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	9.5	1.1	1.1	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			1.3	1.3	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.205	mrاد	OK
V.AREA40	0.321	mrاد	OK
V.AREA3040	0.116	mrاد	OK
V.GZ0.2	0.670	m	OK
V.MAXGZ25	36.117	deg	OK
V.GM0.35	1.920	m	OK
V.IMOWEATHER	1.763		OK
2008IS-A2.3.1.2	2.751	deg	OK

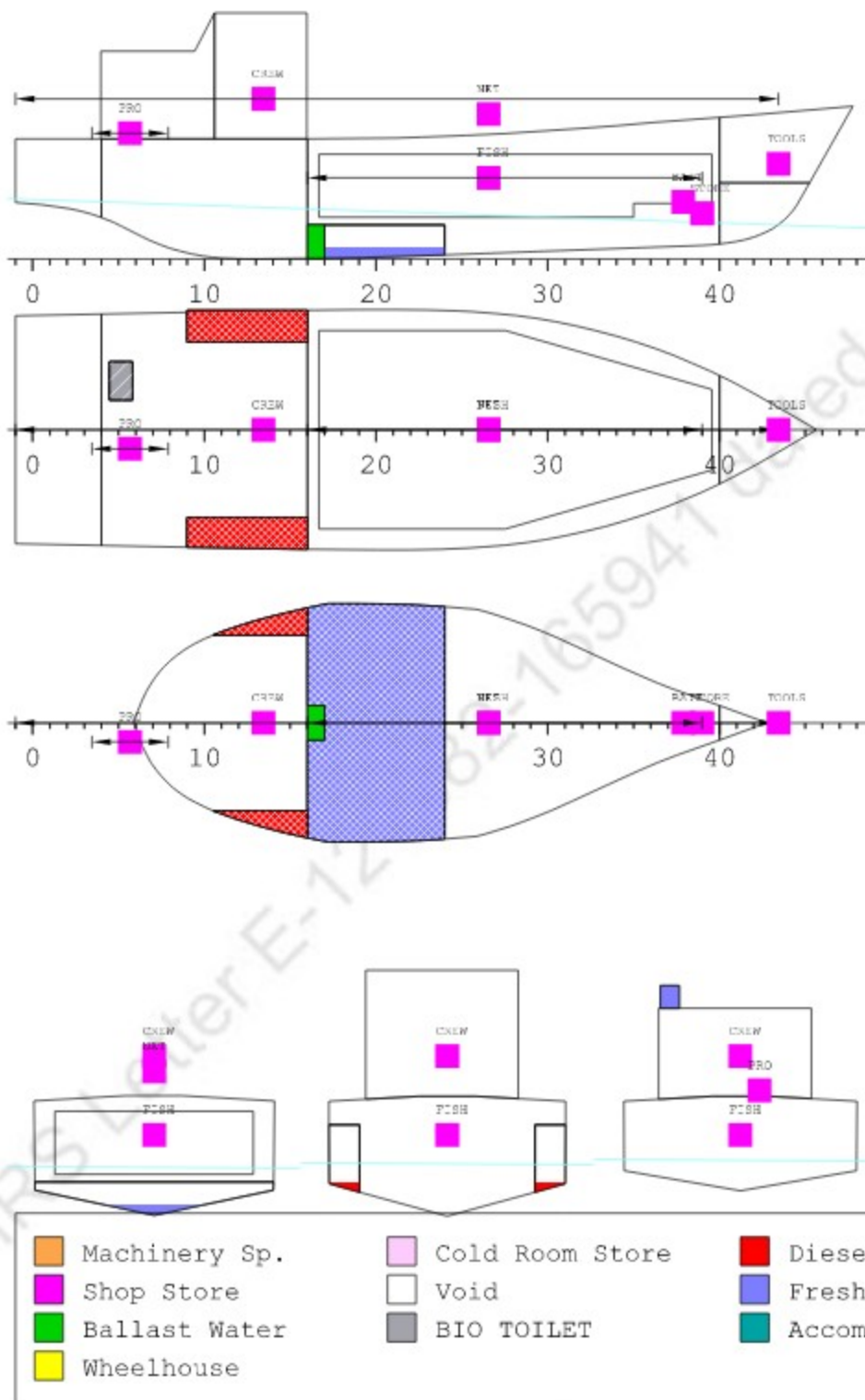
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.394	-0.295	-0.014	0.000
0.4	1.394	-0.295	0.000	0.000
5.0	1.387	-0.275	0.145	0.006
10.0	1.363	-0.216	0.292	0.025
15.0	1.320	-0.130	0.439	0.057
20.0	1.246	-0.034	0.541	0.100
30.0	1.016	0.171	0.650	0.205
40.0	0.710	0.367	0.661	0.321
50.0	0.376	0.503	0.567	0.430

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	43.8	1.985
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	2.027
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	41.7	2.008
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	2.051
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.738
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.567
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.607
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.607
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.607
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.778
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	40.7	2.000
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.609

ARR. 10% CONS & 0% CATCH W/O ICE



ARR. 10% CONS & 0% CATCH W/O ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.576 m
Draught at FP (moulded)	0.871 m
Mean Draught (moulded)	1.223 m

Trim (+ by Bow)	-0.706 m
Heel (+ PS)	0.4 deg

KM above moulded BL	5.178 m
KG above moulded BL	2.258 m
GM0 (solid)	2.920 m
Free Surface Correction	0.463 m
GM (liquid)	2.457 m
Density of Water	1.025 t/m ³

LCB :	8.8388308485502 m Fwd of AP
LCF :	8.6138426202118 m Fwd of AP
MCT :	1.33 tm/cm
TPC :	1.07 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	0.7	6.501	0.000	0.786
FISH	0.0	0.000	0.000	0.000
Fresh Water	1.3	8.146	0.350	1.270
FISH NET	6.0	12.400	0.000	3.800
PROVISION	0.2	3.000	-0.500	3.300
STORE	0.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	11.3	11.049	0.094	2.976
Lightweight	58.7	8.470	0.002	2.120
Deadweight	11.3	11.049	0.094	2.976
Total weight	70.0	8.886	0.017	2.258

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	9.5	0.3	0.4	0.00
R.FOTK.1P	DO	9.5	0.3	0.4	0.00
TOTAL			0.7	0.8	0.00

Fresh Water 1.00 t/m3

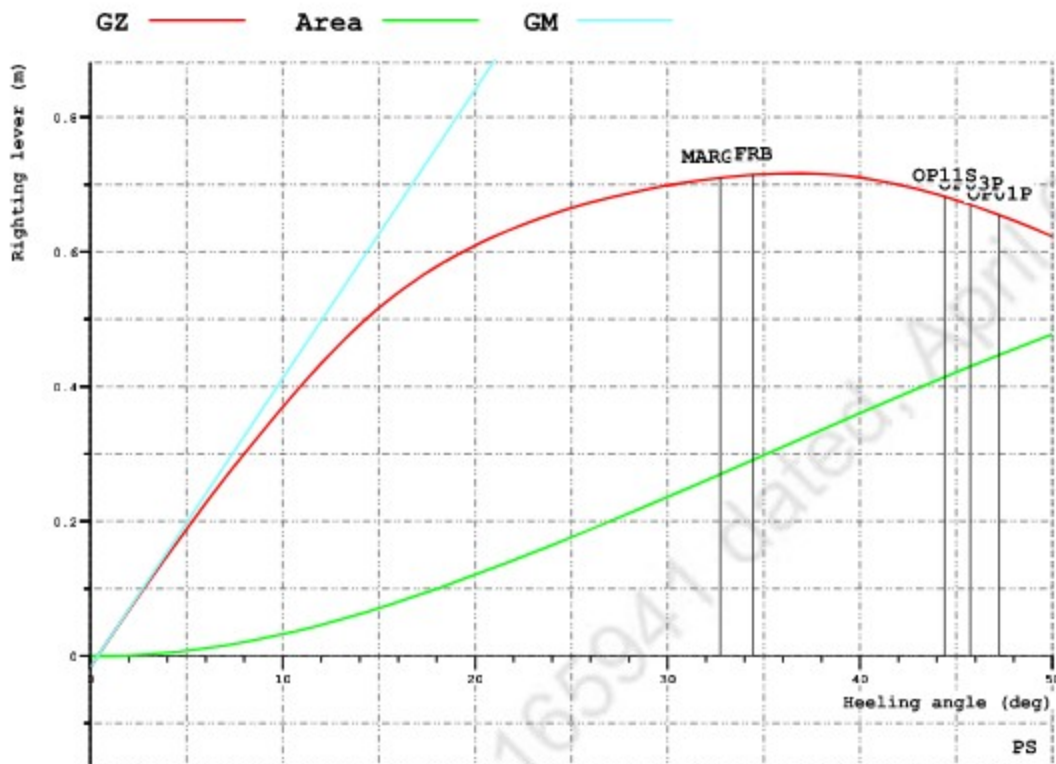
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	9.5	1.1	1.1	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			1.3	1.3	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.236	mrاد	OK
V.AREA40	0.360	mrاد	OK
V.AREA3040	0.124	mrاد	OK
V.GZ0.2	0.717	m	OK
V.MAXGZ25	36.597	deg	OK
V.GM0.35	2.457	m	OK
V.IMOWEATHER	1.615		OK
2008IS-A2.3.1.2	2.721	deg	OK

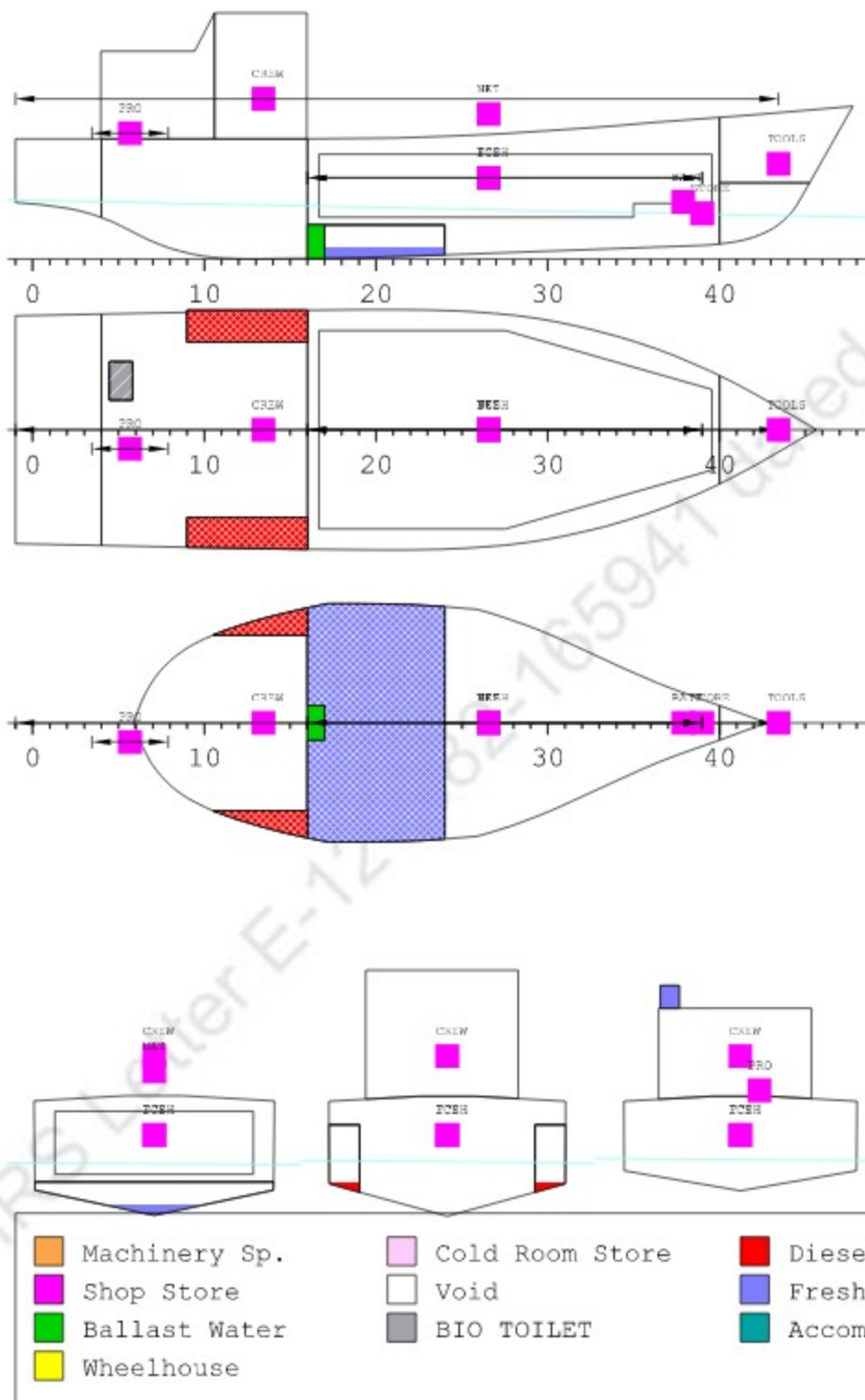
GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.224	-0.706	-0.017	0.000
0.4	1.223	-0.706	0.000	0.000
5.0	1.216	-0.691	0.188	0.008
10.0	1.191	-0.639	0.370	0.032
15.0	1.139	-0.570	0.517	0.071
20.0	1.056	-0.488	0.610	0.121
30.0	0.817	-0.296	0.699	0.236
40.0	0.499	-0.096	0.710	0.360
50.0	0.149	0.040	0.623	0.478

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	47.2	2.087
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	2.127
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	45.7	2.142
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	2.183
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.810
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.584
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.624
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.624
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.624
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	3.158
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	44.4	2.124
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.624

ARR. 10% CONS & 0% CATCH WITH ICE



ARR. 10% CONS & 0% CATCH WITH ICE

Floating Position - Intact condition

Draught at AP (moulded)	1.552 m
Draught at FP (moulded)	1.125 m
Mean Draught (moulded)	1.338 m

Trim (+ by Bow)	-0.427 m
Heel (+ PS)	0.4 deg

KM above moulded BL	4.724 m
KG above moulded BL	2.242 m
GM0 (solid)	2.482 m
Free Surface Correction	0.405 m
GM (liquid)	2.077 m
Density of Water	1.025 t/m ³

LCB : 9.2978953645706 m Fwd of AP
 LCF : 8.7708899336484 m Fwd of AP
 MCT : 1.4 tm/cm
 TPC : 1.09 t/cm

LOAD SUMMARY TABLE

NAME	MASS t	LCG m	TCG m	VCG m
BAIT	0.0	0.000	0.000	0.000
BIO TOILET	0.6	2.765	1.280	1.875
Ballast Water	0.3	7.875	0.000	0.485
CREW	0.9	6.500	0.000	4.200
Diesel Oil	0.7	6.501	0.000	0.786
FISH	0.0	0.000	0.000	0.000
Fresh Water	1.3	8.146	0.350	1.270
ICE	10.0	12.400	0.000	2.130
FISH NET	6.0	12.400	0.000	3.800
PROVISION	0.2	3.000	-0.500	3.300
STORE	0.2	18.000	0.000	1.200
TOOLS	1.0	20.000	0.000	2.500
Deadweight	21.3	11.683	0.050	2.579
Lightweight	58.7	8.470	0.002	2.120
Deadweight	21.3	11.683	0.050	2.579
Total weight	80.0	9.325	0.015	2.242

Diesel Oil (Density 0.860 t/m3)

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FOTK.1S	DO	9.5	0.3	0.4	0.00
R.FOTK.1P	DO	9.5	0.3	0.4	0.00
TOTAL			0.7	0.8	0.00

Fresh Water 1.00 t/m3

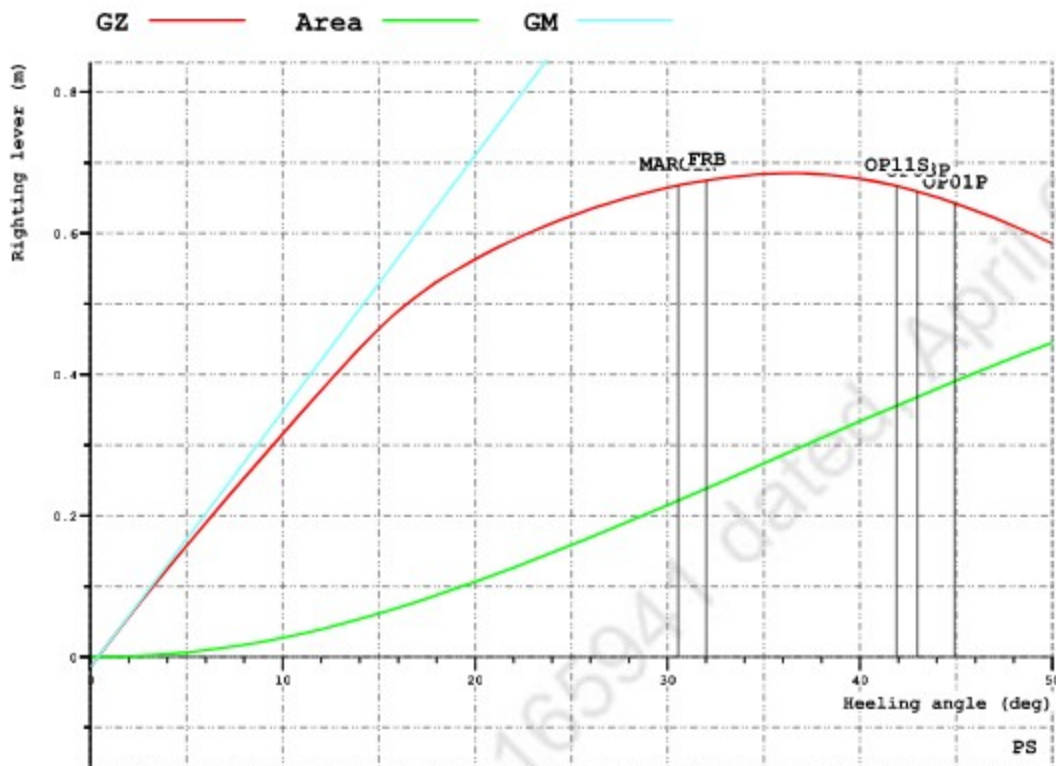
NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.FWTK	FW	9.5	1.1	1.1	32.43
R.FWTK_OVER	FW	95.0	0.3	0.3	0.00
TOTAL			1.3	1.3	32.43

Slurry Ice Water 1.025 t/m3

Fish Hold Drain Water 1.025 t/m3

NAME	PURP	FILL %	MASS t	VOL m3	FRSM tm
R.DRAIN.TK	BW	100.0	0.3	0.3	0.00
TOTAL			0.3	0.3	0.00

INTACT STABILITY CHECK PLOT



INTACT STABILITY CRITERIA

RCR	TEXT	REQ
V.AREA30	Area under GZ curve up to 30 deg	0.055
V.AREA40	Area under GZ curve up to 40 deg.	0.090
V.AREA3040	Area under GZ curve between 30 and 40 deg	0.030
V.GZ0.2	Min. GZ > 0.2	0.200
V.MAXGZ25	Max. GZ at an angle > 25 deg.	25.000
V.GM0.35	GM > 0.35 m	0.350
V.IMOWEATHER	IMO weather criterion	1.000
2008IS-A2.3.1.2	Heeling angle due to steady wind <16 or <=80% of deck imm.	16.000

RCR	ATTN	UNIT	STAT
V.AREA30	0.215	mrاد	OK
V.AREA40	0.334	mrاد	OK
V.AREA3040	0.119	mrاد	OK
V.GZ0.2	0.685	m	OK
V.MAXGZ25	36.400	deg	OK
V.GM0.35	2.077	m	OK
V.IMOWEATHER	1.751		OK
2008IS-A2.3.1.2	2.741	deg	OK

GZ CURVE DATA

HEEL deg	T m	TR m	GZ m	AREA mrad
0.0	1.338	-0.427	-0.015	0.000
0.4	1.338	-0.427	0.000	0.000
5.0	1.331	-0.409	0.158	0.006
10.0	1.308	-0.349	0.316	0.027
15.0	1.262	-0.267	0.465	0.061
20.0	1.185	-0.175	0.563	0.107
30.0	0.953	0.027	0.665	0.215
40.0	0.642	0.227	0.677	0.334
50.0	0.303	0.367	0.585	0.445

RELEVANT OPENINGS

NAME	TEXT	WT	X m	Y m	Z m	IMMA deg	IMMR m
OP01P	FO TANK PORT	UNPROTECTED	6.881	2.856	3.450	44.9	2.019
OP02S	FO TANK STBD	UNPROTECTED	6.881	-2.856	3.450	-	2.060
OP03P	FW TANK PORT	UNPROTECTED	8.518	2.942	3.450	43.0	2.052
OP04S	FW TANK STBD	UNPROTECTED	8.518	-2.942	3.450	-	2.094
OP05S	ENG ROOM IN	UNPROTECTED	5.500	-0.330	7.200	-	5.763
OP06S	ENG ROOM OUT	UNPROTECTED	2.690	-0.725	6.066	-	4.574
OP07S	MAIN ENG IN	UNPROTECTED	2.690	-1.450	4.100	-	2.613
OP08S	MAIN ENG OUT	UNPROTECTED	2.690	-1.470	4.100	-	2.613
OP09S	DG EXHAUST	UNPROTECTED	2.690	-1.490	4.100	-	2.614
OP10S	VOID TANK 1	UNPROTECTED	21.000	-0.088	4.020	-	2.902
OP11S	DRAIN TANK	UNPROTECTED	8.000	3.022	3.450	41.9	2.041
OP12S	E/R VENTILAT	WEATHERTIGHT	2.600	-1.900	4.100	-	2.615

5. HYDROSTATICS DATA

Refer IRS Letter E-121682-165941 dated, April 06, 2021

MAIN CHARACTERISTICS OF THE VESSEL:

Length between perpendiculars	20.70	m
Breadth (moulded)	6.28	m
Design draught (moulded)	1.80	m
X-coordinate of aft perpendicular	0.00	m
X-coordinate of reference point (XREF)	10.35	m
X-coordinate of midship section (XMID)	9.03	m
Thickness of keelplate	0.006	m
Mean thickness of shell plating	0.006	m
Seawater density	1.025	ton/m ³

Calculations are based on STABHULL date 2021-04-02 time 13:41

Shell thickness used in the calculation	6.0	mm
X-coord. of aft end of DWL	0.00	m
X-coord. of fore end of DWL	20.70	m
Calc. sections	31	
Plate thickness	6.0	mm

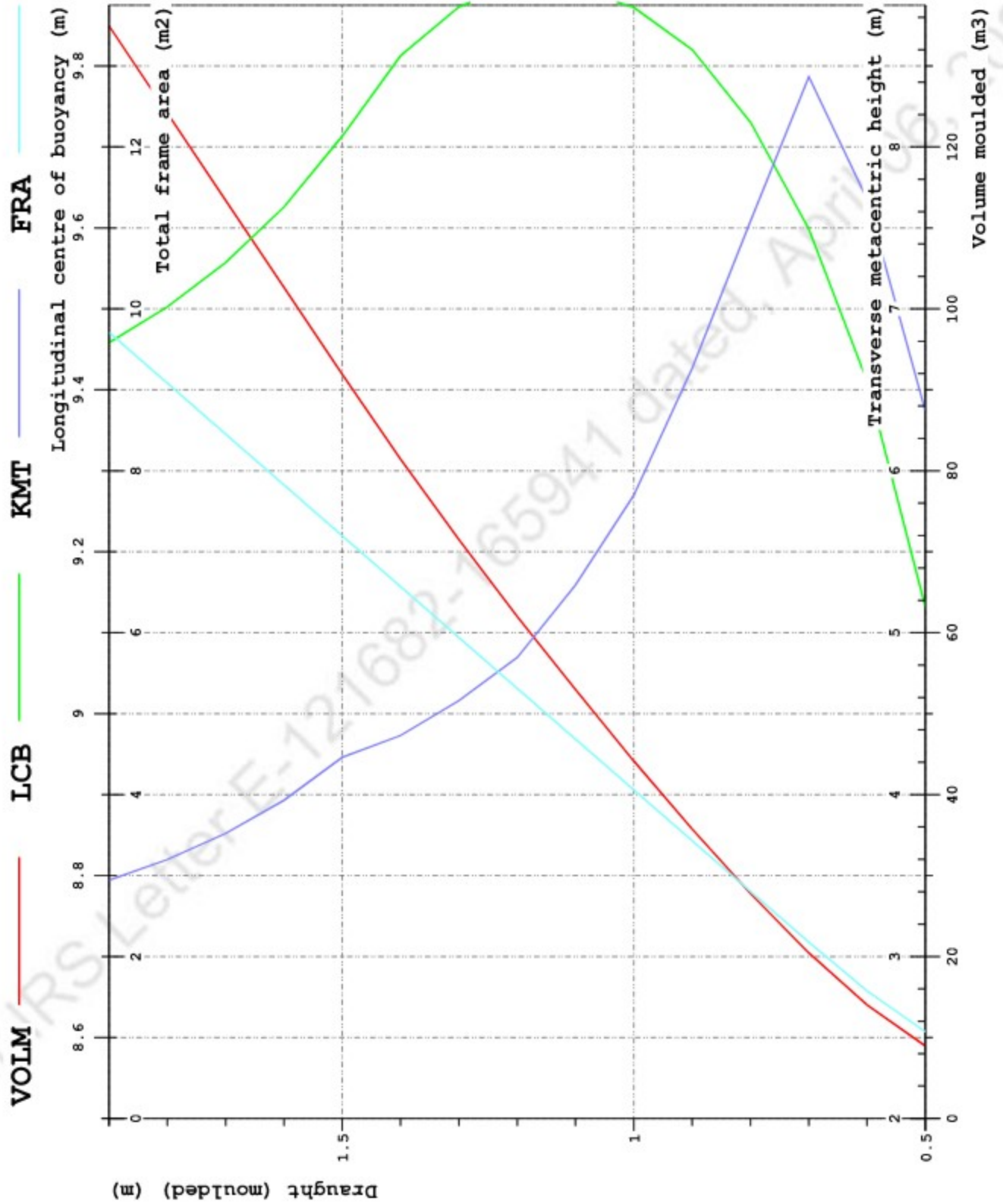
EXPLANATION OF SYMBOLS:

T	Draught (moulded)	m
TK	Draught below keel	m
DISP	Total displacement	t
LCB	longitudinal centre of buoyancy	m
VCB	Vertical center of buoyancy	m
LCF	Longitudinal centre of flotation	m
KMT	Transverse metacentric height	m
MCT	Moment to change trim	tm/cm
TPC	change of displacement/change of draught	t/cm

Trim: -0.1 m

T m	TK m	DISP t	LCB m	VCB m	LCF m	KMT m	MCT tm/cm	TPC t/cm
0.500	0.506	9.4	9.132	0.361	9.790	6.369	0.3	0.5
0.600	0.606	14.7	9.411	0.431	9.970	7.679	0.4	0.6
0.700	0.706	21.4	9.598	0.500	10.083	8.434	0.5	0.7
0.800	0.806	29.0	9.731	0.566	10.139	7.543	0.6	0.8
0.900	0.906	37.2	9.821	0.629	10.139	6.633	0.7	0.8
1.000	1.006	45.9	9.872	0.690	10.092	5.848	0.8	0.9
1.100	1.106	54.9	9.895	0.750	9.996	5.294	0.9	0.9
1.200	1.206	64.2	9.904	0.808	9.802	4.846	1.0	1.0
1.300	1.306	74.0	9.873	0.867	9.565	4.580	1.1	1.0
1.400	1.406	84.2	9.812	0.926	9.160	4.364	1.3	1.1
1.500	1.506	95.0	9.713	0.987	8.859	4.230	1.4	1.1
1.600	1.606	106.0	9.626	1.046	8.883	3.966	1.5	1.1
1.700	1.706	117.1	9.557	1.104	8.909	3.760	1.5	1.1
1.800	1.806	128.1	9.502	1.160	8.934	3.599	1.5	1.1
1.900	1.906	139.3	9.458	1.216	8.960	3.470	1.5	1.1

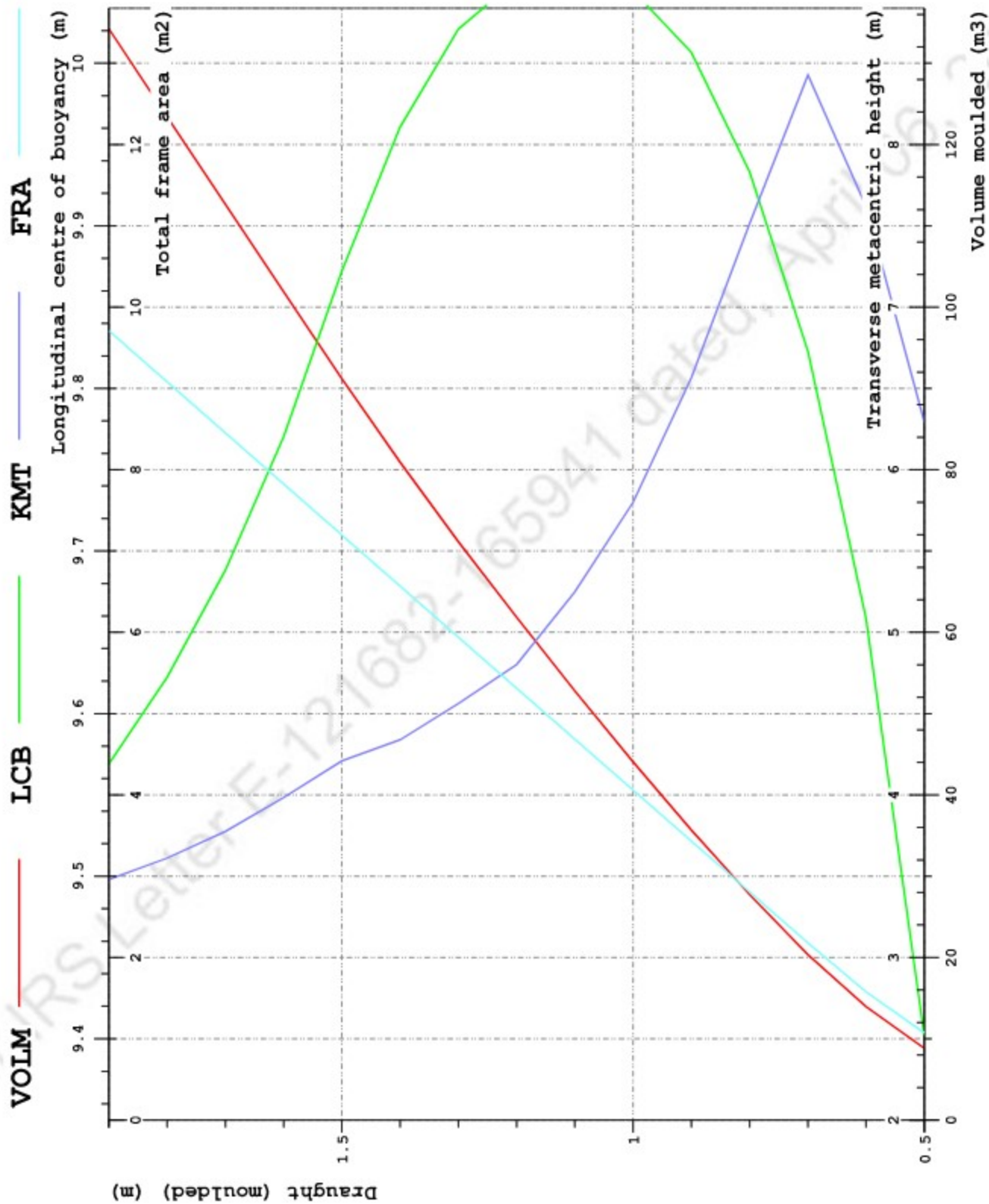
Trim: -0.1 m



Trim: 0 m

T m	TK m	DISP t	LCB m	VCB m	LCF m	KMT m	MCT tm/cm	TPC t/cm
0.500	0.506	9.4	9.402	0.359	10.008	6.294	0.3	0.5
0.600	0.606	14.7	9.659	0.429	10.150	7.620	0.4	0.6
0.700	0.706	21.3	9.823	0.498	10.237	8.428	0.5	0.7
0.800	0.806	28.9	9.933	0.565	10.269	7.514	0.6	0.8
0.900	0.906	37.1	10.007	0.628	10.250	6.565	0.7	0.8
1.000	1.006	45.7	10.045	0.689	10.190	5.800	0.8	0.9
1.100	1.106	54.8	10.053	0.748	10.094	5.249	0.9	0.9
1.200	1.206	64.0	10.051	0.806	9.922	4.803	0.9	0.9
1.300	1.306	73.6	10.021	0.865	9.685	4.561	1.1	1.0
1.400	1.406	83.7	9.961	0.923	9.409	4.339	1.2	1.0
1.500	1.506	94.3	9.872	0.982	8.950	4.209	1.4	1.1
1.600	1.606	105.3	9.770	1.042	8.893	3.985	1.5	1.1
1.700	1.706	116.3	9.688	1.099	8.918	3.776	1.5	1.1
1.800	1.806	127.4	9.622	1.156	8.944	3.611	1.5	1.1
1.900	1.906	138.5	9.569	1.212	8.969	3.480	1.5	1.1

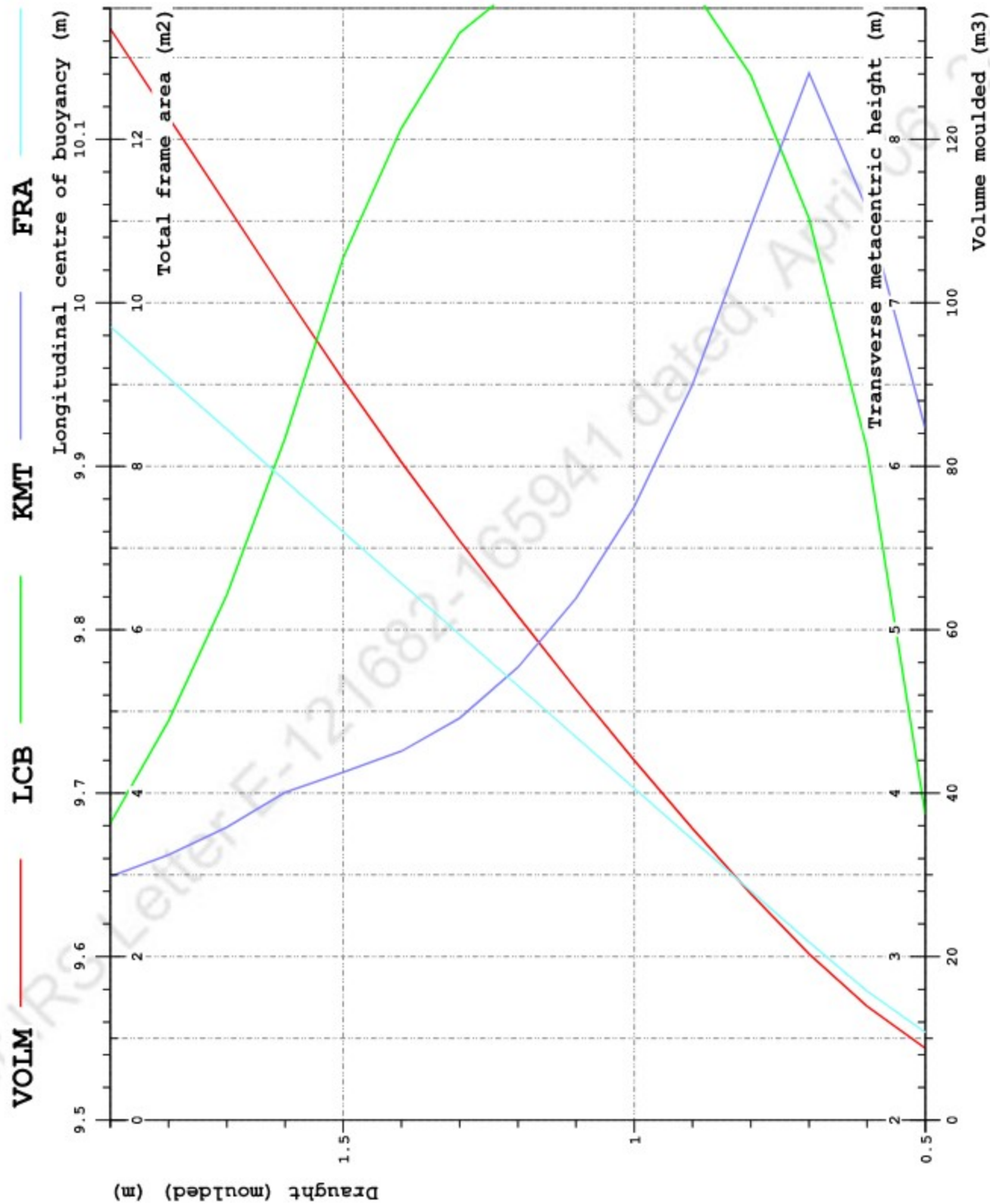
Trim: 0 m



Trim: 0.1 m

T m	TK m	DISP t	LCB m	VCB m	LCF m	KMT m	MCT tm/cm	TPC t/cm
0.500	0.506	9.3	9.687	0.359	10.225	6.229	0.3	0.5
0.600	0.606	14.6	9.910	0.429	10.332	7.570	0.4	0.6
0.700	0.706	21.3	10.051	0.499	10.387	8.406	0.5	0.7
0.800	0.806	28.9	10.139	0.565	10.395	7.468	0.6	0.8
0.900	0.906	37.1	10.192	0.628	10.356	6.499	0.7	0.8
1.000	1.006	45.7	10.215	0.689	10.285	5.753	0.8	0.9
1.100	1.106	54.6	10.212	0.748	10.180	5.192	0.8	0.9
1.200	1.206	63.9	10.194	0.806	10.037	4.770	0.9	0.9
1.300	1.306	73.3	10.165	0.863	9.818	4.460	1.0	1.0
1.400	1.406	83.2	10.107	0.921	9.571	4.257	1.1	1.0
1.500	1.506	93.6	10.027	0.979	9.141	4.128	1.3	1.1
1.600	1.606	104.5	9.917	1.038	8.903	4.005	1.5	1.1
1.700	1.706	115.5	9.821	1.096	8.928	3.792	1.5	1.1
1.800	1.806	126.6	9.744	1.152	8.954	3.624	1.5	1.1
1.900	1.906	137.8	9.682	1.208	8.979	3.491	1.5	1.1

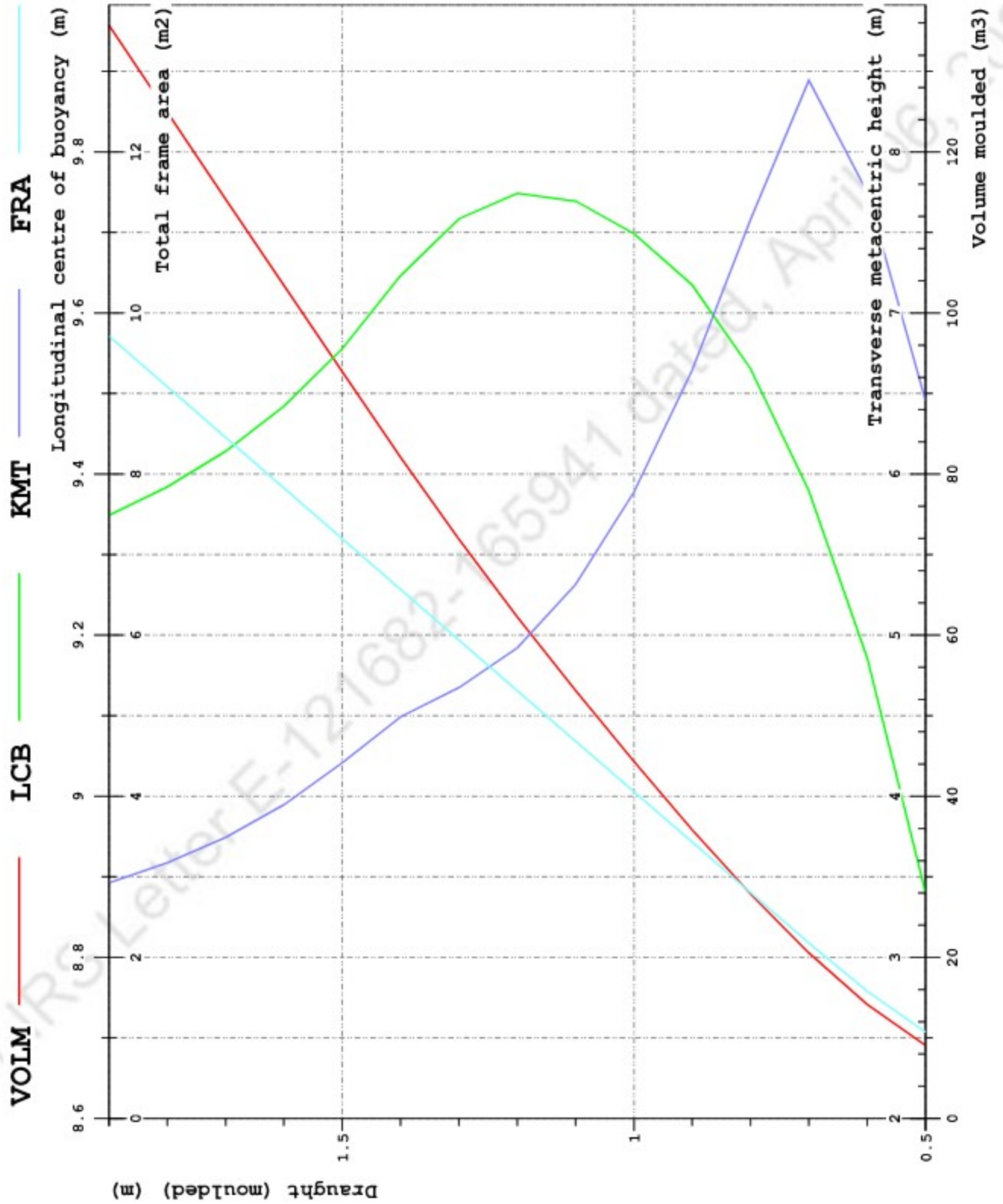
Trim: 0.1 m



Trim: -0.2 m

T m	TK m	DISP t	LCB m	VCB m	LCF m	KMT m	MCT tm/cm	TPC t/cm
0.500	0.506	9.6	8.880	0.365	9.570	6.454	0.2	0.5
0.600	0.606	14.9	9.172	0.434	9.786	7.750	0.4	0.6
0.700	0.706	21.5	9.379	0.502	9.926	8.445	0.5	0.7
0.800	0.806	29.1	9.531	0.568	10.005	7.579	0.6	0.8
0.900	0.906	37.3	9.635	0.631	10.022	6.643	0.7	0.8
1.000	1.006	46.0	9.699	0.692	9.990	5.889	0.8	0.9
1.100	1.106	55.1	9.739	0.752	9.881	5.314	0.9	0.9
1.200	1.206	64.5	9.749	0.811	9.672	4.921	1.0	1.0
1.300	1.306	74.4	9.717	0.871	9.373	4.675	1.2	1.0
1.400	1.406	84.9	9.646	0.931	8.904	4.493	1.4	1.1
1.500	1.506	95.8	9.555	0.992	8.849	4.206	1.4	1.1
1.600	1.606	106.8	9.484	1.051	8.874	3.948	1.5	1.1
1.700	1.706	117.8	9.428	1.108	8.899	3.746	1.5	1.1
1.800	1.806	128.9	9.384	1.165	8.924	3.587	1.5	1.1
1.900	1.906	140.0	9.349	1.220	8.950	3.461	1.5	1.1

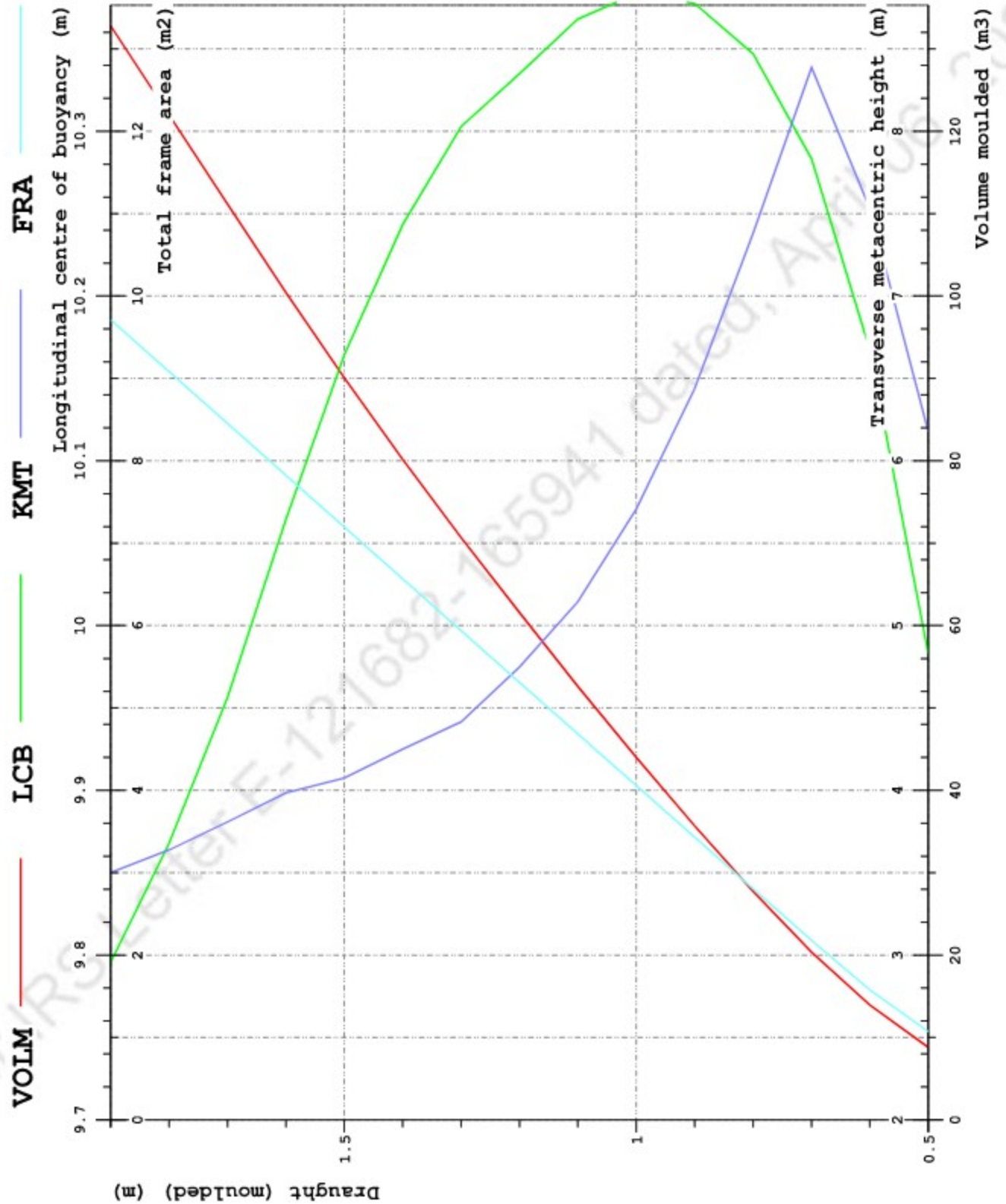
Trim: -0.2 m



Trim: 0.2 m

T m	TK m	DISP t	LCB m	VCB m	LCF m	KMT m	MCT tm/cm	TPC t/cm
0.500	0.506	9.3	9.983	0.361	10.436	6.178	0.3	0.5
0.600	0.606	14.7	10.167	0.431	10.510	7.532	0.4	0.6
0.700	0.706	21.3	10.283	0.501	10.534	8.386	0.5	0.7
0.800	0.806	28.9	10.347	0.567	10.518	7.381	0.6	0.8
0.900	0.906	37.1	10.378	0.630	10.461	6.439	0.7	0.8
1.000	1.006	45.7	10.384	0.690	10.368	5.707	0.8	0.9
1.100	1.106	54.6	10.368	0.749	10.257	5.144	0.8	0.9
1.200	1.206	63.8	10.335	0.806	10.129	4.749	0.9	0.9
1.300	1.306	73.1	10.303	0.863	9.923	4.416	1.0	1.0
1.400	1.406	82.9	10.243	0.920	9.693	4.250	1.1	1.0
1.500	1.506	93.1	10.164	0.977	9.437	4.075	1.2	1.0
1.600	1.606	103.7	10.065	1.035	8.994	3.985	1.4	1.1
1.700	1.706	114.8	9.957	1.093	8.938	3.809	1.5	1.1
1.800	1.806	125.9	9.868	1.149	8.963	3.638	1.5	1.1
1.900	1.906	137.0	9.795	1.205	8.990	3.502	1.5	1.1

Trim: 0.2 m



6. CROSS CURVES

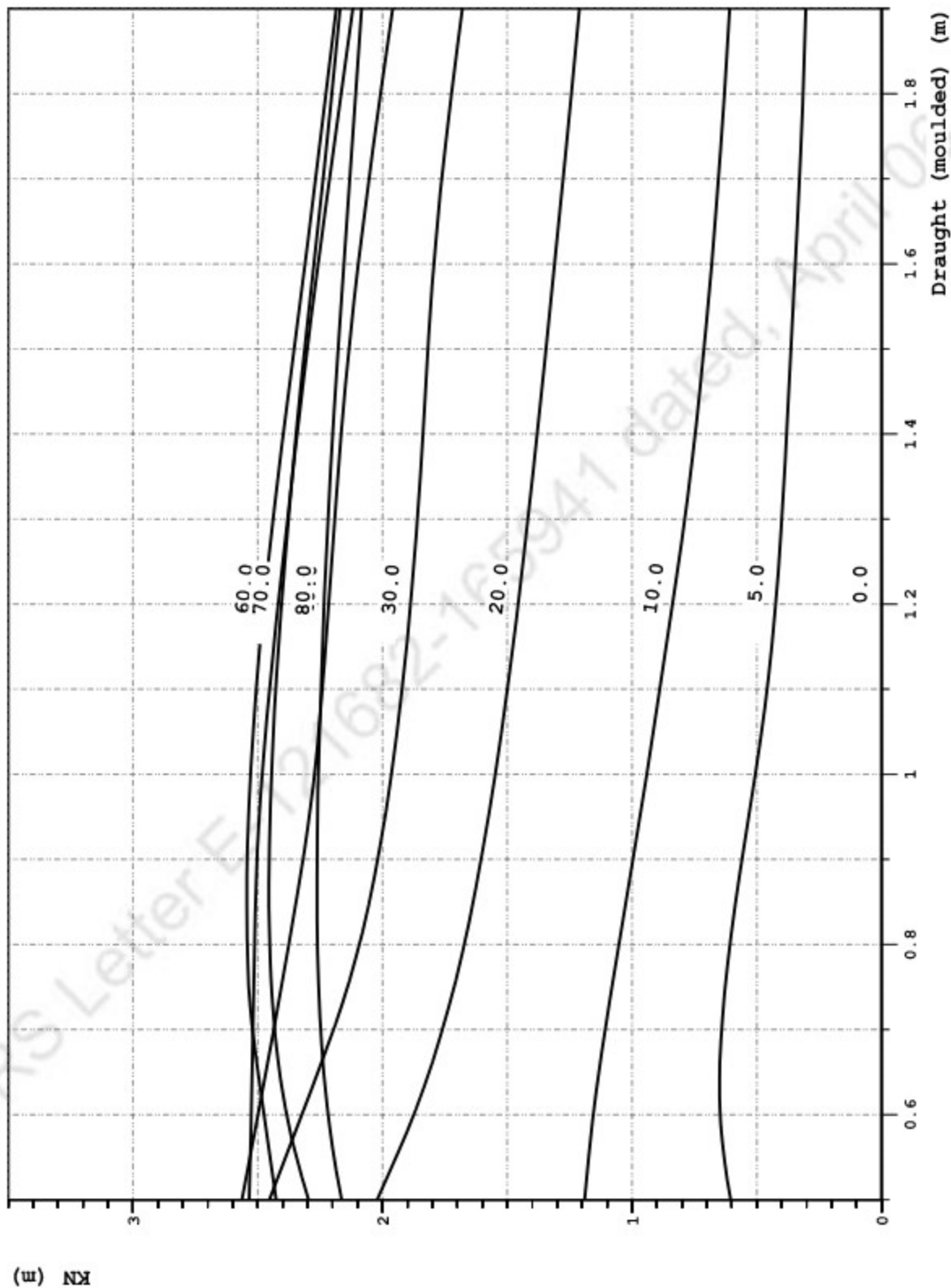
Refer IRS Letter E-121682-165941 dated, April 06, 2021

Trim: -0.1 m

----- KN (For Diff Heel Angles) -----									
draught	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.605	1.190	2.022	2.453	2.564	2.534	2.426	2.296
0.600	0.000	0.647	1.155	1.875	2.323	2.499	2.525	2.475	2.384
0.700	0.000	0.641	1.107	1.760	2.196	2.435	2.519	2.521	2.432
0.800	0.000	0.608	1.053	1.672	2.093	2.375	2.512	2.542	2.452
0.900	0.000	0.559	0.996	1.605	2.019	2.318	2.503	2.542	2.454
1.000	0.000	0.506	0.941	1.549	1.964	2.273	2.482	2.529	2.445
1.100	0.000	0.459	0.889	1.500	1.921	2.241	2.453	2.506	2.428
1.200	0.000	0.425	0.838	1.456	1.888	2.216	2.418	2.475	2.404
1.300	0.000	0.399	0.789	1.417	1.860	2.191	2.381	2.438	2.377
1.400	0.000	0.380	0.747	1.380	1.838	2.165	2.342	2.398	2.346
1.500	0.000	0.363	0.711	1.345	1.818	2.134	2.301	2.354	2.312
1.600	0.000	0.345	0.681	1.310	1.794	2.097	2.258	2.311	2.275
1.700	0.000	0.329	0.654	1.276	1.762	2.055	2.212	2.268	2.238
1.800	0.000	0.314	0.629	1.242	1.724	2.008	2.166	2.226	2.203
1.900	0.000	0.303	0.608	1.211	1.680	1.959	2.119	2.185	2.170

----- KN (For Diff Heel Angles) -----	
draught	80.0
0.500	2.164
0.600	2.218
0.700	2.247
0.800	2.261
0.900	2.262
1.000	2.257
1.100	2.247
1.200	2.234
1.300	2.218
1.400	2.200
1.500	2.178
1.600	2.155
1.700	2.131
1.800	2.107
1.900	2.084

Trim: -0.1 m

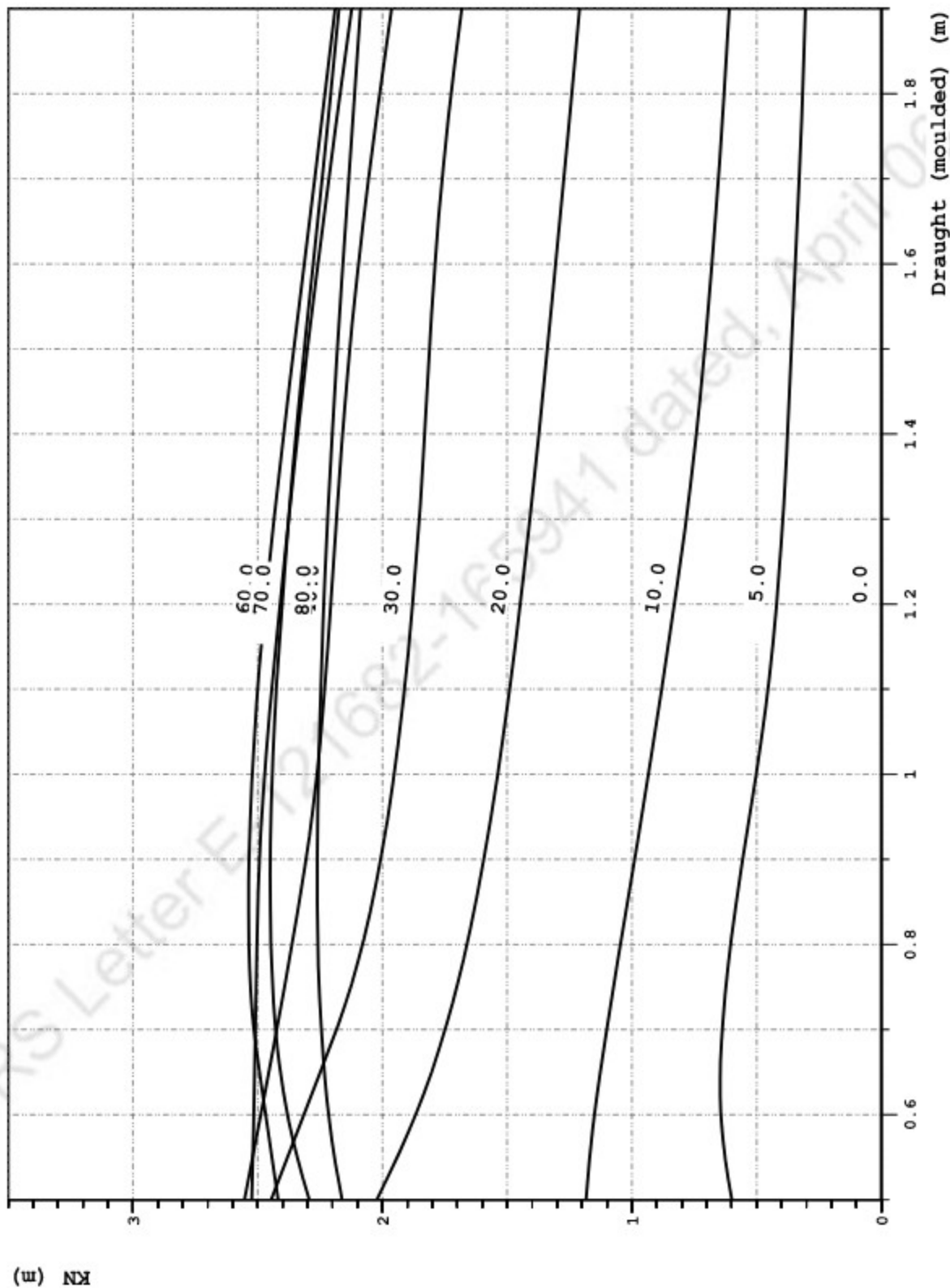


Trim: 0 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.600	1.184	2.023	2.446	2.553	2.524	2.417	2.293
0.600	0.000	0.643	1.150	1.867	2.314	2.487	2.515	2.468	2.380
0.700	0.000	0.638	1.101	1.748	2.184	2.424	2.509	2.515	2.428
0.800	0.000	0.604	1.046	1.661	2.080	2.363	2.503	2.535	2.447
0.900	0.000	0.556	0.989	1.593	2.007	2.306	2.493	2.535	2.450
1.000	0.000	0.502	0.934	1.538	1.953	2.262	2.472	2.522	2.441
1.100	0.000	0.455	0.881	1.490	1.912	2.232	2.443	2.500	2.425
1.200	0.000	0.420	0.830	1.448	1.879	2.207	2.410	2.470	2.402
1.300	0.000	0.395	0.782	1.409	1.852	2.184	2.375	2.434	2.376
1.400	0.000	0.376	0.742	1.373	1.830	2.159	2.339	2.396	2.346
1.500	0.000	0.361	0.708	1.339	1.811	2.131	2.300	2.355	2.313
1.600	0.000	0.345	0.679	1.306	1.789	2.096	2.259	2.313	2.277
1.700	0.000	0.330	0.653	1.273	1.760	2.055	2.215	2.271	2.241
1.800	0.000	0.316	0.630	1.240	1.724	2.011	2.170	2.230	2.207
1.900	0.000	0.304	0.610	1.210	1.682	1.963	2.123	2.189	2.174

draught	KN (For Diff Heel Angles)
	80.0
0.500	2.162
0.600	2.216
0.700	2.245
0.800	2.259
0.900	2.261
1.000	2.257
1.100	2.247
1.200	2.235
1.300	2.219
1.400	2.201
1.500	2.181
1.600	2.158
1.700	2.135
1.800	2.110
1.900	2.087

Trim: 0 m

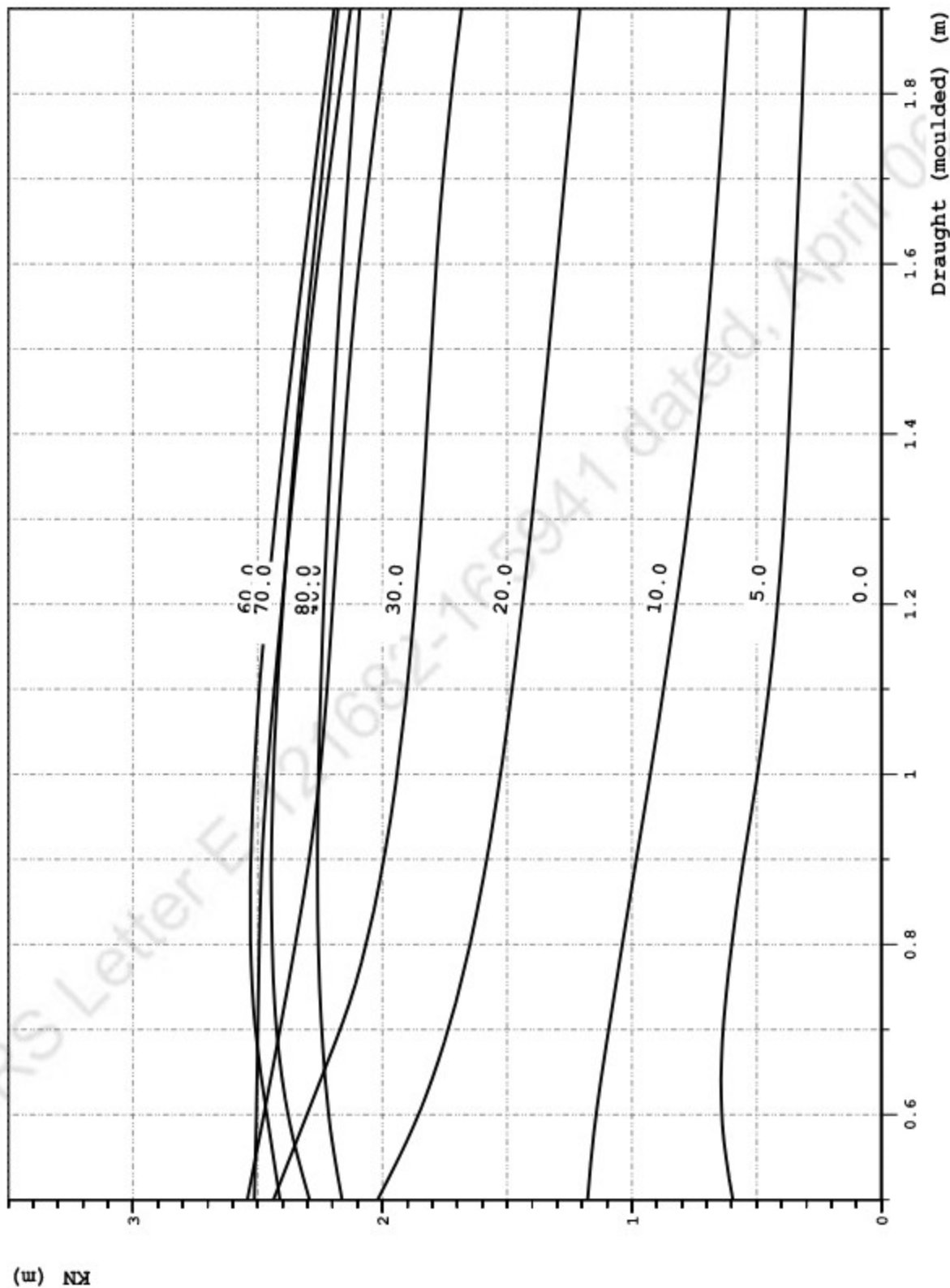


Trim: 0.1 m

----- KN (For Diff Heel Angles) -----									
draught	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.595	1.178	2.020	2.437	2.542	2.514	2.410	2.292
0.600	0.000	0.640	1.143	1.855	2.303	2.475	2.506	2.463	2.378
0.700	0.000	0.634	1.093	1.736	2.169	2.411	2.499	2.509	2.425
0.800	0.000	0.600	1.039	1.649	2.066	2.349	2.494	2.528	2.442
0.900	0.000	0.551	0.982	1.582	1.994	2.294	2.483	2.527	2.445
1.000	0.000	0.497	0.926	1.527	1.942	2.251	2.462	2.514	2.437
1.100	0.000	0.451	0.873	1.481	1.902	2.222	2.434	2.493	2.422
1.200	0.000	0.416	0.823	1.439	1.870	2.199	2.402	2.464	2.399
1.300	0.000	0.391	0.775	1.401	1.844	2.176	2.370	2.430	2.374
1.400	0.000	0.372	0.736	1.366	1.823	2.153	2.335	2.393	2.346
1.500	0.000	0.358	0.704	1.333	1.804	2.126	2.299	2.355	2.314
1.600	0.000	0.344	0.677	1.301	1.784	2.094	2.259	2.315	2.280
1.700	0.000	0.330	0.652	1.269	1.758	2.056	2.217	2.274	2.245
1.800	0.000	0.317	0.630	1.238	1.724	2.013	2.173	2.234	2.211
1.900	0.000	0.305	0.611	1.208	1.683	1.967	2.127	2.194	2.179

----- KN (For Diff Heel Angles) -----	
draught	80.0
0.500	2.162
0.600	2.215
0.700	2.243
0.800	2.257
0.900	2.260
1.000	2.256
1.100	2.247
1.200	2.235
1.300	2.220
1.400	2.203
1.500	2.183
1.600	2.161
1.700	2.138
1.800	2.114
1.900	2.091

Trim: 0.1 m

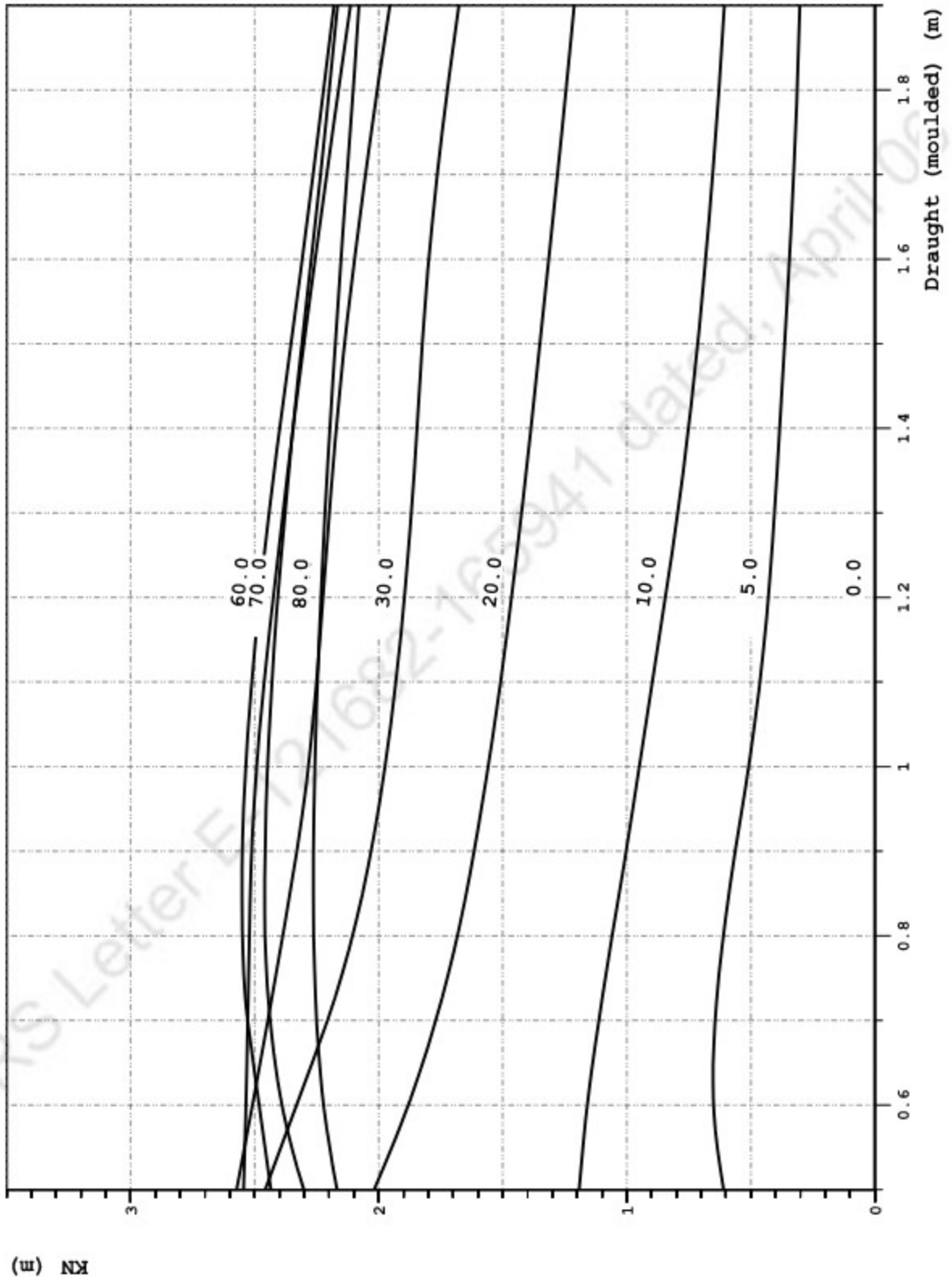


Trim: -0.2 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.610	1.192	2.019	2.457	2.573	2.544	2.435	2.302
0.600	0.000	0.650	1.159	1.881	2.330	2.509	2.535	2.482	2.390
0.700	0.000	0.644	1.113	1.770	2.207	2.446	2.528	2.528	2.438
0.800	0.000	0.611	1.059	1.683	2.105	2.386	2.521	2.550	2.458
0.900	0.000	0.563	1.002	1.615	2.031	2.330	2.512	2.550	2.458
1.000	0.000	0.509	0.949	1.559	1.975	2.283	2.492	2.536	2.448
1.100	0.000	0.464	0.897	1.509	1.931	2.250	2.462	2.512	2.430
1.200	0.000	0.429	0.845	1.464	1.896	2.224	2.425	2.480	2.407
1.300	0.000	0.404	0.795	1.424	1.868	2.199	2.386	2.442	2.377
1.400	0.000	0.383	0.751	1.386	1.845	2.171	2.345	2.399	2.345
1.500	0.000	0.364	0.714	1.350	1.824	2.137	2.301	2.353	2.310
1.600	0.000	0.345	0.682	1.314	1.798	2.097	2.256	2.308	2.272
1.700	0.000	0.327	0.653	1.279	1.764	2.053	2.210	2.264	2.234
1.800	0.000	0.313	0.628	1.244	1.723	2.005	2.162	2.222	2.199
1.900	0.000	0.302	0.607	1.212	1.677	1.955	2.114	2.180	2.166

draught	KN (For Diff Heel Angles)
	80.0
0.500	2.168
0.600	2.222
0.700	2.251
0.800	2.262
0.900	2.263
1.000	2.257
1.100	2.247
1.200	2.233
1.300	2.217
1.400	2.197
1.500	2.175
1.600	2.151
1.700	2.127
1.800	2.103
1.900	2.080

Trim: -0.2 m

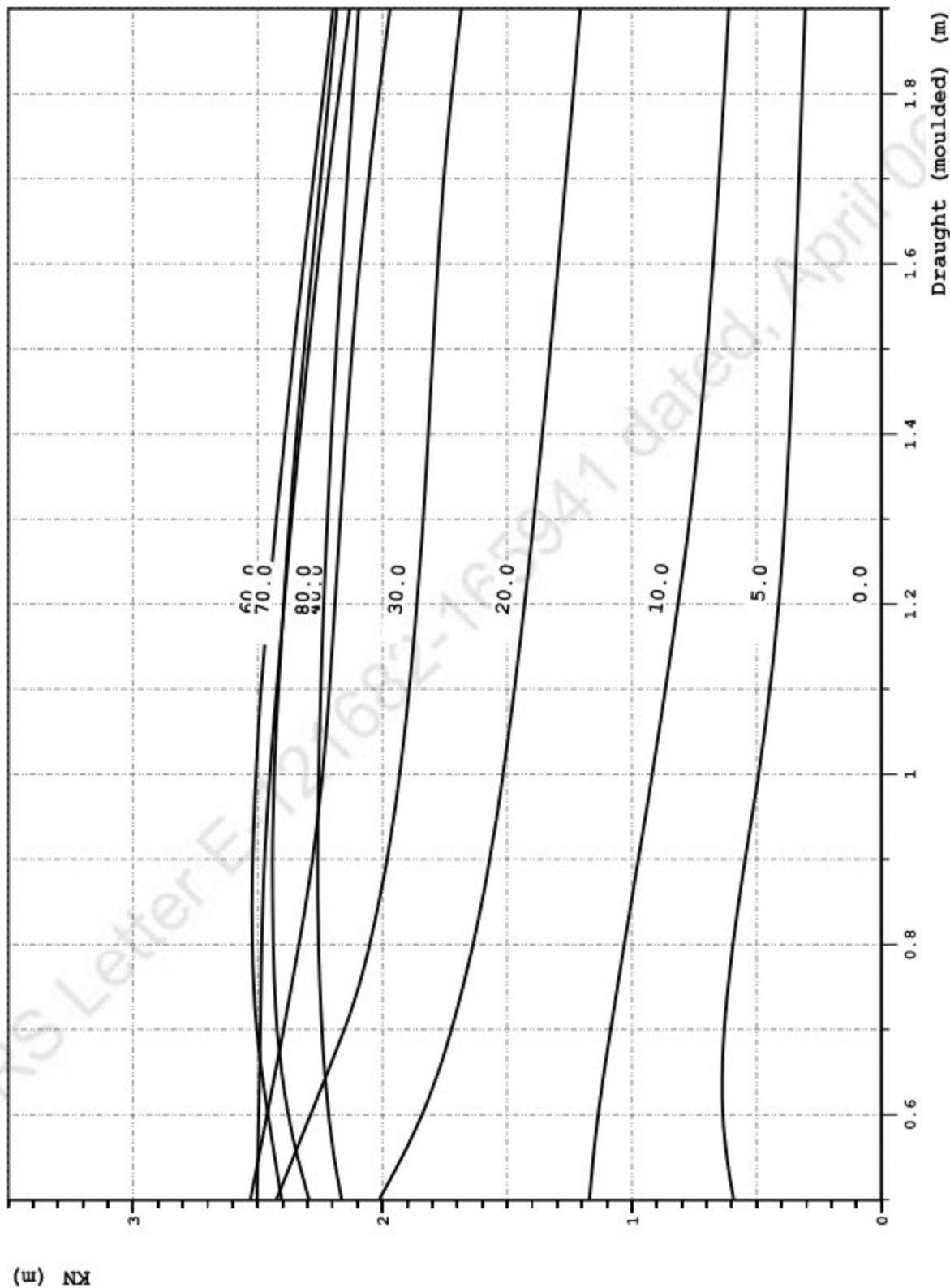


Trim: 0.2 m

----- KN (For Diff Heel Angles) -----									
draught	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.592	1.170	2.014	2.425	2.529	2.503	2.405	2.294
0.600	0.000	0.635	1.135	1.841	2.288	2.462	2.496	2.459	2.377
0.700	0.000	0.630	1.085	1.723	2.153	2.396	2.489	2.504	2.422
0.800	0.000	0.595	1.031	1.637	2.051	2.334	2.484	2.521	2.438
0.900	0.000	0.546	0.974	1.570	1.981	2.280	2.473	2.520	2.441
1.000	0.000	0.492	0.918	1.516	1.931	2.240	2.451	2.507	2.433
1.100	0.000	0.447	0.865	1.471	1.892	2.212	2.424	2.486	2.417
1.200	0.000	0.412	0.815	1.430	1.862	2.191	2.394	2.457	2.396
1.300	0.000	0.387	0.768	1.393	1.836	2.169	2.364	2.425	2.372
1.400	0.000	0.368	0.731	1.359	1.816	2.146	2.331	2.391	2.344
1.500	0.000	0.355	0.700	1.326	1.797	2.121	2.296	2.355	2.314
1.600	0.000	0.343	0.674	1.295	1.778	2.091	2.258	2.316	2.282
1.700	0.000	0.330	0.651	1.265	1.754	2.055	2.218	2.277	2.248
1.800	0.000	0.318	0.630	1.235	1.722	2.014	2.175	2.237	2.214
1.900	0.000	0.306	0.611	1.207	1.684	1.969	2.131	2.198	2.183

----- KN (For Diff Heel Angles) -----	
draught	80.0
0.500	2.164
0.600	2.216
0.700	2.242
0.800	2.256
0.900	2.259
1.000	2.255
1.100	2.247
1.200	2.236
1.300	2.221
1.400	2.204
1.500	2.185
1.600	2.164
1.700	2.141
1.800	2.118
1.900	2.095

Trim: 0.2 m

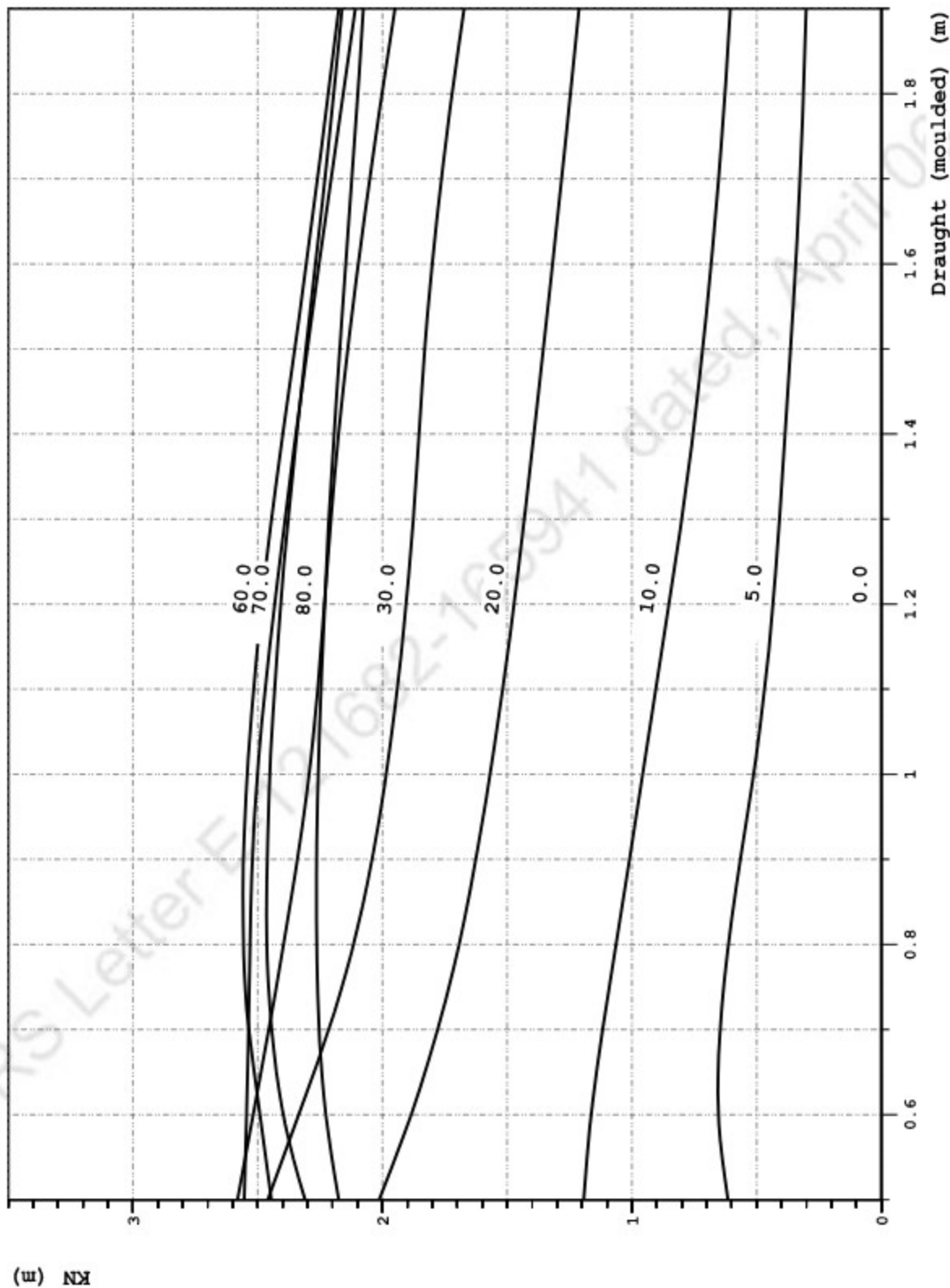


Trim: -0.3 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.614	1.193	2.013	2.459	2.581	2.554	2.445	2.310
0.600	0.000	0.653	1.163	1.885	2.336	2.518	2.545	2.491	2.397
0.700	0.000	0.646	1.117	1.778	2.215	2.456	2.537	2.535	2.444
0.800	0.000	0.613	1.064	1.693	2.116	2.396	2.530	2.557	2.463
0.900	0.000	0.565	1.009	1.626	2.041	2.341	2.521	2.557	2.462
1.000	0.000	0.512	0.957	1.568	1.985	2.293	2.501	2.542	2.452
1.100	0.000	0.468	0.904	1.518	1.940	2.260	2.470	2.516	2.432
1.200	0.000	0.434	0.851	1.472	1.905	2.233	2.432	2.484	2.408
1.300	0.000	0.409	0.800	1.431	1.876	2.207	2.390	2.444	2.378
1.400	0.000	0.386	0.755	1.392	1.853	2.176	2.346	2.399	2.344
1.500	0.000	0.364	0.716	1.355	1.830	2.139	2.301	2.351	2.307
1.600	0.000	0.343	0.682	1.317	1.801	2.097	2.254	2.305	2.268
1.700	0.000	0.326	0.653	1.281	1.764	2.051	2.206	2.260	2.231
1.800	0.000	0.312	0.627	1.246	1.721	2.001	2.158	2.217	2.195
1.900	0.000	0.302	0.605	1.212	1.673	1.950	2.108	2.175	2.161

draught	KN (For Diff Heel Angles)
	80.0
0.500	2.175
0.600	2.227
0.700	2.254
0.800	2.263
0.900	2.264
1.000	2.257
1.100	2.246
1.200	2.231
1.300	2.215
1.400	2.194
1.500	2.171
1.600	2.148
1.700	2.123
1.800	2.099
1.900	2.076

Trim: -0.3 m

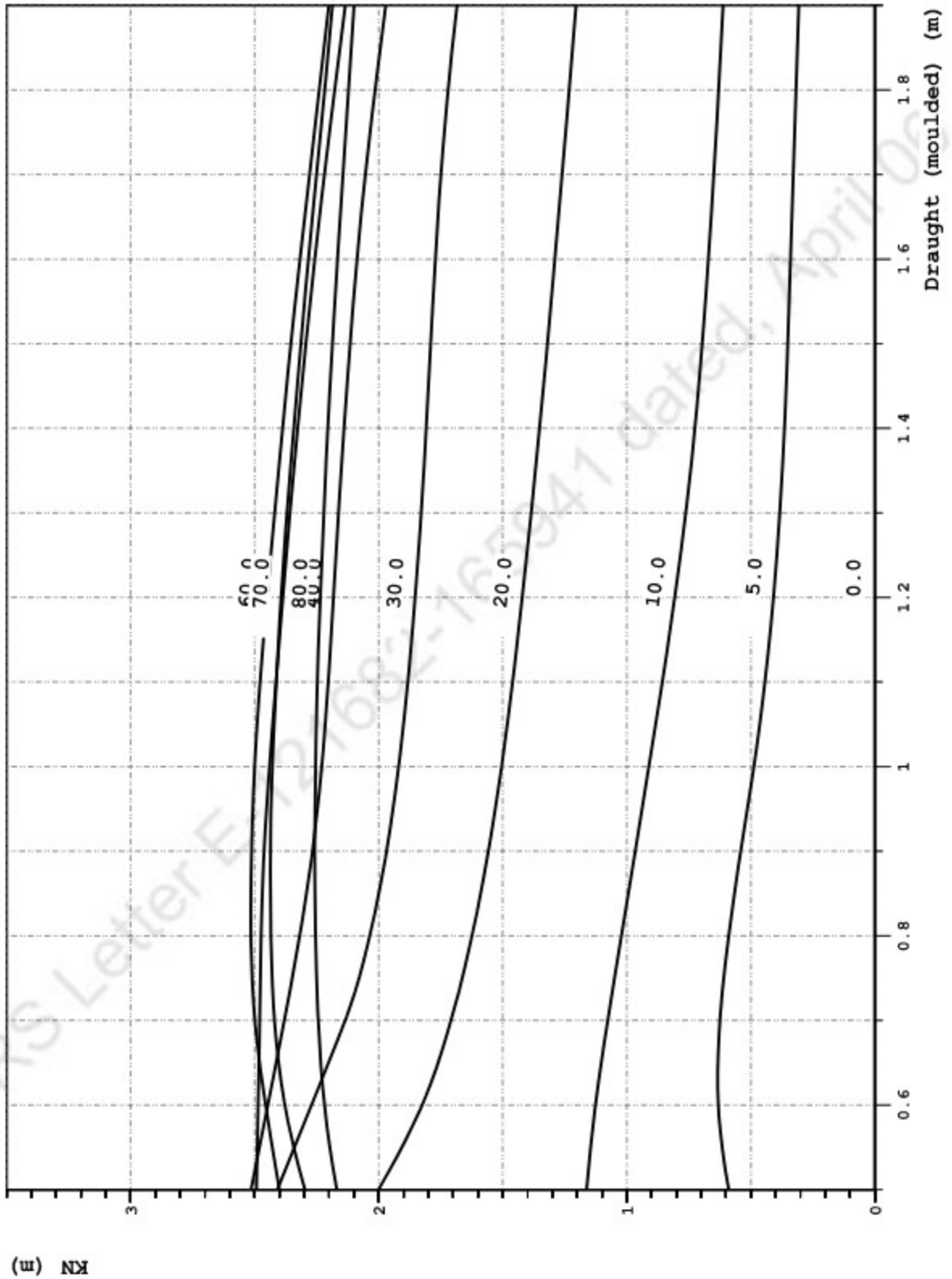


Trim: 0.3 m

----- KN (For Diff Heel Angles) -----									
draught	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.589	1.162	2.001	2.409	2.514	2.492	2.400	2.298
0.600	0.000	0.631	1.126	1.825	2.270	2.447	2.486	2.456	2.378
0.700	0.000	0.625	1.077	1.708	2.135	2.381	2.479	2.499	2.420
0.800	0.000	0.589	1.021	1.624	2.036	2.318	2.474	2.515	2.435
0.900	0.000	0.541	0.965	1.558	1.968	2.267	2.462	2.513	2.436
1.000	0.000	0.487	0.911	1.505	1.919	2.229	2.440	2.500	2.429
1.100	0.000	0.443	0.857	1.460	1.882	2.203	2.414	2.478	2.413
1.200	0.000	0.408	0.807	1.421	1.853	2.182	2.386	2.451	2.393
1.300	0.000	0.383	0.762	1.385	1.829	2.162	2.357	2.420	2.370
1.400	0.000	0.365	0.725	1.351	1.808	2.140	2.326	2.388	2.342
1.500	0.000	0.351	0.695	1.320	1.790	2.116	2.293	2.353	2.314
1.600	0.000	0.340	0.671	1.290	1.772	2.087	2.257	2.317	2.283
1.700	0.000	0.329	0.649	1.260	1.749	2.054	2.219	2.279	2.251
1.800	0.000	0.318	0.629	1.232	1.720	2.015	2.177	2.240	2.218
1.900	0.000	0.307	0.612	1.205	1.684	1.971	2.134	2.201	2.187

----- KN (For Diff Heel Angles) -----	
draught	80.0
0.500	2.169
0.600	2.218
0.700	2.243
0.800	2.255
0.900	2.258
1.000	2.254
1.100	2.247
1.200	2.235
1.300	2.221
1.400	2.205
1.500	2.187
1.600	2.166
1.700	2.144
1.800	2.121
1.900	2.099

Trim: 0.3 m

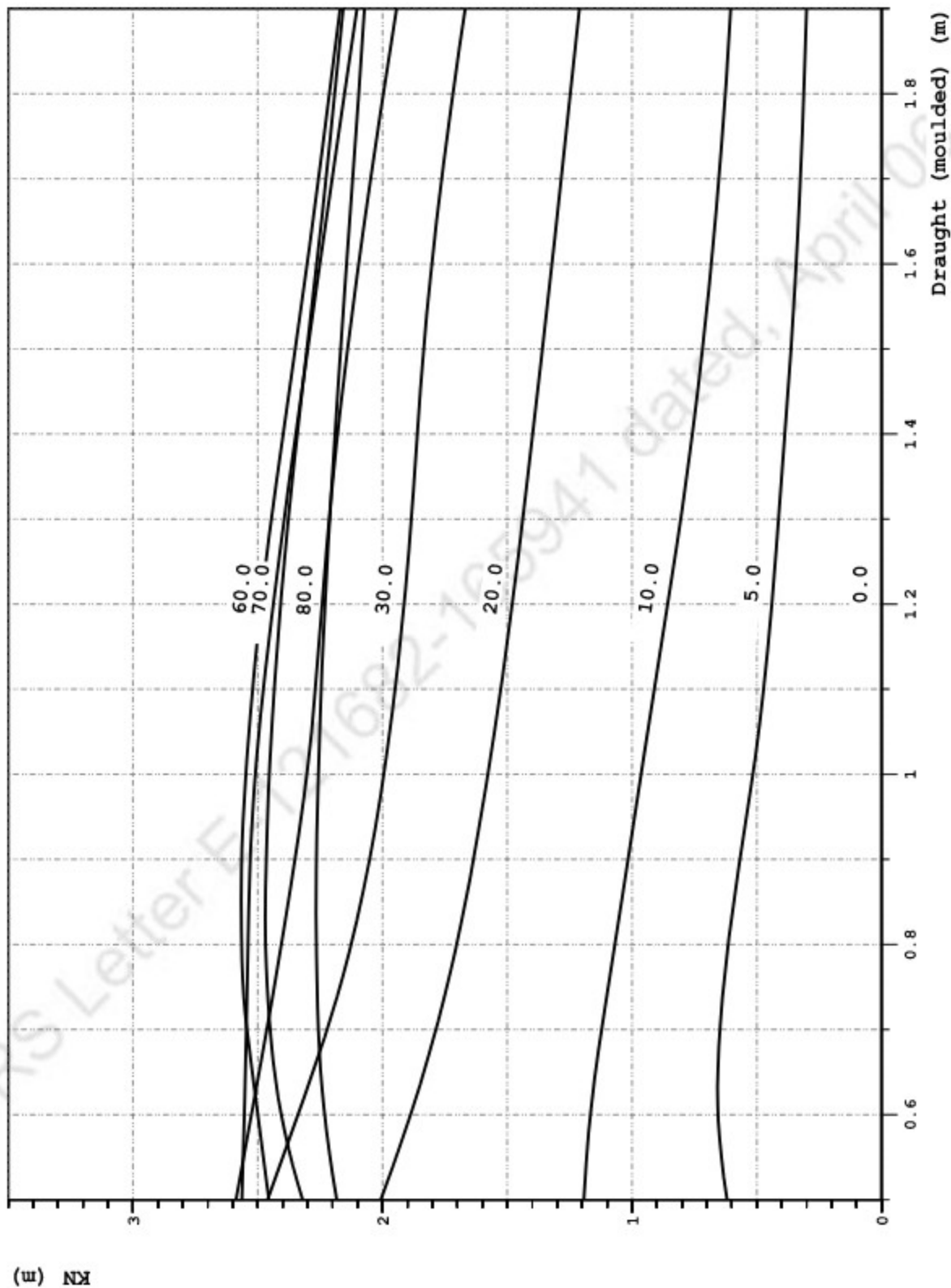


Trim: -0.4 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.619	1.193	2.007	2.460	2.587	2.563	2.455	2.320
0.600	0.000	0.655	1.167	1.887	2.339	2.525	2.554	2.500	2.406
0.700	0.000	0.648	1.122	1.786	2.222	2.464	2.546	2.543	2.450
0.800	0.000	0.614	1.069	1.702	2.126	2.405	2.539	2.565	2.468
0.900	0.000	0.567	1.016	1.635	2.052	2.351	2.530	2.564	2.466
1.000	0.000	0.515	0.964	1.577	1.994	2.303	2.509	2.548	2.454
1.100	0.000	0.473	0.911	1.526	1.949	2.269	2.478	2.521	2.434
1.200	0.000	0.440	0.857	1.480	1.914	2.242	2.438	2.487	2.408
1.300	0.000	0.412	0.805	1.438	1.885	2.214	2.394	2.446	2.377
1.400	0.000	0.387	0.758	1.398	1.860	2.180	2.347	2.398	2.341
1.500	0.000	0.363	0.717	1.358	1.835	2.140	2.300	2.349	2.303
1.600	0.000	0.342	0.682	1.320	1.802	2.095	2.251	2.302	2.264
1.700	0.000	0.325	0.652	1.283	1.763	2.047	2.202	2.256	2.227
1.800	0.000	0.312	0.626	1.247	1.718	1.997	2.153	2.212	2.191
1.900	0.000	0.301	0.604	1.211	1.668	1.944	2.103	2.169	2.157

draught	KN (For Diff Heel Angles)
	80.0
0.500	2.184
0.600	2.232
0.700	2.257
0.800	2.265
0.900	2.265
1.000	2.257
1.100	2.246
1.200	2.230
1.300	2.211
1.400	2.190
1.500	2.167
1.600	2.144
1.700	2.119
1.800	2.095
1.900	2.073

Trim: -0.4 m

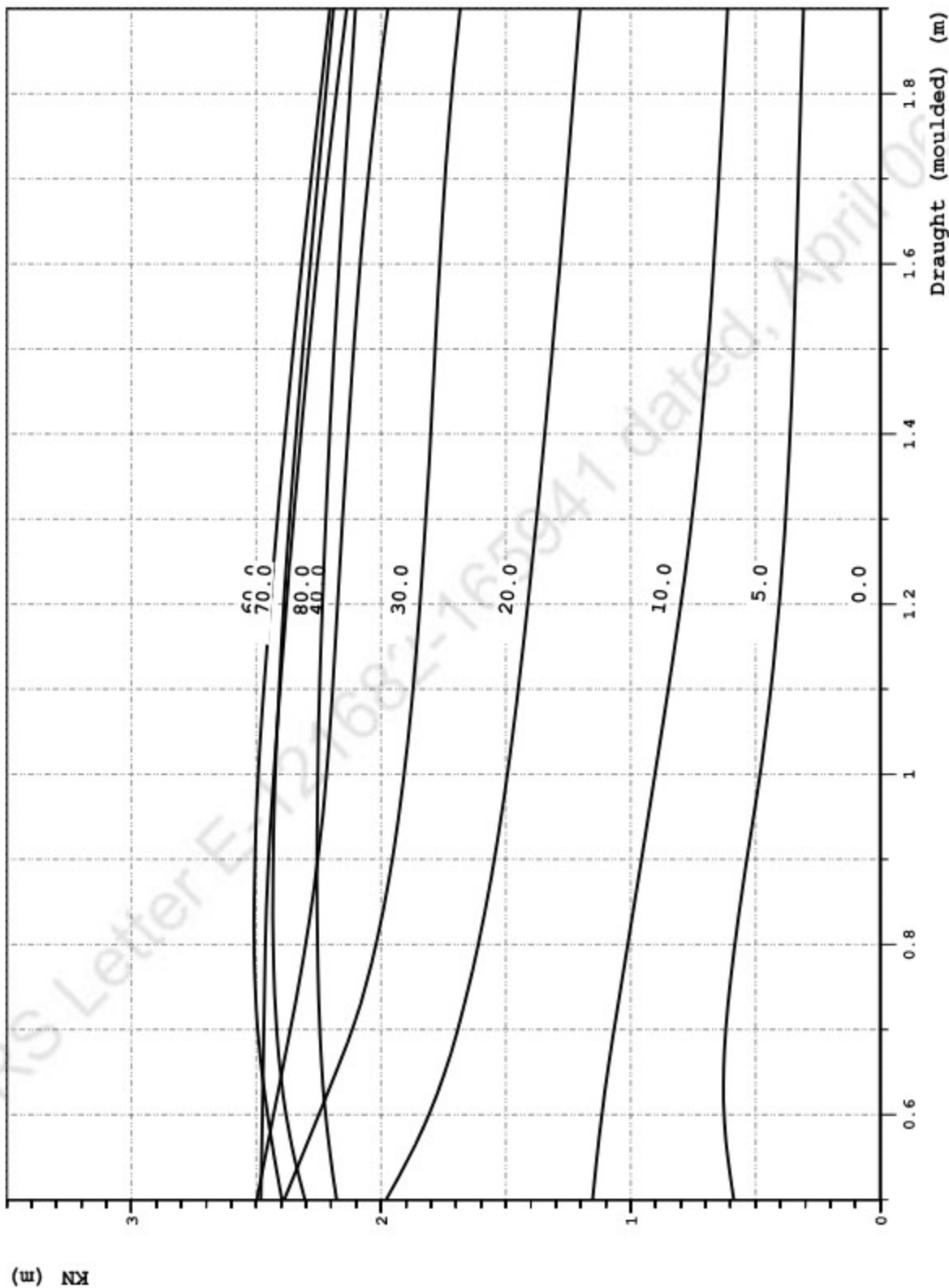


Trim: 0.4 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.587	1.152	1.980	2.388	2.497	2.481	2.397	2.304
0.600	0.000	0.626	1.115	1.808	2.248	2.430	2.475	2.455	2.380
0.700	0.000	0.619	1.067	1.693	2.116	2.364	2.469	2.494	2.418
0.800	0.000	0.583	1.011	1.610	2.020	2.302	2.463	2.508	2.432
0.900	0.000	0.534	0.957	1.546	1.955	2.253	2.451	2.505	2.432
1.000	0.000	0.482	0.903	1.494	1.908	2.218	2.430	2.492	2.424
1.100	0.000	0.439	0.849	1.450	1.872	2.194	2.404	2.470	2.408
1.200	0.000	0.405	0.799	1.412	1.844	2.174	2.378	2.443	2.390
1.300	0.000	0.380	0.755	1.377	1.821	2.154	2.351	2.415	2.367
1.400	0.000	0.362	0.719	1.344	1.801	2.133	2.321	2.384	2.340
1.500	0.000	0.348	0.691	1.313	1.784	2.110	2.290	2.352	2.313
1.600	0.000	0.337	0.667	1.284	1.766	2.083	2.256	2.317	2.284
1.700	0.000	0.328	0.647	1.256	1.744	2.052	2.219	2.280	2.253
1.800	0.000	0.318	0.628	1.228	1.717	2.015	2.179	2.243	2.222
1.900	0.000	0.308	0.612	1.203	1.683	1.973	2.137	2.205	2.190

draught	KN (For Diff Heel Angles)
	80.0
0.500	2.178
0.600	2.222
0.700	2.246
0.800	2.255
0.900	2.257
1.000	2.254
1.100	2.247
1.200	2.235
1.300	2.221
1.400	2.205
1.500	2.188
1.600	2.168
1.700	2.147
1.800	2.125
1.900	2.103

Trim: 0.4 m

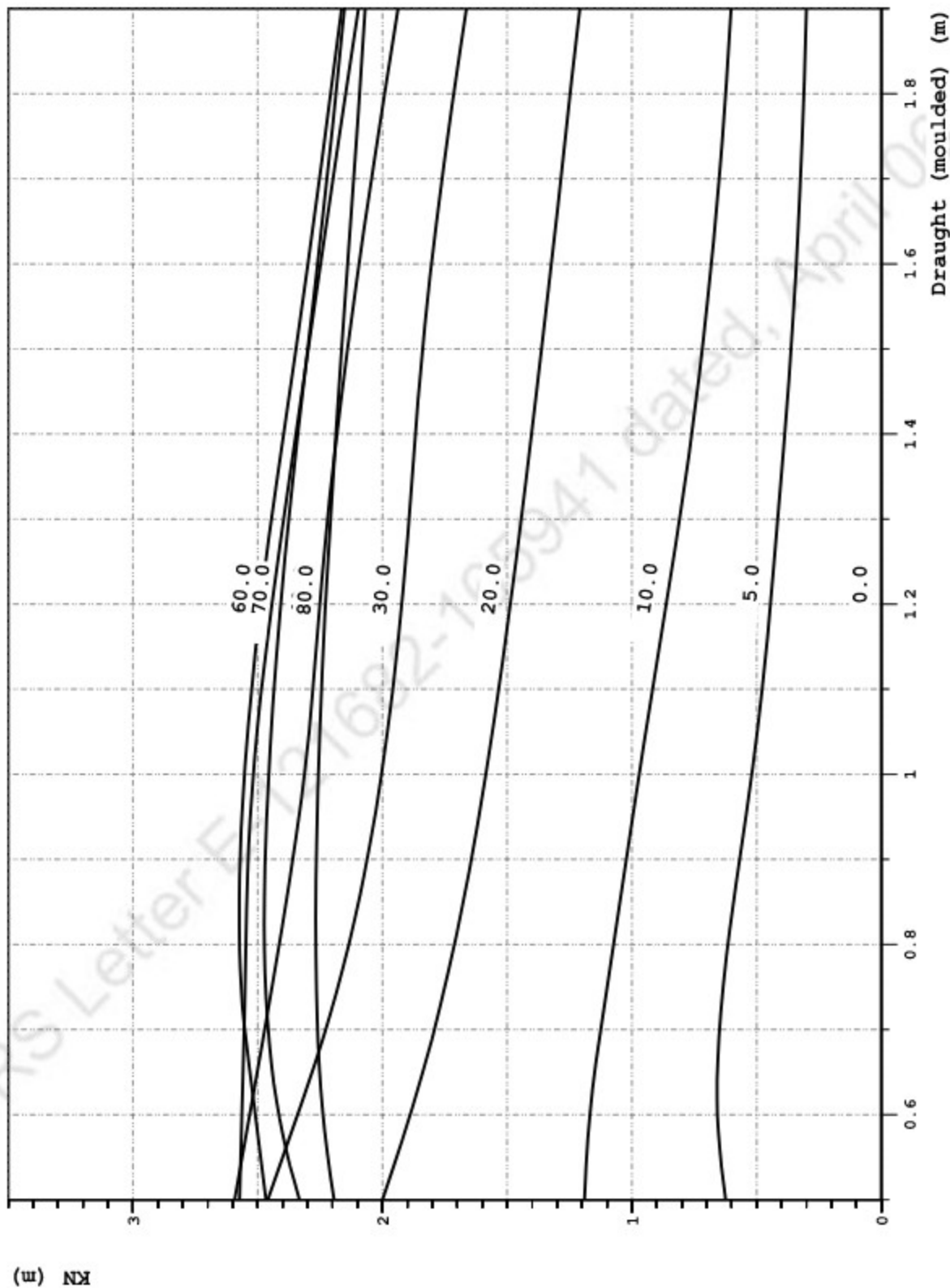


Trim: -0.5 m

----- KN (For Diff Heel Angles) -----									
draught	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.624	1.190	2.000	2.459	2.593	2.572	2.466	2.332
0.600	0.000	0.657	1.169	1.888	2.340	2.532	2.563	2.510	2.416
0.700	0.000	0.649	1.125	1.792	2.227	2.471	2.554	2.552	2.457
0.800	0.000	0.615	1.074	1.711	2.135	2.414	2.548	2.573	2.473
0.900	0.000	0.568	1.022	1.644	2.061	2.359	2.539	2.571	2.470
1.000	0.000	0.519	0.970	1.586	2.004	2.313	2.517	2.553	2.456
1.100	0.000	0.478	0.917	1.534	1.958	2.278	2.485	2.524	2.435
1.200	0.000	0.444	0.863	1.487	1.922	2.251	2.443	2.488	2.408
1.300	0.000	0.415	0.809	1.444	1.893	2.220	2.396	2.445	2.375
1.400	0.000	0.387	0.760	1.402	1.867	2.183	2.347	2.396	2.339
1.500	0.000	0.362	0.718	1.362	1.839	2.140	2.298	2.346	2.299
1.600	0.000	0.341	0.682	1.323	1.803	2.093	2.248	2.298	2.260
1.700	0.000	0.324	0.650	1.285	1.761	2.044	2.198	2.252	2.222
1.800	0.000	0.311	0.624	1.248	1.714	1.992	2.147	2.207	2.186
1.900	0.000	0.300	0.603	1.209	1.663	1.938	2.096	2.164	2.152

----- KN (For Diff Heel Angles) -----	
draught	80.0
0.500	2.193
0.600	2.238
0.700	2.260
0.800	2.267
0.900	2.265
1.000	2.257
1.100	2.245
1.200	2.228
1.300	2.208
1.400	2.186
1.500	2.163
1.600	2.139
1.700	2.115
1.800	2.091
1.900	2.069

Trim: -0.5 m

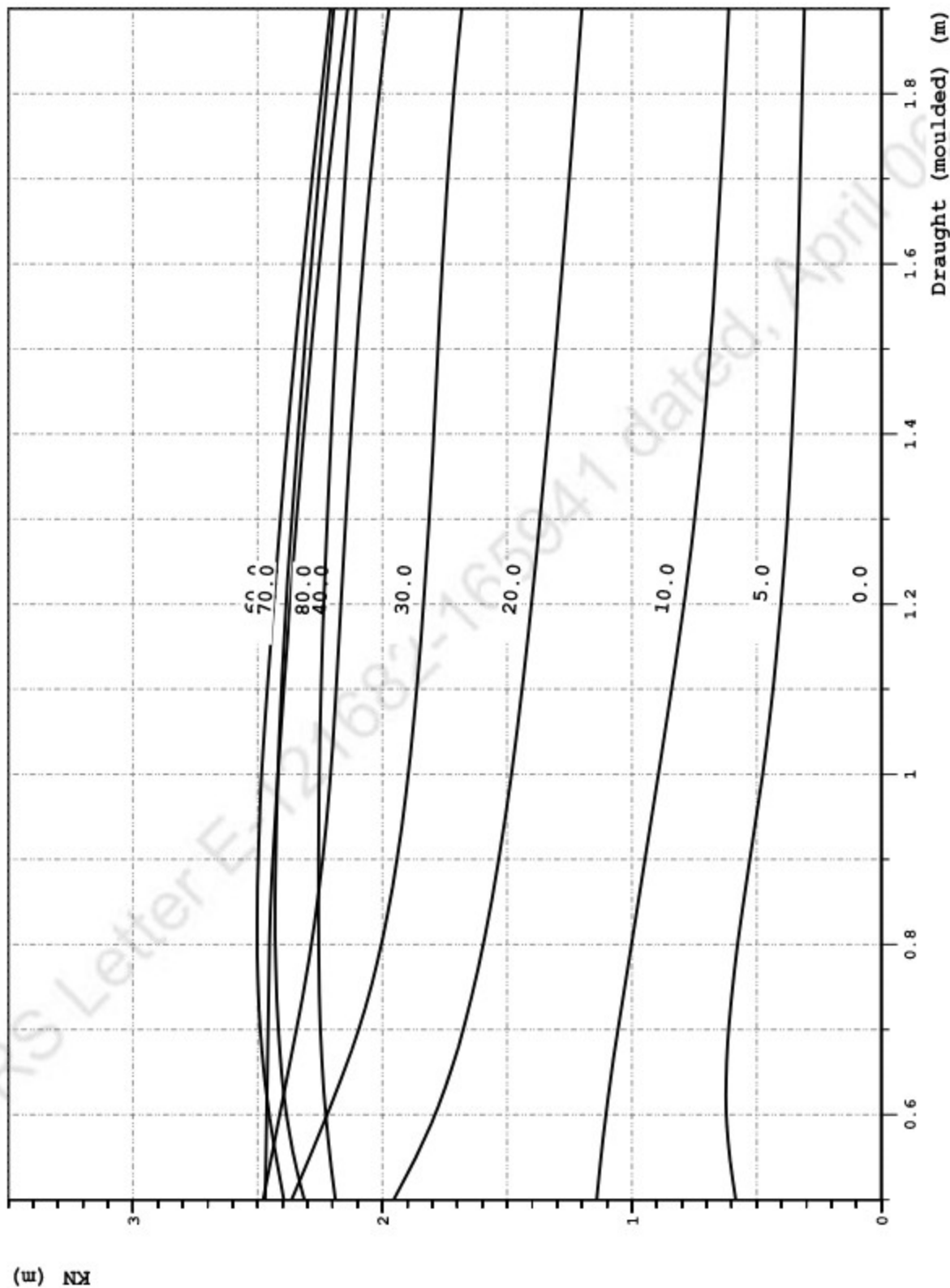


Trim: 0.5 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.584	1.141	1.955	2.363	2.478	2.470	2.395	2.313
0.600	0.000	0.621	1.104	1.789	2.222	2.411	2.464	2.453	2.384
0.700	0.000	0.612	1.056	1.676	2.095	2.345	2.458	2.490	2.417
0.800	0.000	0.576	1.001	1.596	2.004	2.285	2.452	2.502	2.430
0.900	0.000	0.527	0.947	1.534	1.941	2.240	2.439	2.498	2.428
1.000	0.000	0.476	0.894	1.483	1.896	2.207	2.419	2.484	2.419
1.100	0.000	0.434	0.841	1.440	1.862	2.185	2.395	2.462	2.404
1.200	0.000	0.402	0.791	1.403	1.835	2.166	2.370	2.436	2.386
1.300	0.000	0.377	0.749	1.369	1.813	2.147	2.344	2.410	2.363
1.400	0.000	0.358	0.714	1.337	1.794	2.127	2.316	2.381	2.338
1.500	0.000	0.344	0.686	1.306	1.777	2.104	2.286	2.350	2.312
1.600	0.000	0.334	0.663	1.278	1.760	2.079	2.253	2.316	2.285
1.700	0.000	0.326	0.644	1.251	1.739	2.049	2.218	2.282	2.256
1.800	0.000	0.318	0.627	1.225	1.714	2.014	2.180	2.245	2.225
1.900	0.000	0.308	0.611	1.200	1.682	1.974	2.139	2.208	2.194

draught	KN (For Diff Heel Angles)
	80.0
0.500	2.189
0.600	2.228
0.700	2.248
0.800	2.256
0.900	2.256
1.000	2.253
1.100	2.246
1.200	2.235
1.300	2.221
1.400	2.206
1.500	2.188
1.600	2.170
1.700	2.150
1.800	2.128
1.900	2.107

Trim: 0.5 m

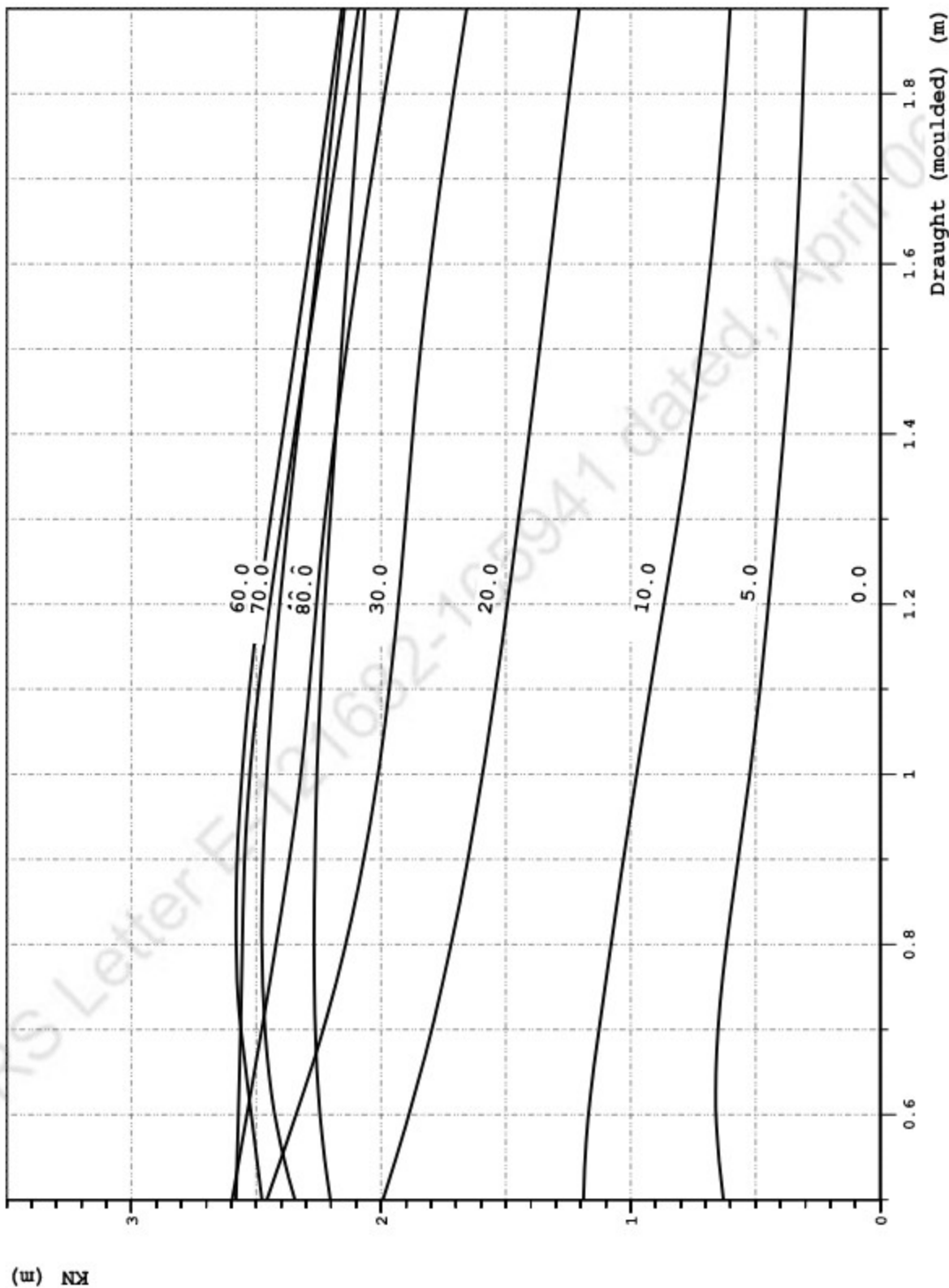


Trim: -0.6 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.628	1.189	1.992	2.457	2.597	2.581	2.478	2.346
0.600	0.000	0.658	1.169	1.888	2.340	2.537	2.571	2.520	2.426
0.700	0.000	0.650	1.127	1.797	2.231	2.478	2.563	2.561	2.464
0.800	0.000	0.616	1.079	1.719	2.142	2.421	2.556	2.580	2.478
0.900	0.000	0.570	1.029	1.652	2.070	2.367	2.547	2.576	2.473
1.000	0.000	0.523	0.976	1.593	2.012	2.322	2.525	2.557	2.457
1.100	0.000	0.482	0.922	1.541	1.967	2.288	2.491	2.527	2.435
1.200	0.000	0.448	0.867	1.494	1.931	2.259	2.446	2.489	2.406
1.300	0.000	0.416	0.811	1.449	1.901	2.225	2.397	2.443	2.372
1.400	0.000	0.386	0.761	1.406	1.873	2.184	2.346	2.393	2.335
1.500	0.000	0.360	0.718	1.365	1.841	2.139	2.295	2.343	2.295
1.600	0.000	0.339	0.680	1.325	1.803	2.090	2.244	2.294	2.255
1.700	0.000	0.323	0.649	1.286	1.759	2.039	2.193	2.247	2.217
1.800	0.000	0.310	0.622	1.247	1.710	1.986	2.141	2.202	2.182
1.900	0.000	0.300	0.601	1.207	1.657	1.931	2.090	2.158	2.147

draught	KN (For Diff Heel Angles)
	80.0
0.500	2.203
0.600	2.245
0.700	2.263
0.800	2.268
0.900	2.265
1.000	2.257
1.100	2.243
1.200	2.226
1.300	2.205
1.400	2.182
1.500	2.159
1.600	2.135
1.700	2.110
1.800	2.087
1.900	2.065

Trim: -0.6 m

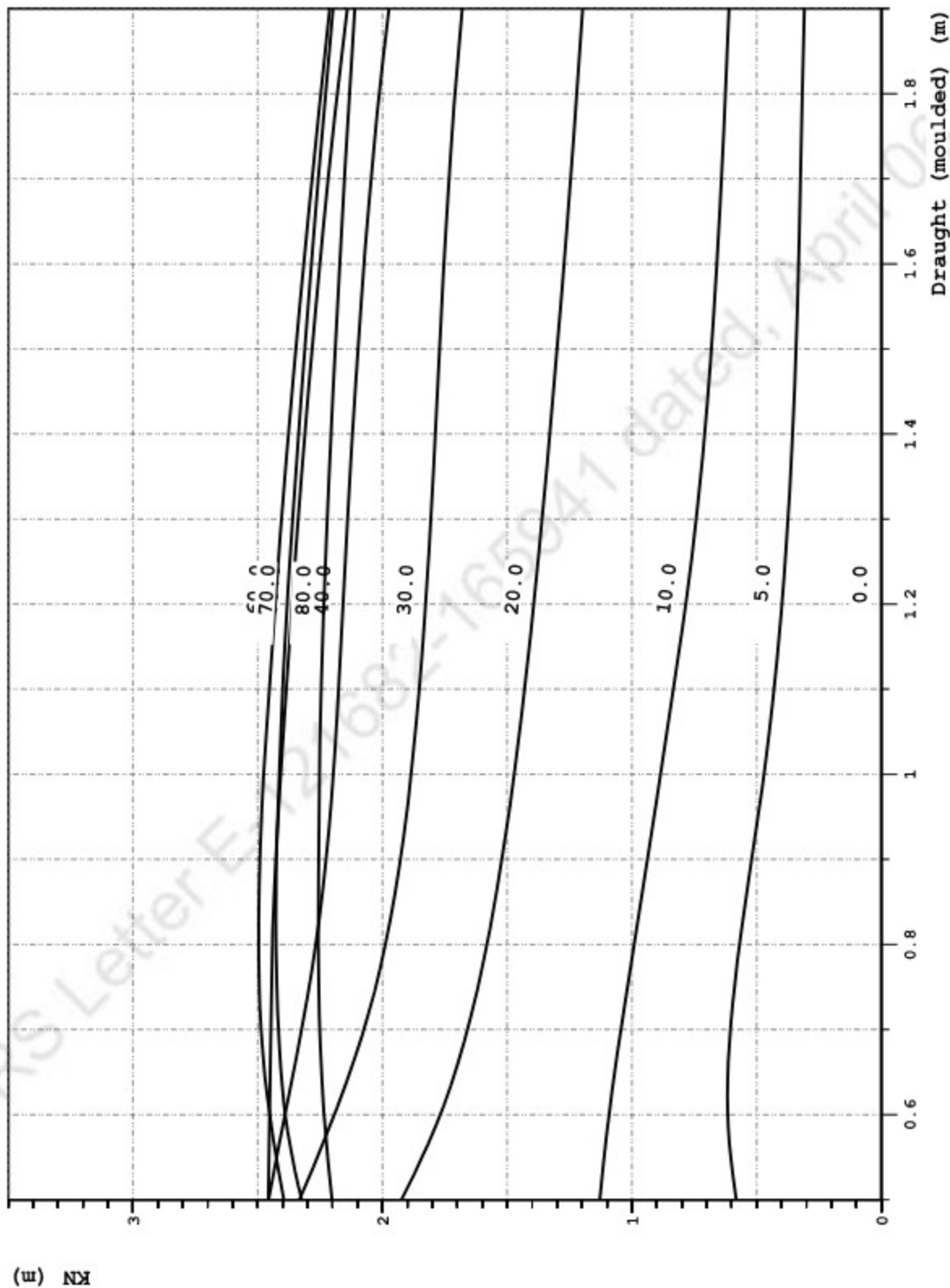


Trim: 0.6 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.581	1.128	1.924	2.333	2.456	2.457	2.395	2.323
0.600	0.000	0.616	1.092	1.768	2.192	2.391	2.452	2.452	2.389
0.700	0.000	0.605	1.044	1.659	2.074	2.324	2.447	2.486	2.417
0.800	0.000	0.569	0.991	1.581	1.988	2.267	2.441	2.496	2.427
0.900	0.000	0.520	0.937	1.521	1.928	2.226	2.427	2.491	2.425
1.000	0.000	0.470	0.885	1.472	1.885	2.197	2.408	2.476	2.414
1.100	0.000	0.430	0.834	1.430	1.853	2.176	2.386	2.454	2.400
1.200	0.000	0.399	0.784	1.393	1.827	2.158	2.362	2.429	2.382
1.300	0.000	0.374	0.742	1.360	1.806	2.140	2.337	2.404	2.360
1.400	0.000	0.356	0.708	1.329	1.787	2.120	2.310	2.377	2.336
1.500	0.000	0.342	0.681	1.300	1.771	2.098	2.282	2.347	2.311
1.600	0.000	0.331	0.659	1.272	1.753	2.074	2.251	2.315	2.285
1.700	0.000	0.324	0.641	1.246	1.733	2.046	2.217	2.282	2.257
1.800	0.000	0.317	0.625	1.221	1.709	2.012	2.181	2.247	2.228
1.900	0.000	0.309	0.610	1.198	1.680	1.974	2.141	2.211	2.198

draught	KN (For Diff Heel Angles)
	80.0
0.500	2.202
0.600	2.234
0.700	2.251
0.800	2.257
0.900	2.255
1.000	2.253
1.100	2.245
1.200	2.234
1.300	2.221
1.400	2.206
1.500	2.189
1.600	2.171
1.700	2.152
1.800	2.132
1.900	2.111

Trim: 0.6 m

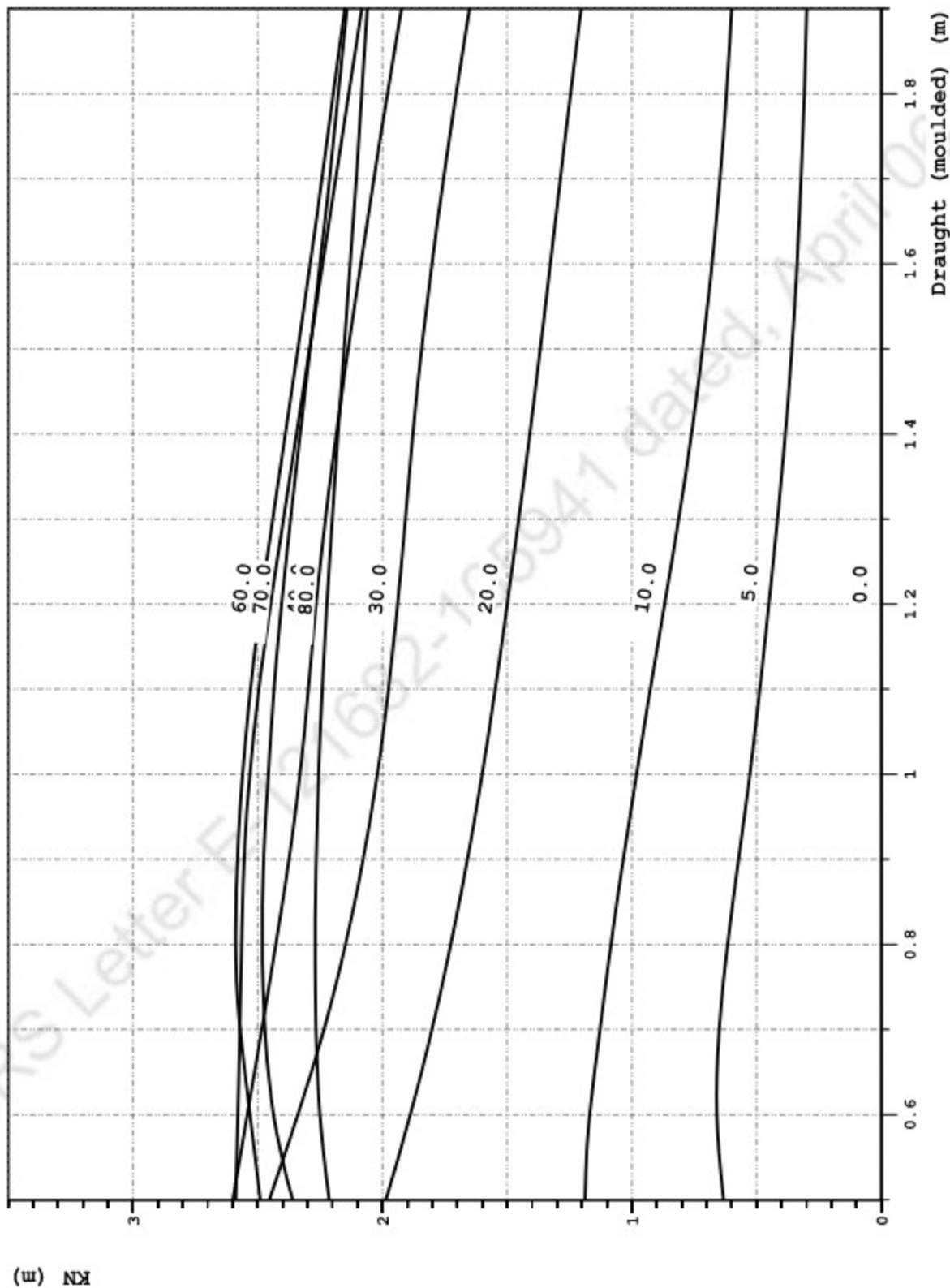


Trim: -0.7 m

----- KN (For Diff Heel Angles) -----									
draught	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.632	1.187	1.986	2.453	2.600	2.588	2.489	2.360
0.600	0.000	0.660	1.169	1.888	2.339	2.542	2.579	2.531	2.436
0.700	0.000	0.650	1.128	1.801	2.234	2.483	2.571	2.571	2.471
0.800	0.000	0.616	1.084	1.726	2.148	2.427	2.564	2.588	2.482
0.900	0.000	0.573	1.034	1.659	2.077	2.374	2.554	2.582	2.476
1.000	0.000	0.527	0.982	1.600	2.020	2.330	2.531	2.560	2.458
1.100	0.000	0.487	0.927	1.548	1.975	2.297	2.495	2.529	2.435
1.200	0.000	0.451	0.869	1.500	1.939	2.266	2.448	2.488	2.404
1.300	0.000	0.416	0.812	1.453	1.908	2.228	2.397	2.440	2.368
1.400	0.000	0.385	0.761	1.409	1.878	2.185	2.344	2.389	2.330
1.500	0.000	0.359	0.717	1.367	1.843	2.137	2.292	2.339	2.290
1.600	0.000	0.338	0.679	1.326	1.802	2.087	2.239	2.290	2.250
1.700	0.000	0.322	0.647	1.287	1.755	2.034	2.187	2.242	2.212
1.800	0.000	0.309	0.621	1.246	1.705	1.980	2.135	2.196	2.176
1.900	0.000	0.299	0.600	1.203	1.651	1.923	2.083	2.151	2.142

----- KN (For Diff Heel Angles) -----	
draught	80.0
0.500	2.213
0.600	2.250
0.700	2.266
0.800	2.270
0.900	2.265
1.000	2.256
1.100	2.241
1.200	2.222
1.300	2.201
1.400	2.178
1.500	2.154
1.600	2.130
1.700	2.105
1.800	2.082
1.900	2.061

Trim: -0.7 m

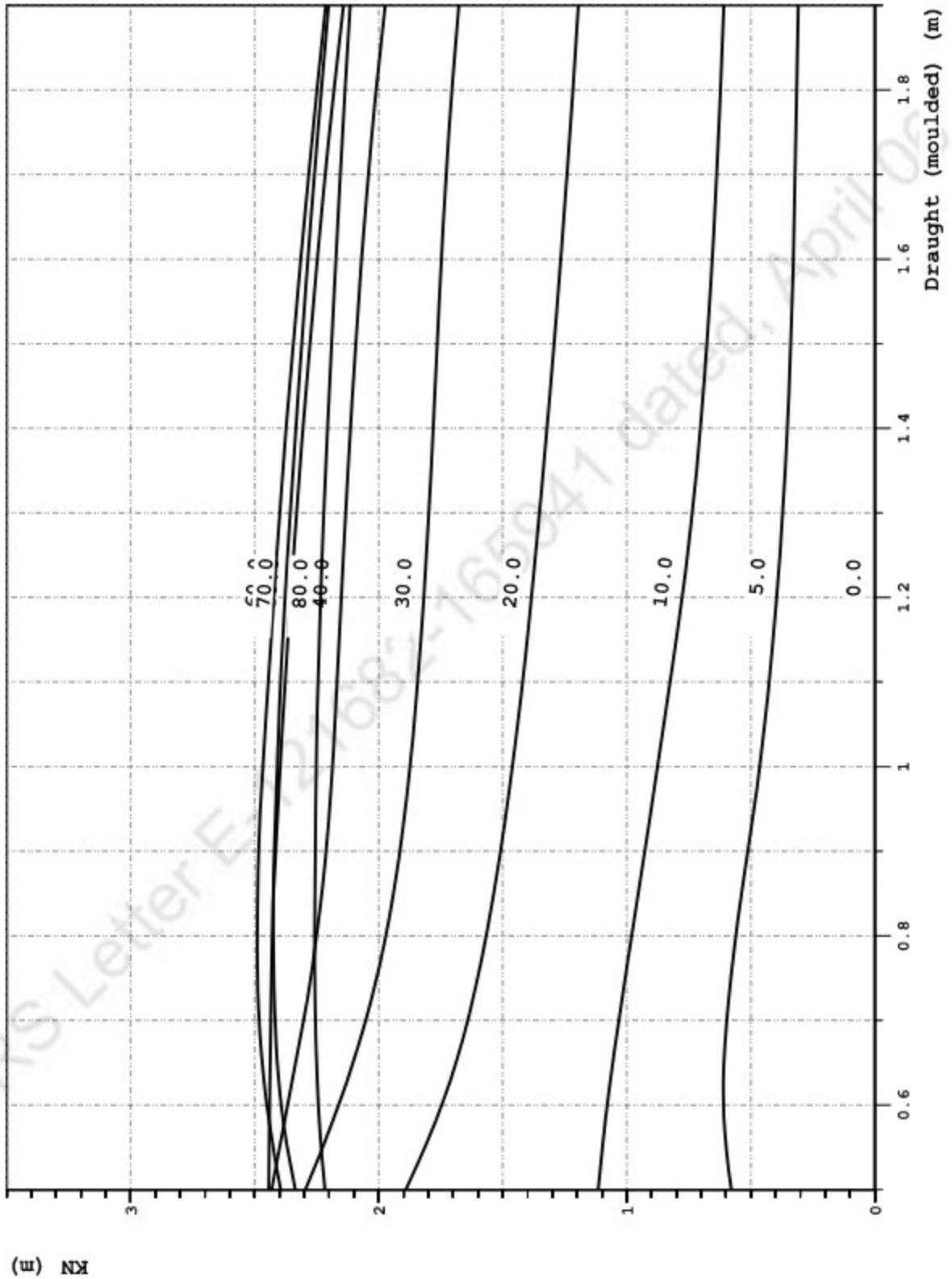


Trim: 0.7 m

----- KN (For Diff Heel Angles) -----									
draught	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.579	1.115	1.891	2.295	2.431	2.443	2.396	2.336
0.600	0.000	0.610	1.079	1.746	2.161	2.367	2.440	2.451	2.393
0.700	0.000	0.597	1.032	1.641	2.052	2.303	2.435	2.482	2.418
0.800	0.000	0.560	0.980	1.566	1.971	2.250	2.430	2.490	2.425
0.900	0.000	0.512	0.927	1.509	1.914	2.212	2.416	2.484	2.421
1.000	0.000	0.464	0.876	1.461	1.874	2.186	2.397	2.467	2.409
1.100	0.000	0.426	0.825	1.420	1.843	2.167	2.377	2.445	2.396
1.200	0.000	0.395	0.777	1.384	1.818	2.150	2.355	2.422	2.378
1.300	0.000	0.372	0.736	1.352	1.798	2.133	2.331	2.399	2.356
1.400	0.000	0.353	0.703	1.322	1.781	2.114	2.305	2.373	2.334
1.500	0.000	0.339	0.676	1.293	1.765	2.092	2.277	2.344	2.310
1.600	0.000	0.329	0.655	1.266	1.748	2.069	2.248	2.314	2.285
1.700	0.000	0.321	0.638	1.241	1.728	2.042	2.216	2.282	2.259
1.800	0.000	0.315	0.623	1.217	1.705	2.010	2.181	2.249	2.231
1.900	0.000	0.308	0.609	1.195	1.677	1.974	2.142	2.214	2.202

----- KN (For Diff Heel Angles) -----	
draught	80.0
0.500	2.217
0.600	2.243
0.700	2.255
0.800	2.258
0.900	2.255
1.000	2.252
1.100	2.244
1.200	2.234
1.300	2.221
1.400	2.206
1.500	2.190
1.600	2.172
1.700	2.154
1.800	2.135
1.900	2.115

Trim: 0.7 m

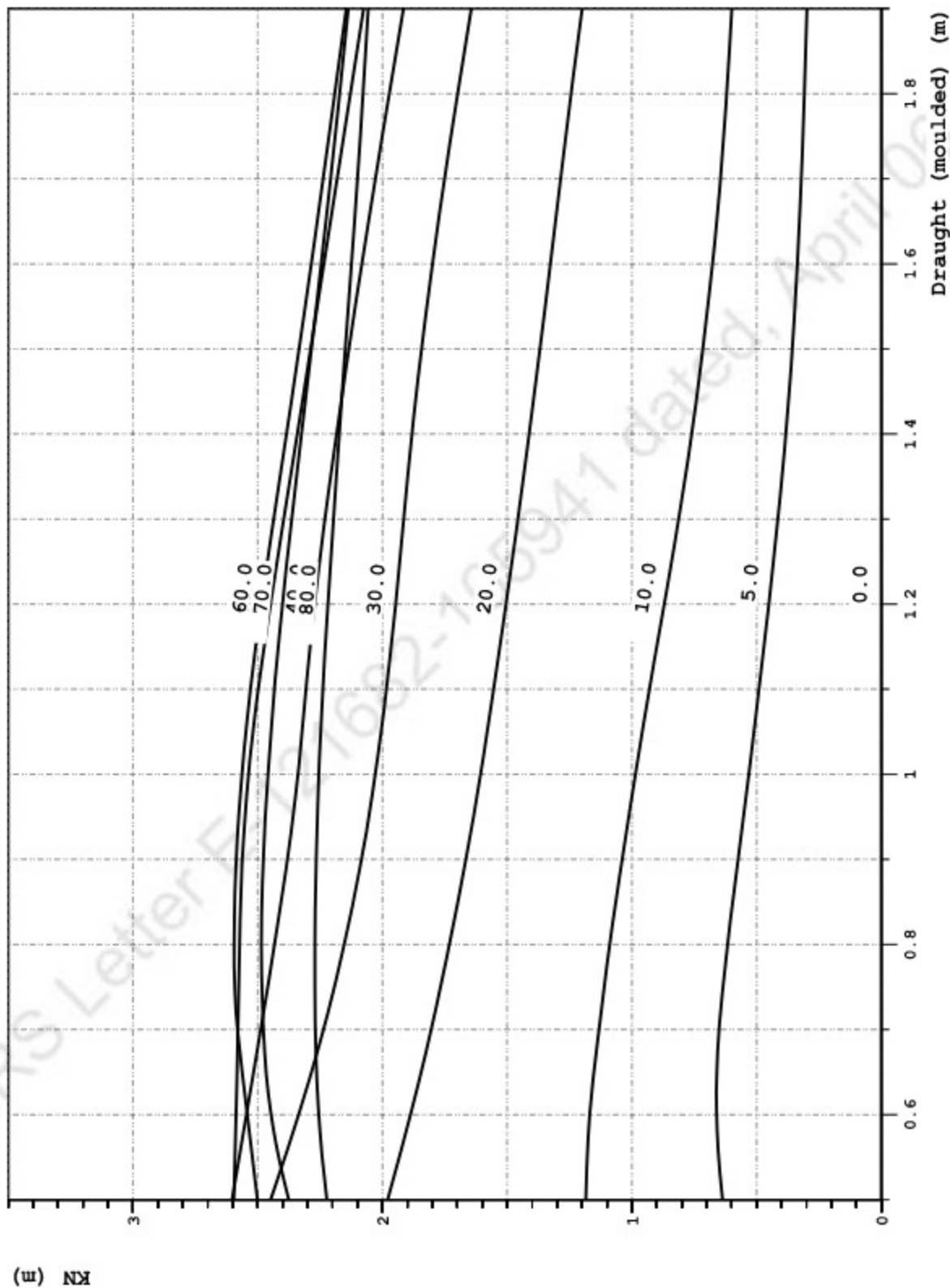


Trim: -0.8 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.637	1.185	1.979	2.448	2.602	2.596	2.501	2.376
0.600	0.000	0.661	1.169	1.887	2.336	2.545	2.587	2.542	2.446
0.700	0.000	0.650	1.132	1.805	2.236	2.488	2.579	2.580	2.477
0.800	0.000	0.616	1.089	1.732	2.153	2.433	2.572	2.595	2.485
0.900	0.000	0.575	1.039	1.665	2.084	2.381	2.562	2.586	2.478
1.000	0.000	0.531	0.986	1.607	2.028	2.338	2.537	2.563	2.459
1.100	0.000	0.490	0.930	1.554	1.984	2.306	2.498	2.529	2.433
1.200	0.000	0.451	0.870	1.504	1.947	2.272	2.448	2.485	2.401
1.300	0.000	0.415	0.812	1.457	1.915	2.230	2.395	2.436	2.364
1.400	0.000	0.383	0.760	1.412	1.881	2.184	2.341	2.384	2.325
1.500	0.000	0.357	0.715	1.368	1.843	2.134	2.288	2.333	2.284
1.600	0.000	0.337	0.677	1.327	1.799	2.082	2.234	2.284	2.245
1.700	0.000	0.321	0.645	1.286	1.751	2.028	2.181	2.237	2.207
1.800	0.000	0.309	0.620	1.244	1.699	1.973	2.128	2.191	2.171
1.900	0.000	0.299	0.599	1.199	1.644	1.915	2.075	2.145	2.137

draught	KN (For Diff Heel Angles)
	80.0
0.500	2.222
0.600	2.255
0.700	2.269
0.800	2.271
0.900	2.265
1.000	2.255
1.100	2.239
1.200	2.219
1.300	2.197
1.400	2.173
1.500	2.149
1.600	2.124
1.700	2.100
1.800	2.078
1.900	2.057

Trim: -0.8 m

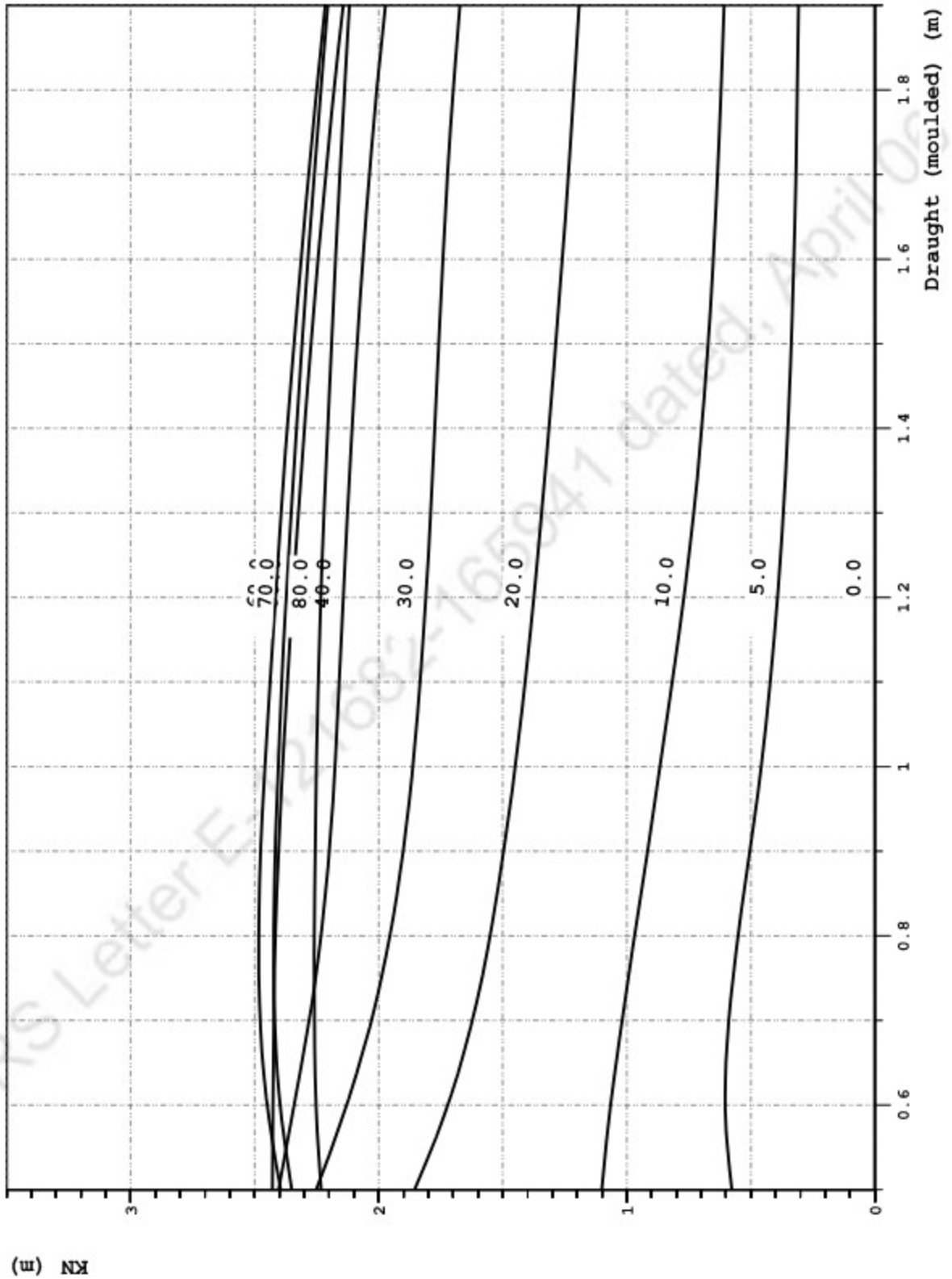


Trim: 0.8 m

draught	KN (For Diff Heel Angles)								
	0.0	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0
0.500	0.000	0.576	1.100	1.855	2.252	2.404	2.428	2.395	2.350
0.600	0.000	0.604	1.065	1.721	2.129	2.341	2.426	2.450	2.397
0.700	0.000	0.589	1.019	1.623	2.029	2.280	2.423	2.478	2.419
0.800	0.000	0.551	0.968	1.551	1.955	2.233	2.417	2.484	2.423
0.900	0.000	0.504	0.916	1.496	1.901	2.199	2.404	2.476	2.417
1.000	0.000	0.458	0.866	1.450	1.863	2.176	2.387	2.459	2.405
1.100	0.000	0.421	0.816	1.410	1.833	2.159	2.368	2.438	2.391
1.200	0.000	0.392	0.770	1.375	1.810	2.143	2.347	2.416	2.373
1.300	0.000	0.369	0.730	1.343	1.790	2.126	2.324	2.393	2.353
1.400	0.000	0.351	0.698	1.314	1.774	2.107	2.299	2.369	2.331
1.500	0.000	0.337	0.672	1.286	1.758	2.087	2.273	2.341	2.309
1.600	0.000	0.326	0.651	1.260	1.742	2.063	2.244	2.312	2.285
1.700	0.000	0.319	0.634	1.235	1.722	2.037	2.213	2.282	2.260
1.800	0.000	0.313	0.620	1.213	1.700	2.007	2.180	2.250	2.233
1.900	0.000	0.307	0.607	1.192	1.673	1.973	2.143	2.216	2.205

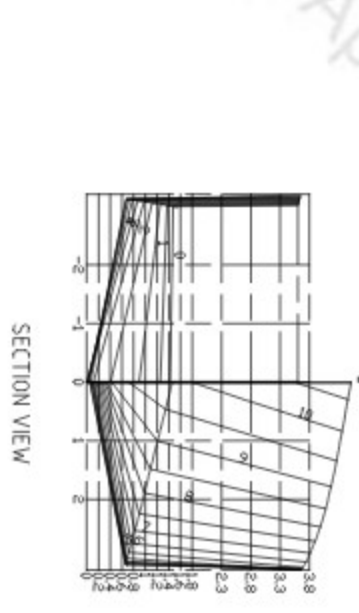
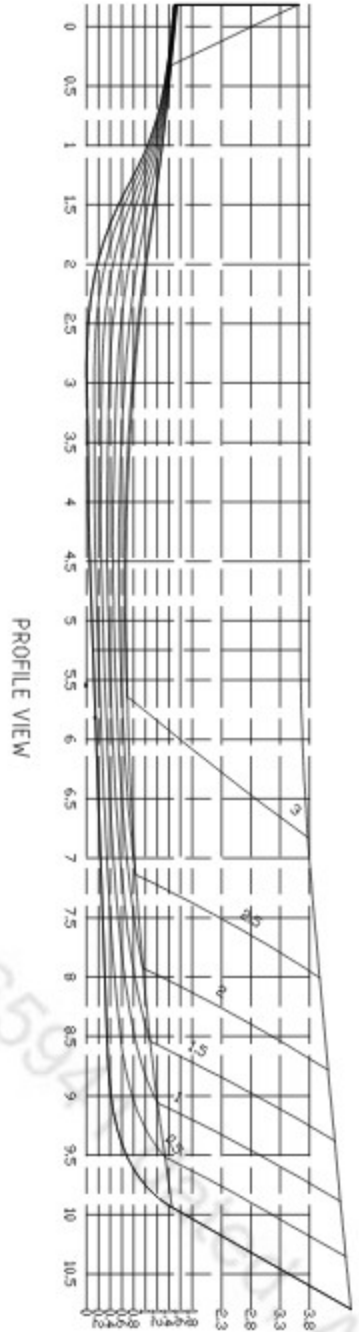
draught	KN (For Diff Heel Angles)
	80.0
0.500	2.232
0.600	2.252
0.700	2.259
0.800	2.260
0.900	2.256
1.000	2.251
1.100	2.243
1.200	2.233
1.300	2.221
1.400	2.206
1.500	2.190
1.600	2.174
1.700	2.156
1.800	2.138
1.900	2.118

Trim: 0.8 m



9 LINES PLAN

Refer IRS Letter E-121682-165941 dated, April 06, 2021



MINI PARTICULARS:

LENGTH O.A..... ddt 22.70 M.
 LENGTH R.P..... ddt 20.21 M.
 BREADTH (MID)..... ddt 6.40 M.
 BREADTH (WIDSHIP)..... ddt 3.00 M.
 DRAFT (MAX.)..... ddt 1.80 M.
 PRINTE SPACING..... 450 MM
 SPEED..... 8 KNOTS.
 REFRIGERATED FISH HOLD..... ddt 70 Cu m.

VARIANT 2

- NOTE:
1. DRAWING ONLY FOR IN PRINCIPLE APPROVAL
 2. THIS DRAWING IS ONLY FOR GUIDANCE ONLY.

Rev	Date	Description	Auth	Checked	Appr
01	03/04/2021	Final			
CUSTOMER TITUL			TITLE		
YARD NO. 1193			Lines Plan		
COCOA DEVELOPMENT			FISHING VESSEL P.V.1770		
Scale	Project No.	Proj. No.	Doc. No.		
1:80	A3	P.V.1770	P.V.1770-101-102		

Refer IRS Letter No. 1682-16594 dated April 06, 2021