

		DRAWN: D. Clark		DATE: Jun 2015	
		CHECKED: D. Clark		DATE: Jun 2015	
		APPROVED: J. Kerai		DATE: Jun 2015	
APPROVED by ABS on behalf of the USCG for compliance with applicable USCG Regulations subject to any amendments or comments in ABS letter ABS FOUNDED 1862 USCG approval applies only to specified vessel(s) This document satisfies the requirements of REG. 10, ANNEX I of the International Convention on Load Lines, 1966 This document satisfies the requirements of REG. 5-1, CH. II-1 of SOLAS 1974 (as amended) TRIM AND STABILITY BOOKLET FOR USNS MEDGAR EVERS (T-AKE 13) APPROVED This approval covers only ABS requirements and does not include items not required by ABS. Details of this approval are set forth in the ABS letter. ABS FOUNDED 1862					
HJDEPT. OF THE NAVY					
WASHINGTON, D.C.					
MILITARY SEALIFT COMMAND					
TECHNICAL DIVISION					
DRAWN: D. Clark		CHECKED D. Clark		D. Clark Jun 2015	
CALCULATIONS BY: D. Clark		APPROVED: J. Kerai		PROJECT ENGINEER DATE	
J. Gladson Jun 2015		J. Kerai Jun 2015		J. Gladson Jun 2015	
DIRECTOR, TECH. DIVISION DATE		HEAD, NAVAL ARCHITECTURE BRANCH DATE			
J. Gladson Jun 2015		MSC PLAN NUMBER			REV.
APPROVED FOR COMMANDER MSC DATE		T-AKE 13	801	8499168	B

REVISIONS

REV.	SHEET	DESCRIPTION	DATE/ (INITIALS)
-	ALL	Initial release in MSC format Supersedes NASSCO T&S Book DWG 801-8390114	02/13 (A. Traugh)
	24	LO Storage Tank Divided into two tanks per TRANSALT T-AKE-05-001	
	30	Dry Provision Stores and Dry Provisions Annex reflect changes from TRANSALT T-AKE-06-059 and T-AKE-06-060	
A	All	This booklet has been updated to comply with MSC Engineering Process Instruction (EPI) "Trim and Stability (T&S) Booklet, Conventions, Assumptions, and Format".	6/3/2014 (COS Herbert Engineering Corp.)
	4	Added keel plate thickness and clarified the drafts/VCG reference per MSC. Clarified the drafts to keel. Added Yard Hull No. Added frame spacing. Added load line drafts per certificate and MSC. Updated tank capacities.	
	5	Added Deck Heights. Updated tonnage and Class note from ABS website and tonnage certificates.	
	6	Updated references per MSC.	
	7-12	Updated instruction per fleet standard and MSC. Added "Stability Requirements" section per MSC standard.	
	11	Updated minimum group free surface and wording per MSC.	
	12	Added air draft per General Arrangement and MSC.	
	14-20	Corrected Hydro draft from BL to Keel per MSC.	
	22 & 23	Corrected the Required GM table and GM curve label for the keel thickness and maximum molded draft per MSC.	
	24	Added tank name in "GAIN IN GM DUE TO BALLASTING" table.	
	25-27 et	Changed density of tanks to MSC fleet standard and updated group free surface per MSC.	
	27	Added Tank Variable TCG's for J-shaped tanks with widely varying TCG's over the possible fill range	
	28-29	Corrected useable cargo hold areas and volumes	
	Appendix	Reprinted Appendix A-I for CargoMax® upgrade Updated Appendix J, J1, K blank, hand and cargo form. Corrected Appendix L sample cargo Bulk 2 nd Dk VCG per MSC.	
		Updated Software instruction and moved to Appendix end.	
B	6	Added reference 7) for hydrotank.	9/12/2016 (Y.Me, Herbert Engineering Corp.)
	9	Updated CargoMax software date.	
	19	Corrected LCB typo at 3m-A trim in hydrotank per Ref 7).	
	Appendix	Reprinted Appendix for CargoMax and sample load cases.	Checked: D.Clark, MSC N721)

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*Note: Loading conditions for B1 & B2 as defined in Appendix B of the System specifications for T-AKE1 Class

Software Instructions - CargoMax® Installation Instructions

TABLE OF PRINCIPAL CHARACTERISTICS

SHIP CHARACTERISTICS

Length Overall, LOA	210.00 METERS
Length Between Perpendiculars, LBP	199.55 METERS
Molded Beam, B	32.20 METERS
Depth to Main Deck at Side	18.55 METERS ABL
Building Yard/Hull No.	NASSCO 483

Frame Spacing:	Fr. 101 - Fr. 100:	0.600 METERS
	Fr. 100 - Fr. 95 (AP):	0.620 METERS
	Fr. 95 - Fr. 85:	0.617 METERS
	Fr. 85 - Fr. 58:	3.140 METERS
	Fr. 58 - Fr. 38:	3.500 METERS
	Fr. 38 - Fr. 24:	1.750 METERS
	Fr. 24 - Fr. 18:	0.583 METERS
	Fr. 18 - Fr. 6:	0.590 METERS
	Fr. 6 - Fr. "M" (Fwd):	0.587 METERS

FP is at Frame 0

Frame spacing information from inboard profile drawing

LOAD LINE

Displacement, Seawater, SLL	44,776 MTON
Amidship Draft, Molded (<i>Summer Load Line</i>)	9.7505 METERS
Amidship Draft, Keel (<i>Summer Load Line</i>)	9.780 METERS
(<i>Fresh Water</i>)	= SLL + 0.203 = 9.983 METERS
(<i>Summer Load Line</i>)	= SLL = 9.780 METERS

Bottom of keel is 29.5mm below molded baseline (from Capacity Plan)

LIGHT SHIP⁽¹⁾

Displacement	25,254 MTON
VCG ⁽²⁾ (ABL)	14.310 METERS
LCG (Aft of FP)	107.601 METERS
TCG (Off Centerline, Port Positive)	-0.020 METERS
Mean Draft, Keel	6.096 METERS

CAPACITIES

VOLUME

WEIGHT

Fuel Oil (95%)*	4801.1 M ³	4002.2 MTON
Lube Oil (95%)*	357.7 M ³	329.4 MTON
Salt Water Ballast (100%)	5960.2 M ³	6109.2 MTON
Cargo Fuel Oil (as DFM) (95%)*	3968.1 M ³	3307.8 MTON
(as JP-5) (95%)*	3968.1 M ³	3228.5 MTON
Aviation Fuel Oil (95%)	123.2 M ³	100.2 MTON
Cargo Potable Water (100%)	201.0 M ³	201.0 MTON
Ship's Service Potable Water (100%)	201.0 M ³	201.0 MTON
Distilled Water (100%)	119.2 M ³	119.2 MTON

(* Fuel Oil: Fuel Overflow Tank 3-82-1 not included; Lube Oil: LO Drain Tank 4-79-1 not included; Cargo Fuel Oil: CF Slop Tank 4-38.5-0 not excluded)

BRIDGE VISIBILITY REQUIREMENTS

ABS

PANAMA CANAL

Required Cargo Visibility	420.00 METERS	210 METERS
Required Non-Cargo Visibility	420.00 METERS	315 METERS

TABLE OF PRINCIPAL CHARACTERISTICS

Pilot Longitudinal Position	111.9 METERS aft FP	111.72 METERS aft FP
Pilot Height	41.305 METERS ABL	41.305 METERS ABL
Position of Sight Interference	77.45 METERS aft FP	11.767 METERS aft FP
Height of Sight Interference	38.7 METERS ABL	28.870 METERS ABL

Notes:

ABS navigational bridge visibility requirements from Steel Vessel Rules Part 3, Chapter 6, Section 1.1.1.

Panama Canal navigational bridge requirements from MR Notice to Shipping No. N-1-2001 Vessel Requirements 4.e. Vessel is able to meet 35 CFR 103.6 minimum salt water drafts of 7.32m FWD and 7.93m AFT for Panama Canal transit without cargo (minimum 40% full load fuel allowance required).

CARGO CRANE CHARACTERISTICS						
CRANE	DECK	LOCATION	CAPACITY MTON	AT RADIUS M	MAX OUTREACH M	MIN OUTREACH M
No 1	03 LVL	FR 32 STBD	10	20	26.33	6.5
			6	26		
No 2	03 LVL	FR 30 PORT	10	20	26.33	6.5
			6	26		
No 3	04 LVL	FR 76.5 STBD	10	20	26.33	6.5
			6	26		
No 4	04 LVL	FR 77 Port	10	20	26.33	6.5
			6	26		

DECK HEIGHTS (Above BL)

01 Level	22.800 METERS
Main Deck (At CL)	18.700 METERS
Main Deck (At Side)	18.550 METERS
2 nd Deck	14.450 METERS
3 rd Deck	10.350 METERS
4 th Deck	6.175 METERS
Tanktop	2.000 METERS

REGISTERED TONNAGES

	<u>GROSS</u>	<u>NET</u>
International Tonnage Certificate (ITC)	43,758	13,127
PANAMA		41,623
SUEZ	46,286	37,260

CLASS INFORMATION

Registry Number: CG1074514
ABS Number: 12216547
IMO Number: 9593115

Class: ABS *A1, Ice Class C0, (E), *AMS, *ACCU, *APS, NIBS, R1, VEC, DLA

TABLE OF PRINCIPAL CHARACTERISTICS

COMPLEMENT

	<u>Naval</u>	<u>Civilian</u>	<u>Total</u>
Officers	11	20	31
CPO's	4	21	25
Civilian Crew	N/A	82	82
Naval Enlisted	34	N/A	34
Subtotal	49	123	172
Spare Officers			5
Spare CPO's			3
Spare Crew			17
Total Accommodations			197

REFERENCES

- | | <u>MSC DOCUMENT NUMBER</u> |
|---|--|
| 1) Stability Report | 835-7488870 Rev G |
| 2) General Arrangement (T-AKE 13) | 802-7488866 Rev U |
| 3) Molded Lines, Control Surfaces, and Appendages | 801-7488864 Rev C |
| 4) Deck Loading Capacity Drawing | 802-7488904 Rev B |
| 5) Table of Offsets | 801-7488863 Rev D |
| 6) Capacity Plan (T-AKE 13) | 801-8499127 Rev - |
| 7) Characteristics of Hull Form (Incl. Hydrostatic Tables) | 801-7488869 |
| | (NAVSE Dwg. 471-341-7012 Rev F - Appendix A) |
| | |
| (1) Note on Light Ship origin | |
| Lightship weight and CGs are based on Deadweight Survey for USNS MEDGAR EVERS conducted on 03 March, 2013 at General Dynamics NASSCO in San Diego, California. The vessel is not fitted with permanent ballast. | |
| | |
| (2) Note: VCG is based on Incline Experiment for USNS CARL BRASHEAR (T-AKE 7) | |

INSTRUCTIONS

OBJECTIVE

1. These instructions have been prepared as an aid to operating personnel using this Trim and Stability Booklet to determine the vessel's operating metacentric height (corrected $GM_{AVAILABLE}$), trim, and drafts for any condition of loading or operation.
2. It shall be the Master's responsibility to maintain the vessel in a satisfactory stability condition at all times so as to meet the stability requirements documented in this booklet.
 - USCG Stability Requirement per 46 CFR part 170
 - One Compartment Damage Criteria
 - Intact Stability Criteria

GENERAL NOTES

1. Vertical centers and measurements (VCG, KM, etc.) are measured in meters above baseline. Baseline is the molded baseline, top of keel. Longitudinal centers and measurements (LCG, LCB, etc.) are measured in meters aft of the forward perpendicular (Frame 0) Transverse centers and measurements (TCG, etc.) are measured in meters off centerline with positive values (+) to PORT and negative values (-) to STBD.
2. Drafts calculated in this book are to the bottom of keel. Bottom of keel is 29.5 mm below baseline.
3. Drafts as read from marks are to the bottom of the keel.
4. Trim by the stern is positive.
5. Port heel is positive.
6. All tons used throughout this booklet are metric tons (MTON/TONNE) of 1,000 KG.
7. No fixed ballast or other such weights shall be added, removed, altered, and/or relocated without the authorization and supervision of the cognizant Officer In Charge, Marine Inspection.
8. A stability program is provided with this booklet. This program may be used to rapidly evaluate loading conditions. The program is not a replacement for, and shall never be used separately from, the instructions in this booklet. Results from the program should be compared to longhand calculations to confirm the program's accuracy.
9. The sample loading conditions presented in this booklet represent typical voyage conditions the vessel may encounter. These conditions are not intended to limit the operation of the vessel and do not supersede nor augment the loading restrictions presented in the instructions of this booklet.

STABILITY REQUIREMENTS

See sheet 22 and 23 for Required GM data and curve.

- USCG Stability Requirement per 46 CFR part 170
- One Compartment Damage Criteria
The minimum required GM curve is controlled by one-compartment damage criteria from Appendix H of T-AKE system requirements.

INSTRUCTIONS (CONT.)

- Intact Stability Criteria
Because of the vessel's size, crane capacity, and expected operational parameters, the vessel will comply with the following intact stability criteria so long as the vessel is operated in accordance with the required GM curve:
 - SOLAS Probabilistic Damage (SOLAS Chapter II-1, Part B-1)
 - USCG Weather Criterion (46 CFR 170.170)
 - USCG Lifting Rules (46 CFR 173.005)
 - USCG Towline Pull Criterion (46 CFR 173.095)
 - IMO General Intact Stability Criteria (IMO Resolution A.749, Part 3.1)
 - IMO Severe Wind and Rolling Criterion (IMO Resolution A.749, Part 3.2)

OPERATING INSTRUCTIONS

1. Any openings that could allow water to enter into the hull or deckhouse should be kept closed when rough weather or sea conditions exist or are anticipated.
2. Deck freeing ports shall be maintained operable and completely unobstructed at all times.
3. The Master shall make every effort to determine the cause of any list of the vessel before taking corrective action.
4. Bilges shall be kept pumped to a minimum at all times.
5. Full tank vertical centers of gravity (VCGs) shall be used for all tanks in longhand calculations, even if the tanks are slack.
6. RESTRICTIONS:
 - Draft Restrictions:
 - Load Line maximum draft is 9.78 meters.
 - Minimum waterline is 6.78 meters when operating in ice.
 - Trim and List Restrictions:
 - The trim shall never exceed 0.15 meters by the bow
 - Through the operating range, the vessel can trim up to 2 meters aft.
 - At mean drafts less than or equal to 9.43 meters, the vessel can trim up to 3 meters aft.
 - At mean drafts less than or equal to 8.83 meters, the vessel can trim up to 4 meters aft.
 - Maximum list is 0.5 degrees port or starboard.
 - Cargo Hold Loading Restrictions:
 - At mean drafts greater than 9.03 meters, Hold 1 must be at least 25% full by volume
 - At mean drafts greater than 9.43 meters, Hold 1 must be at least 35% full by volume
 - Fuel Filling Restrictions:
 - At mean drafts greater than 9.0 meters, fuel oil tank 6-62-4 must be 95% full
 - At mean drafts greater than 9.6 meters, fuel oil tanks 6-62-4 and 6-66-2 must both be 95% full.

INSTRUCTIONS (CONT.)

- o Calculations shall be performed to assure that adequate trim and stability is maintained for the entire fueling evolution. These calculations should be performed prior to the start of fueling to identify any unacceptable conditions.
7. In order to maintain stability, care must be taken to ensure that the ship's available GM is larger than the required GM. The required GM for a given draft can be found using the GM curve on Sheet 22.

SLIDING WATERTIGHT DOORS:

- Watertight Cargo Doors:
There are three (3) hydraulic operated watertight cargo doors. Two provide access on Second Deck between Cargo Hold No. 5 (2-75-0) and Cargo Hold No. 6 (2-79-0). The third provides access on Second Deck between Cargo Hold No. 4 (2-66-01) and Cargo Hold No. 5 (2-75-0). The watertight cargo doors are normally closed when the vessel is underway, effectively making each hold watertight to prevent progressive flooding.

The watertight cargo doors can be opened and closed locally by operating the electrical local control switches located on each side of the bulkhead. If there is power loss, the doors can be opened and closed using the local manual hand pumps located on each side of the bulkhead.

The watertight cargo doors have position indication electrically from the following remote stations: the DCC station located on the bridge, the EOS Station (3-66-01), the DC Locker No. 1 (1-28-1), and the Fire Fighting Station located in Passage (2-67-2). A Red light indicates the door is in the fully open position. A Green light indicates that the door is fully closed and dogged. Flashing Red indicates the door is transitioning, (not fully open or fully closed).

- Watertight Personnel Doors:
There are seven (7) hydraulic operated personnel watertight sliding doors located in the machinery spaces. Four are located on the Third Deck providing access through watertight bulkheads at frames 75, 79, and 85. Two are located on the Fourth Deck providing access through watertight bulkheads at frames 75, and 79. One door provides access through the watertight bulkhead at frame 66 on the Tank Top. The doors are normally closed when the vessel is underway, effectively making each bulkhead watertight to prevent progressive flooding.

The watertight personnel doors can be opened and closed locally by operating the electrical local control switches located on each side of the bulkhead. If there is power loss, the doors can be opened and closed using the local manual hand pumps located on each side of the bulkhead. Remote hand pumps are also located in the EOS Station (3-66-01).

There are remote control and indication panels for these door at the following locations: the Navigation Bridge, the EOS Station (3-66-01), the DC Locker No. 1 (1-28-1), and the Fire Fighting Station located in Passage (2-67-2).

STABILITY SOFTWARE

1. The stability software for this ship is CargoMax® created by Herbert-ABS Software Solutions, LLC. Only CargoMax® Version 2.01 with [USNS MEDGAR EVERS] dated 17 May 2016 shall be used with this T&S Booklet. To check the Version and [Database / Ship Model] date go to the "Help" menu → click "About CargoMax".

INSTRUCTIONS (CONT.)

2. Before running a stability calculation, verify the version of CargoMax® matches the version listed in paragraph 1. If you do not have the matching version of CargoMax® onboard, contact the MSC Headquarters' Naval Architecture Branch (MSC Code N721).
3. CargoMax® uses "AS-FILLED" VCG and/or VMFS values for stability calculations. Therefore longhand calculation results may be slightly different and more conservative than CargoMax® results.
4. To validate CargoMax® is working correctly choose at least one sample condition to input into CargoMax® from the Appendices.
 - a. If sample load case files (*.LC2) are not included with CargoMax® then copy tank / cargo loads from the printed T&S Book and input them by hand.
 - b. The outputs from the load condition entered into CargoMax® must match the sample load cases. Small deviations associated with calculation rounding or abridged input data are acceptable.
5. If there is a significant discrepancy between the longhand calculation results and CargoMax® results then the longhand calculation shall take precedence. Report significant discrepancies to the MSC Headquarters' Naval Architecture Branch (MSC Code N721).
6. Instructions for stability software installation are found at the back of the T&S booklet.

LIQUID LOADS

1. Tank pairs should be filled or consumed one pair at a time to avoid undesirable list and free surface. However, simultaneous filling of multiple tank pairs is acceptable provided vessel stays within the prescribed trim and stability requirements.
2. For each type of liquid onboard, excluding service tanks, overflow tanks, lube oil, and potable water, not more than one center tank or one pair of wing tanks should be slack at the same time.
3. Prior to loading liquids, calculations shall be performed to assure that adequate trim and stability is maintained for the entire fueling evolution.
4. No tank containing petroleum based liquid (fuel, lube oil, JP-5, hydraulic oil, etc.) shall be filled above [95%] of the tank capacity.
5. If filling levels of non-consumable tanks (e.g. seawater ballast tanks) are changed during a voyage, maximum free surface values for the affected tanks shall be applied when doing the longhand calculation.
6. During ballasting, a reduction in the vessel's GM due to slack tank free surface will occur until the tanks are pressed up. This temporary loss of GM is equal to the seawater free surface moment of the tank(s) divided by the vessel's displacement at the time of ballasting. Ballasting should be started as early as possible after departure to avoid insufficient available GM.
7. When seawater ballast must be added during a voyage, prudent operation dictates that it should be added well in advance of drawing fuel. Ballast should be introduced and pressed up prior to drawing fuel to minimize free surface and ensure adequate stability at all times.

INSTRUCTIONS (CONT.)

FREE SURFACE:

1. Non-consumable tanks (seawater ballast) filled to 100% of capacity shall be considered *full*.
2. Consumable tanks containing petroleum based liquids (fuel oil, lube oil, etc.) filled to [95%] of capacity shall be considered *full*.
3. Consumable tanks containing water (potable water, feed water, etc.) filled to 100% of capacity shall be considered *full*.
4. Consumable tanks less than [95%] full shall be considered *slack*.
5. Fuel Oil Service and Potable Water tanks shall be considered slack at all times.
6. The vertical moment of free surface (VMFS) for 100% full non-consumable tanks shall be zero, unless noted otherwise in the instructions.
7. The [95%] VMFS value listed in the tank tables shall be applied to [95%] full consumable tanks, unless noted otherwise in the instructions.
8. The slack VMFS value listed in the tank tables shall be applied to all slack tanks.
9. The VMFS for any empty tank shall be zero, unless noted otherwise in the instructions.
10. Sum the VMFS values for each tank group for the current loading condition. If the total VMFS values for each tank group are less than the minimum VMFS values listed below, the default minimum VMFS values shall be used. If the sum of the VMFS values for the current loading condition are greater, the summed values shall be used:

Fuel Oil	-	3,876 MTon-M
Lube Oil	-	606 MTon-M
Cargo Oil DFM	-	2,421 MTon-M
Cargo Oil JP-5	-	2,363 MTon-M
Fresh Water	-	143 MTon-M
Miscellaneous	-	136 MTon-M

11. In general, tanks required to be ballasted with salt water shall be completely filled as soon as possible and carried pressed up at all times while such ballast is necessary. However, in order to achieve adequate trim or list, it may be necessary to operate the vessel with a minimum number of tanks in the slack condition. This is permissible provided that the adverse free surface effect of these slack tanks does not reduce the vessel's GM to an unacceptable point.

INSTRUCTIONS FOR CALCULATING TRIM AND STABILITY

The following procedure, used in solving the Sample Longhand Calculation (Appendix J1), shall be used to calculate vessel's operating metacentric height (CORRECTED $GM_{AVAILABLE}$), trim, and drafts for any condition of loading.

1. Using Appendix J1 as an example, enter the weight, TCG (where applicable, see sheet 27) and vertical moment of free surface (VMFS) for every tank containing a liquid in Appendix J blank worksheets 2-6. Also enter the weight, VCG, LCG and TCG for any other loads such deck cargo, crew and effects, stores, etc. (see Appendix J1).
2. Calculate the values for the cargo using the Detailed Cargo Loadout Forms, Appendix K. Enter the description, hold/deck location, total weight, VCG, LCG, and TCG values for each piece of cargo and calculate the total values for the deck being loaded.

INSTRUCTIONS (CONT.)

3. Multiply each weight by its VCG, LCG and TCG and enter the product in the vertical moment, longitudinal moment and transverse moment columns respectively.
4. For each category, sum the weights, vertical moments, longitudinal moments, transverse moments and VMFS. Divide the sums of the vertical, longitudinal and transverse moments by the sum of the weight to obtain the resultant VCG, LCG and TCG of each deadweight category. Transfer the resultant weights, centers, moments, and VMFS for each category on worksheets 2-6 to the appropriate category line on worksheet 1.
5. On worksheet 1, sum the weights, vertical, longitudinal and transverse moments and VMFS for each category to obtain the total displacement values. Divide the total vertical, longitudinal and transverse moments by displacement to obtain the resultant ship KG, LCG and TCG respectively.
6. From the tabular hydrostatics on sheets 14-20 at the corresponding displacement, obtain the draft at the longitudinal center of flotation (LCF draft), the height of the transverse metacenter above the baseline (KMt), the longitudinal center of buoyancy (LCB), the longitudinal center of flotation (LCF), and moment to trim one cm (MCT-1cm).
7. From the Required GM Curve on sheet 22 at the corresponding draft and trim, obtain the required GM (GM_{REQUIRED}).
8. Using the formula on worksheet 1, calculate the available GM (GM_{SOLID}).
9. Divide total VMFS by displacement to obtain the change in GM due to free surface (VMFS CORRECTION).
10. Subtract the VMFS CORRECTION from the GM_{SOLID} to get the operating GM (CORRECTED $GM_{\text{AVAILABLE}}$).
11. CORRECTED $GM_{\text{AVAILABLE}}$ must be greater than the GM_{REQUIRED} .
12. Subtract LCB from LCG to obtain trim lever. A positive (+) trim lever results in trim by the stern and a negative (-) trim lever in the trim by the bow.
13. Multiply the trim lever by displacement to obtain trimming moment. Divide the trimming moment by the MCT-1cm and 100 cm per meter to obtain trim in meters.
14. Drafts at the marks may be calculated from the following formulae:
Draft at Forward Marks = Draft at FP + (Trim X 2.348/199.55)
Draft at Aft Marks = Draft at AP - (Trim X 1.000/199.55)
Draft at Stern Marks = Draft at AP + (Trim X 3.700/199.55)
15. "Air Draft" is defined as the vertical distance from the waterline to the highest point on the vessel with the folding radar mast, SOLAS antennas, HF transmit antenna and AM/SW antenna in the stowed positions.

The highest point on the vessel is 60.260m ABL at the TACAN Antenna (from Ref.2, G/A). Antenna or other equipment which exceed air draft limit shall be mounted on hinged or tilting device. (See G/A general notes 13 & 14 for more details.)

The air draft can be calculated from this highest point minus the draft. If the vessel has trim, the air draft can be conservatively estimated as the high point (ABL) minus the least draft along the length (or the minimum of the Fwd/Aft draft). The CargoMax loading program calculates the air draft by considering the draft at the longitudinal location of the high points.

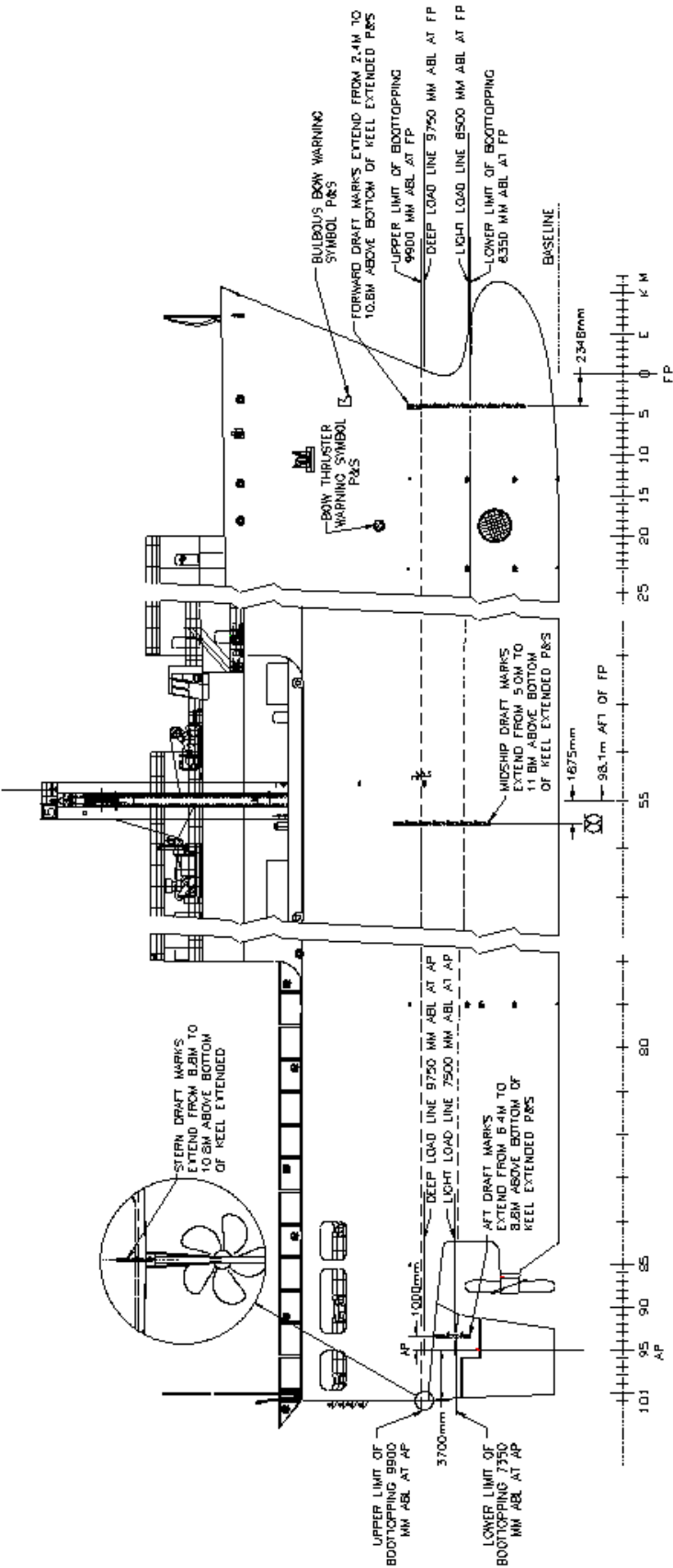
DIAGRAM OF DRAFT MARKS

DRAFT MARKS ARE 100mm VERTICAL PROJECTED HEIGHT BLOCK ARABIC NUMERALS WITH THE BOTTOM OF THE NUMERALS AT 0.2m LEVEL.

TRIM BY THE STERN IS POSITIVE.

DRAFT AT AFT MARKS = DRAFT AT AP - (TRIM X 1.000/199.55) DRAFT AT FWD MARKS = DRAFT AT FP + (TRIM X 2.348/199.55)

DRAFT AT STERN MARKS = DRAFT AT AP + (TRIM X 3.700/199.55)



HYDROSTATIC PROPERTIES

(0.15m Fwd Trim)							
DRAFT (m-Keel)	TOT. DISPL (MT)		KM (m)	TP1 (MT/cm)	MT1 (m-MT/cm)	LCB AFT FP (m)	LCF AFT FP (m)
	SW	FW					
9.9	45,476	44,367	15.302	57.8	778	100.517	111.237
9.8	44,895	43,800	15.315	57.6	771	100.379	111.077
9.7	44,315	43,234	15.329	57.4	762	100.241	110.861
9.6	43,737	42,670	15.342	57.1	751	100.102	110.560
9.5	43,163	42,110	15.358	56.7	738	99.967	110.171
9.4	42,591	41,552	15.378	56.4	726	99.831	109.805
9.3	42,022	40,998	15.402	56.1	714	99.697	109.442
9.2	41,458	40,446	15.426	55.8	703	99.566	109.140
9.1	40,895	39,898	15.449	55.5	691	99.436	108.780
9.0	40,338	39,354	15.471	55.1	677	99.314	108.313
8.9	39,784	38,813	15.503	54.9	671	99.189	108.167
8.8	39,231	38,274	15.533	54.7	662	99.063	107.922
8.7	38,681	37,737	15.567	54.2	647	98.941	107.412
8.6	38,135	37,205	15.604	54.1	642	98.820	107.286
8.5	37,590	36,673	15.637	53.8	635	98.698	107.087
8.4	37,047	36,143	15.661	53.2	611	98.581	106.163
8.3	36,511	35,621	15.718	53.0	607	98.469	106.102
8.2	35,978	35,100	15.774	52.9	603	98.356	106.012
8.1	35,445	34,580	15.822	52.7	596	98.242	105.811
8.0	34,914	34,063	15.867	52.2	580	98.131	105.208
7.9	34,389	33,550	15.928	52.1	577	98.023	105.140
7.8	33,865	33,039	15.987	51.9	573	97.913	105.041
7.7	33,342	32,529	16.052	51.8	569	97.801	104.941
7.6	32,820	32,020	16.114	51.6	564	97.688	104.806
7.5	32,300	31,513	16.178	51.5	559	97.574	104.638
7.4	31,782	31,007	16.232	51.2	553	97.460	104.369
7.3	31,266	30,503	16.277	50.8	541	97.349	103.886
7.2	30,753	30,003	16.344	50.4	526	97.245	103.224
7.1	30,245	29,508	16.440	50.0	515	97.148	102.725
7.0	29,742	29,017	16.534	49.8	510	97.055	102.553
6.9	29,241	28,528	16.630	49.7	508	96.961	102.455
6.8	28,740	28,039	16.727	49.6	506	96.865	102.317
6.7	28,241	27,552	16.826	49.5	503	96.769	102.159
6.6	27,742	27,066	16.922	49.3	500	96.673	101.959
6.5	27,245	26,581	17.024	49.2	497	96.578	101.687
6.4	26,750	26,097	17.136	49.0	494	96.485	101.376
6.3	26,255	25,615	17.256	48.8	490	96.395	101.052
6.2	25,763	25,135	17.385	48.6	486	96.308	100.755
6.1	25,273	24,657	17.525	48.5	483	96.223	100.493
6.0	24,785	24,180	17.655	48.3	481	96.140	100.282

HYDROSTATIC PROPERTIES

(0m Trim)							
DRAFT (m-Keel)	TOT. DISPL (MT)		KM (m)	TP1 (MT/cm)	MT1 (m-MT/cm)	LCB AFT FP (m)	LCF AFT FP (m)
	SW	FW					
9.9	45,477	44,368	15.325	57.9	780	100.777	111.411
9.8	44,895	43,800	15.339	57.7	774	100.640	111.271
9.7	44,315	43,235	15.354	57.5	766	100.502	111.097
9.6	43,738	42,671	15.370	57.2	757	100.363	110.862
9.5	43,163	42,110	15.384	56.9	745	100.225	110.524
9.4	42,592	41,553	15.402	56.6	732	100.091	110.134
9.3	42,023	40,998	15.425	56.2	719	99.956	109.767
9.2	41,458	40,447	15.451	55.9	708	99.823	109.414
9.1	40,896	39,899	15.475	55.6	697	99.693	109.111
9.0	40,337	39,353	15.498	55.3	683	99.565	108.675
8.9	39,784	38,814	15.525	55.0	673	99.444	108.330
8.8	39,231	38,275	15.558	54.8	666	99.319	108.173
8.7	38,681	37,738	15.588	54.4	653	99.195	107.737
8.6	38,135	37,205	15.628	54.1	644	99.075	107.445
8.5	37,591	36,674	15.666	53.9	638	98.954	107.300
8.4	37,049	36,145	15.695	53.7	629	98.833	107.014
8.3	36,511	35,621	15.733	53.1	608	98.721	106.213
8.2	35,978	35,100	15.793	52.9	604	98.609	106.146
8.1	35,445	34,581	15.848	52.8	599	98.496	106.026
8.0	34,915	34,063	15.888	52.4	587	98.383	105.602
7.9	34,389	33,550	15.947	52.1	577	98.277	105.235
7.8	33,865	33,039	16.009	52.0	574	98.169	105.151
7.7	33,342	32,529	16.073	51.8	570	98.059	105.051
7.6	32,820	32,020	16.140	51.7	566	97.948	104.939
7.5	32,301	31,513	16.205	51.5	562	97.836	104.789
7.4	31,782	31,007	16.268	51.3	556	97.724	104.585
7.3	31,267	30,504	16.321	51.1	548	97.612	104.261
7.2	30,754	30,004	16.371	50.6	534	97.505	103.660
7.1	30,246	29,508	16.455	50.2	521	97.407	103.050
7.0	29,742	29,017	16.553	49.8	511	97.314	102.623
6.9	29,241	28,528	16.648	49.8	510	97.224	102.507
6.8	28,740	28,039	16.748	49.6	508	97.132	102.382
6.7	28,241	27,552	16.850	49.5	505	97.039	102.241
6.6	27,742	27,066	16.950	49.4	503	96.946	102.039
6.5	27,245	26,581	17.053	49.3	501	96.855	101.775
6.4	26,750	26,097	17.162	49.1	498	96.765	101.474
6.3	26,256	25,615	17.284	48.9	494	96.679	101.181
6.2	25,763	25,135	17.409	48.7	490	96.594	100.878
6.1	25,273	24,657	17.548	48.6	486	96.513	100.591
6.0	24,785	24,180	17.687	48.4	484	96.434	100.349

HYDROSTATIC PROPERTIES

(0.5m Aft Trim)							
DRAFT (m-Keel)	TOT. DISPL (MT)		KM (m)	TP1 (MT/cm)	MT1 (m-MT/cm)	LCB AFT FP (m)	LCF AFT FP (m)
	SW	FW					
9.9	45,474	44,365	15.387	58.0	784	101.644	111.867
9.8	44,892	43,797	15.414	57.9	780	101.512	111.808
9.7	44,311	43,230	15.434	57.7	774	101.377	111.709
9.6	43,733	42,666	15.453	57.5	767	101.240	111.581
9.5	43,157	42,104	15.474	57.3	760	101.103	111.421
9.4	42,584	41,545	15.493	57.1	751	100.965	111.201
9.3	42,015	40,990	15.511	56.8	740	100.828	110.891
9.2	41,450	40,439	15.535	56.4	727	100.693	110.497
9.1	40,889	39,892	15.559	56.1	715	100.561	110.116
9.0	40,331	39,347	15.589	55.8	703	100.430	109.743
8.9	39,774	38,804	15.620	55.5	693	100.301	109.434
8.8	39,223	38,266	15.644	55.2	680	100.175	109.026
8.7	38,677	37,734	15.672	54.8	667	100.057	108.591
8.6	38,128	37,198	15.711	54.6	661	99.934	108.439
8.5	37,583	36,666	15.747	54.3	651	99.812	108.123
8.4	37,044	36,140	15.790	53.9	638	99.695	107.697
8.3	36,504	35,614	15.835	53.8	632	99.577	107.557
8.2	35,967	35,090	15.873	53.5	625	99.459	107.296
8.1	35,442	34,578	15.912	52.9	603	99.350	106.431
8.0	34,911	34,060	15.978	52.8	600	99.243	106.351
7.9	34,382	33,543	16.040	52.6	595	99.133	106.218
7.8	33,858	33,032	16.083	52.3	586	99.025	105.858
7.7	33,339	32,526	16.146	52.0	574	98.923	105.388
7.6	32,818	32,018	16.216	51.8	571	98.821	105.296
7.5	32,298	31,510	16.288	51.7	567	98.716	105.188
7.4	31,779	31,004	16.364	51.6	563	98.611	105.073
7.3	31,263	30,500	16.438	51.4	559	98.505	104.921
7.2	30,749	29,999	16.508	51.2	554	98.399	104.684
7.1	30,239	29,501	16.570	51.0	547	98.295	104.324
7.0	29,735	29,010	16.626	50.5	535	98.197	103.695
6.9	29,236	28,523	16.715	50.1	522	98.108	103.040
6.8	28,739	28,038	16.816	49.8	514	98.026	102.509
6.7	28,240	27,551	16.924	49.7	514	97.948	102.344
6.6	27,741	27,064	17.035	49.7	513	97.869	102.177
6.5	27,243	26,579	17.150	49.6	511	97.791	102.012
6.4	26,747	26,095	17.262	49.4	509	97.714	101.807
6.3	26,253	25,613	17.378	49.3	506	97.638	101.553
6.2	25,761	25,133	17.501	49.1	502	97.564	101.291
6.1	25,270	24,654	17.635	48.9	498	97.494	101.020
6.0	24,781	24,177	17.773	48.7	492	97.425	100.808

HYDROSTATIC PROPERTIES

(1m Aft Trim)							
DRAFT (m-Keel)	TOT. DISPL (MT)		KM (m)	TP1 (MT/cm)	MT1 (m-MT/cm)	LCB AFT FP (m)	LCF AFT FP (m)
	SW	FW					
9.9	45,466	44,357	15.431	58.0	785	102.512	112.222
9.8	44,882	43,788	15.466	57.9	782	102.386	112.199
9.7	44,301	43,221	15.500	57.8	777	102.257	112.160
9.6	43,721	42,655	15.531	57.7	773	102.125	112.101
9.5	43,144	42,092	15.557	57.5	767	101.992	112.006
9.4	42,570	41,531	15.582	57.3	761	101.857	111.881
9.3	41,998	40,973	15.607	57.1	754	101.721	111.722
9.2	41,429	40,419	15.631	56.9	746	101.584	111.513
9.1	40,865	39,869	15.653	56.6	736	101.449	111.223
9.0	40,307	39,324	15.680	56.3	723	101.315	110.842
8.9	39,753	38,783	15.709	56.0	711	101.186	110.451
8.8	39,201	38,245	15.743	55.7	699	101.056	110.067
8.7	38,651	37,708	15.777	55.4	688	100.930	109.744
8.6	38,106	37,176	15.806	55.0	676	100.806	109.361
8.5	37,569	36,652	15.836	54.6	662	100.690	108.860
8.4	37,024	36,121	15.881	54.4	656	100.571	108.683
8.3	36,484	35,595	15.926	54.2	648	100.452	108.417
8.2	35,955	35,078	15.971	53.8	634	100.339	107.893
8.1	35,418	34,554	16.021	53.6	629	100.225	107.740
8.0	34,886	34,035	16.068	53.4	622	100.111	107.499
7.9	34,375	33,536	16.107	52.8	600	100.008	106.591
7.8	33,846	33,020	16.182	52.7	597	99.905	106.505
7.7	33,320	32,507	16.249	52.5	592	99.801	106.369
7.6	32,800	32,000	16.301	52.2	584	99.698	106.062
7.5	32,291	31,503	16.366	51.8	571	99.603	105.508
7.4	31,773	30,998	16.446	51.7	569	99.507	105.376
7.3	31,256	30,494	16.527	51.6	567	99.411	105.227
7.2	30,741	29,991	16.611	51.5	564	99.314	105.072
7.1	30,229	29,492	16.692	51.4	562	99.217	104.838
7.0	29,720	28,995	16.770	51.2	559	99.122	104.545
6.9	29,215	28,503	16.841	51.0	553	99.031	104.145
6.8	28,719	28,019	16.905	50.6	542	98.947	103.509
6.7	28,229	27,540	17.000	50.2	529	98.873	102.835
6.6	27,738	27,061	17.110	49.9	521	98.807	102.304
6.5	27,240	26,576	17.231	49.8	519	98.744	102.153
6.4	26,743	26,090	17.356	49.7	517	98.680	102.020
6.3	26,247	25,607	17.485	49.5	515	98.618	101.869
6.2	25,751	25,123	17.608	49.4	510	98.555	101.771
6.1	25,259	24,643	17.735	49.2	506	98.493	101.593
6.0	24,770	24,166	17.870	49.0	501	98.433	101.373

HYDROSTATIC PROPERTIES

(2m Aft Trim)							
DRAFT (m-Keel)	TOT. DISPL (MT)		KM (m)	TP1 (MT/cm)	MT1 (m-MT/cm)	LCB AFT FP (m)	LCF AFT FP (m)
	SW	FW					
9.9	45,438	44,330	15.506	58.1	785	104.248	112.817
9.8	44,855	43,761	15.549	58.0	782	104.136	112.814
9.7	44,272	43,192	15.591	57.9	779	104.021	112.804
9.6	43,691	42,625	15.636	57.8	776	103.904	112.792
9.5	43,111	42,059	15.680	57.7	772	103.784	112.769
9.4	42,532	41,495	15.725	57.6	768	103.661	112.739
9.3	41,956	40,932	15.769	57.4	764	103.536	112.701
9.2	41,382	40,372	15.809	57.3	760	103.409	112.636
9.1	40,810	39,815	15.847	57.2	755	103.280	112.548
9.0	40,242	39,261	15.883	57.0	750	103.149	112.427
8.9	39,678	38,710	15.919	56.8	744	103.018	112.269
8.8	39,118	38,164	15.953	56.6	737	102.886	112.066
8.7	38,564	37,624	15.987	56.4	728	102.756	111.795
8.6	38,018	37,091	16.022	56.1	718	102.628	111.440
8.5	37,479	36,565	16.059	55.8	705	102.505	111.013
8.4	36,942	36,041	16.102	55.4	694	102.382	110.597
8.3	36,407	35,519	16.144	55.1	682	102.264	110.195
8.2	35,873	34,998	16.184	54.8	672	102.148	109.831
8.1	35,354	34,491	16.223	54.4	657	102.038	109.268
8.0	34,823	33,974	16.275	54.2	651	101.934	108.992
7.9	34,292	33,456	16.336	54.0	645	101.825	108.741
7.8	33,784	32,960	16.389	53.6	631	101.725	108.101
7.7	33,257	32,446	16.457	53.5	628	101.625	107.881
7.6	32,735	31,937	16.522	53.3	625	101.527	107.586
7.5	32,255	31,469	16.564	52.7	604	101.441	106.541
7.4	31,733	30,959	16.652	52.6	602	101.358	106.383
7.3	31,214	30,453	16.734	52.5	600	101.275	106.189
7.2	30,702	29,954	16.805	52.3	595	101.194	105.889
7.1	30,215	29,478	16.876	51.9	582	101.124	105.179
7.0	29,700	28,976	16.974	51.8	580	101.054	105.040
6.9	29,187	28,475	17.075	51.6	577	100.984	104.893
6.8	28,676	27,977	17.182	51.5	575	100.915	104.733
6.7	28,164	27,477	17.287	51.3	570	100.846	104.610
6.6	27,658	26,984	17.389	51.1	564	100.778	104.407
6.5	27,161	26,498	17.480	50.9	557	100.713	104.089
6.4	26,679	26,028	17.558	50.5	545	100.656	103.522
6.3	26,203	25,564	17.667	50.0	531	100.609	102.903
6.2	25,726	25,098	17.797	49.7	521	100.571	102.407
6.1	25,234	24,618	17.944	49.5	518	100.536	102.260
6.0	24,740	24,137	18.094	49.4	515	100.502	102.159

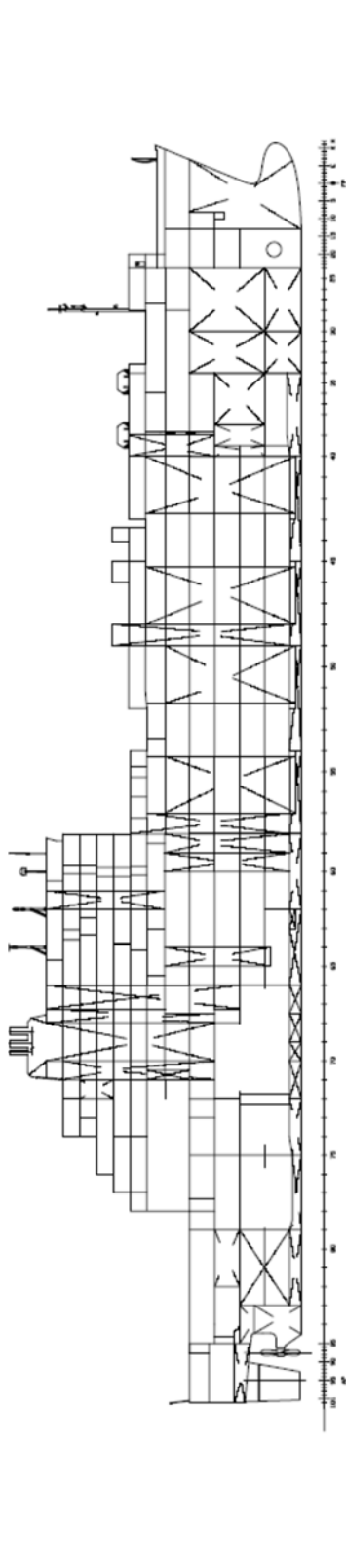
HYDROSTATIC PROPERTIES

(3m Aft Trim)							
DRAFT (m-Keel)	TOT. DISPL (MT)		KM (m)	TP1 (MT/cm)	MT1 (m-MT/cm)	LCB AFT FP (m)	LCF AFT FP (m)
	SW	FW					
9.9	-	-	-	-	-	-	-
9.8	-	-	-	-	-	-	-
9.7	-	-	-	-	-	-	-
9.6	-	-	-	-	-	-	-
9.5	-	-	-	-	-	-	-
9.4	-	-	-	-	-	-	-
9.3	-	-	-	-	-	-	-
9.2	41,337	40,329	15.932	57.5	765	105.257	113.244
9.1	40,763	39,768	15.988	57.4	762	105.145	113.203
9.0	40,190	39,210	16.043	57.3	759	105.030	113.147
8.9	39,619	38,653	16.098	57.2	756	104.913	113.088
8.8	39,051	38,099	16.151	57.0	752	104.794	113.006
8.7	38,486	37,548	16.202	56.9	748	104.673	112.907
8.6	37,926	37,001	16.252	56.8	744	104.552	112.768
8.5	37,370	36,459	16.301	56.6	739	104.430	112.586
8.4	36,820	35,922	16.347	56.5	734	104.310	112.360
8.3	36,279	35,394	16.393	56.3	729	104.191	112.050
8.2	35,747	34,875	16.438	56.1	722	104.076	111.652
8.1	35,224	34,364	16.487	55.8	714	103.966	111.173
8.0	34,705	33,859	16.539	55.5	703	103.863	110.678
7.9	34,188	33,354	16.592	55.2	693	103.762	110.185
7.8	33,670	32,849	16.648	54.9	685	103.666	109.751
7.7	33,162	32,353	16.697	54.6	674	103.576	109.219
7.6	32,657	31,860	16.758	54.3	663	103.496	108.711
7.5	32,130	31,346	16.836	54.1	659	103.412	108.483
7.4	31,626	30,854	16.902	53.8	648	103.333	107.994
7.3	31,117	30,358	16.985	53.5	640	103.260	107.614
7.2	30,591	29,845	17.070	53.3	633	103.186	107.464
7.1	30,093	29,359	17.134	52.9	621	103.117	106.994
7.0	29,614	28,892	17.224	52.5	606	103.063	106.350
6.9	29,098	28,388	17.326	52.3	602	103.005	106.202
6.8	28,588	27,891	17.420	52.1	596	102.949	105.987
6.7	28,116	27,430	17.504	51.7	582	102.902	105.336
6.6	27,609	26,935	17.626	51.5	578	102.859	105.171
6.5	27,098	26,437	17.752	51.4	575	102.816	105.067
6.4	26,590	25,942	17.882	51.3	571	102.774	104.947
6.3	26,087	25,450	18.009	51.1	566	102.733	104.797
6.2	25,588	24,964	18.131	50.9	561	102.693	104.596
6.1	25,101	24,488	18.242	50.6	553	102.659	104.286
6.0	24,633	24,033	18.341	50.2	541	102.633	103.747

HYDROSTATIC PROPERTIES

(4m Aft Trim)							
DRAFT (m-Keel)	TOT. DISPL (MT)		KM (m)	TP1 (MT/cm)	MT1 (m-MT/cm)	LCB AFT FP (m)	LCF AFT FP (m)
	SW	FW					
9.9	-	-	-	-	-	-	-
9.8	-	-	-	-	-	-	-
9.7	-	-	-	-	-	-	-
9.6	-	-	-	-	-	-	-
9.5	-	-	-	-	-	-	-
9.4	-	-	-	-	-	-	-
9.3	-	-	-	-	-	-	-
9.2	-	-	-	-	-	-	-
9.1	-	-	-	-	-	-	-
9.0	-	-	-	-	-	-	-
8.9	-	-	-	-	-	-	-
8.8	39,019	38,067	16.291	57.3	766	106.743	113.334
8.7	38,456	37,518	16.360	57.3	766	106.647	113.210
8.6	37,893	36,969	16.428	57.2	765	106.550	113.092
8.5	37,331	36,421	16.497	57.1	763	106.452	112.971
8.4	36,773	35,876	16.567	57.1	763	106.353	112.824
8.3	36,217	35,334	16.634	57.0	761	106.254	112.665
8.2	35,662	34,792	16.702	56.9	758	106.155	112.508
8.1	35,111	34,254	16.766	56.7	754	106.056	112.329
8.0	34,563	33,720	16.828	56.6	749	105.957	112.123
7.9	34,023	33,193	16.891	56.4	744	105.861	111.879
7.8	33,484	32,668	16.950	56.1	734	105.765	111.627
7.7	32,961	32,157	17.012	55.8	724	105.675	111.267
7.6	32,449	31,657	17.077	55.5	711	105.589	110.832
7.5	31,943	31,164	17.142	55.1	699	105.510	110.366
7.4	31,438	30,671	17.213	54.8	688	105.435	109.924
7.3	30,933	30,179	17.283	54.5	677	105.364	109.505
7.2	30,455	29,712	17.355	54.1	662	105.303	108.873
7.1	29,932	29,202	17.448	53.9	657	105.246	108.696
7.0	29,422	28,704	17.539	53.6	648	105.187	108.399
6.9	28,939	28,234	17.634	53.3	635	105.139	107.882
6.8	28,422	27,729	17.739	53.1	630	105.090	107.713
6.7	27,923	27,242	17.830	52.8	621	105.045	107.394
6.6	27,480	26,810	17.916	52.2	601	105.016	106.577
6.5	26,969	26,311	18.041	52.1	597	104.988	106.448
6.4	26,465	25,819	18.162	51.9	592	104.961	106.260
6.3	26,003	25,369	18.263	51.5	578	104.942	105.686
6.2	25,511	24,889	18.410	51.2	572	104.930	105.447
6.1	25,006	24,396	18.564	51.1	568	104.921	105.343
6.0	24,505	23,907	18.723	50.9	565	104.913	105.223

TRIM TABLE



EXPLANATION

- 1. The above table shows correction, in mm, to draft (at the perpendiculars) forward and aft, for weight of 100 MT loaded at any location on the vessel.
- 2. The corrections (from a condition of even keel) are computed at two drafts to facilitate interpolation.
- 3. When discharging, reverse the (+) and (-) signs.

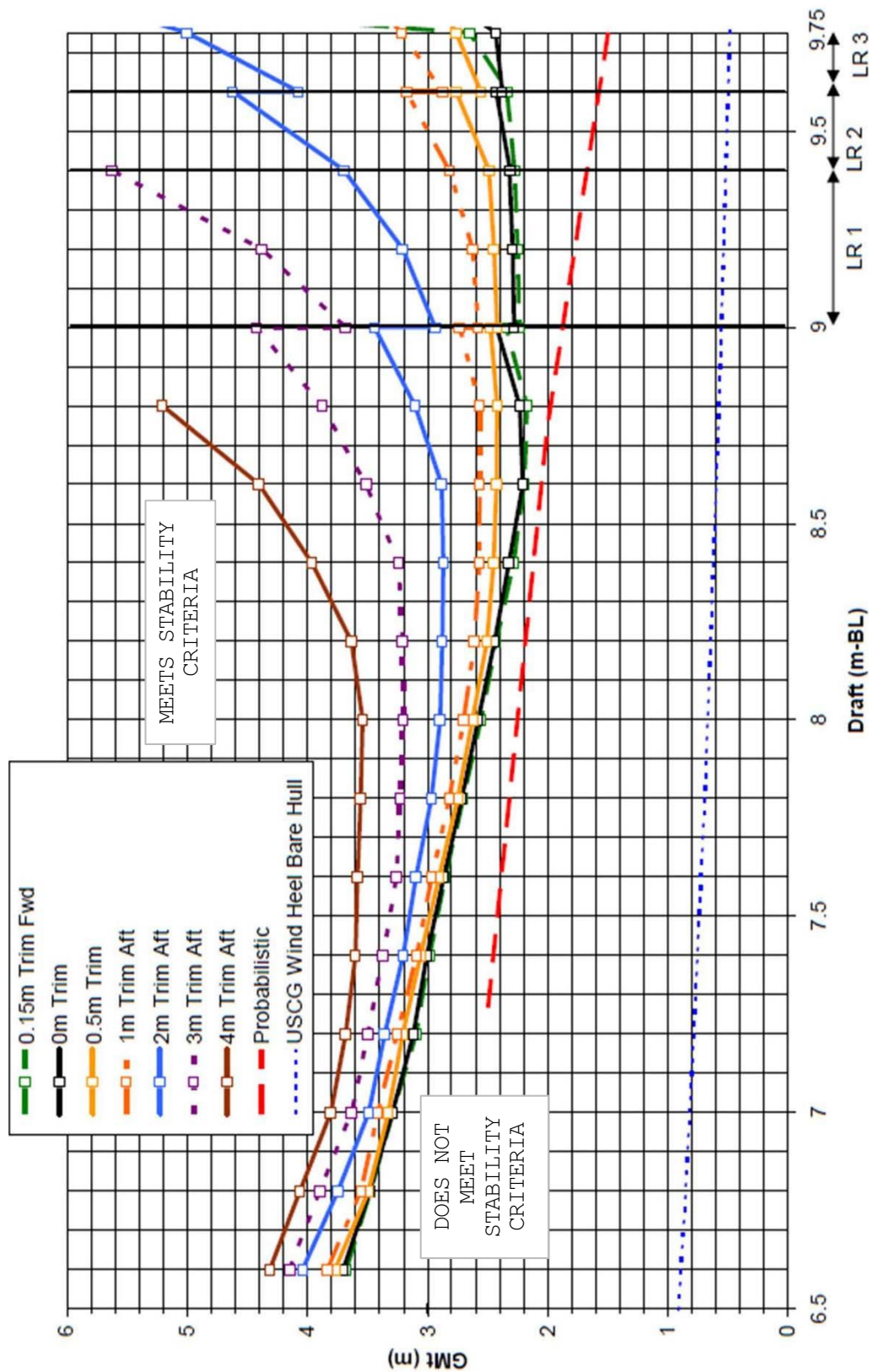
EXAMPLE

Find the new draft, at the perpendiculars, after loading 300 MT at location 50 m aft F.P.

Initial Draft	AFT	FWD
Correction at 7.10 m	8.4 m	8.0 m
Correction at 9.10 m	3x(-31) = -93 mm	3x(73) = 219 mm
Correction at 8.2 m	3x(-16) = -48 mm	3x(68) = 204 mm
Corrected Draft	= -68 mm	= 211 mm
	8.33 m	8.21 m

Note: This table is for reference estimates only; actual calculations should be done using the loading table or the computer program on board the ship.

REQUIRED GM CURVE



Note: Load line maximum molded draft is 9.7505 meters or keel draft is 9.780 meters. Probabilistic and USCG Win2d Heel Bare Hull curves shown above do not govern and not to be used. They are shown for reference only. L.R = Load Restriction. See sheet 23 for L.R 1, 2 and 3. See Operating Instructions on sheet 8 for draft restrictions.

Safe zone: For each trim condition the GMt values above the curve.

Unsafe zone: GMt values below the curve are considered unsafe.

REQUIRED GM TABLE
Minimum Required GM Values (m)

Molded Draft (m)	Keel Draft (m)	Trim							Load Restr.
		0 m	0.5 m	1 m	2 m	3 m	4 m	-0.15 m	
6.6005	6.630	3.701	3.771	3.829	4.041	4.148	4.313	3.675	--
6.7005	6.730	3.591	3.633	3.690	3.894	4.022	4.187	3.576	--
6.8005	6.830	3.481	3.494	3.551	3.746	3.896	4.060	3.476	--
6.9005	6.930	3.387	3.410	3.481	3.618	3.764	3.932	3.382	--
7.0005	7.030	3.292	3.325	3.411	3.489	3.632	3.803	3.287	--
7.1005	7.130	3.205	3.266	3.332	3.423	3.564	3.743	3.193	
7.2005	7.230	3.118	3.206	3.253	3.357	3.496	3.683	3.098	--
7.3005	7.330	3.063	3.131	3.173	3.279	3.432	3.642	3.042	--
7.4005	7.430	3.007	3.056	3.093	3.201	3.368	3.601	2.986	--
7.5005	7.530	2.937	2.980	3.029	3.148	3.314	3.591	2.919	--
7.6005	7.630	2.866	2.904	2.964	3.094	3.260	3.581	2.852	--
7.7005	7.730	2.791	2.828	2.891	3.031	3.244	3.570	2.778	--
7.8005	7.830	2.716	2.752	2.818	2.967	3.227	3.559	2.703	--
7.9005	7.930	2.648	2.690	2.759	2.931	3.215	3.550	2.630	--
8.0005	8.030	2.580	2.627	2.699	2.894	3.202	3.540	2.556	--
8.1005	8.130	2.511	2.568	2.654	2.887	3.204	3.588	2.494	--
8.2005	8.230	2.441	2.508	2.609	2.880	3.205	3.635	2.431	--
8.3005	8.330	2.381	2.480	2.589	2.876	3.224	3.799	2.358	--
8.4005	8.430	2.321	2.452	2.569	2.871	3.243	3.962	2.284	--
8.5005	8.530	2.265	2.439	2.568	2.877	3.377	4.182	2.239	--
8.6005	8.630	2.208	2.425	2.567	2.883	3.511	4.402	2.194	--
8.7005	8.730	2.221	2.423	2.566	2.994	3.695	4.805	2.184	--
8.8005	8.830	2.234	2.420	2.565	3.105	3.878	5.207	2.173	--
8.9005	8.930	2.331	2.449	2.649	3.273	4.152	--	2.260	--
9.0005	9.030	2.427	2.477	2.733	3.440	4.425	--	2.346	--
		2.279	2.422	2.581	2.940	3.681	--	2.236	1
9.1005	9.130	2.286	2.434	2.603	3.073	4.031	--	2.244	1
9.2005	9.230	2.293	2.445	2.625	3.205	4.380	--	2.252	1
9.3005	9.330	2.306	2.468	2.722	3.452	5.005	--	2.265	1
9.4005	9.430	2.318	2.491	2.819	3.698	5.630	--	2.277	1
		2.316	2.491	2.819	3.698	--	--	2.277	2
9.5005	9.530	2.372	2.627	2.997	4.159	--	--	2.309	2
9.6005	9.630	2.428	2.763	3.175	4.619	--	--	2.340	2
		2.378	2.556	2.874	4.076	--	--	2.331	3
9.7005	9.730	2.406	2.660	3.045	4.539	--	--	2.490	3
9.7505	9.780	2.434	2.763	3.216	5.001	--	--	2.648	3
9.8005	9.830	2.665	2.864	3.363	5.538	--	--	4.784	3

Notes: (A) Load line maximum molded draft is 9.7505 meters or keel draft is 9.780 meters.
(B) Minimum required GM for intermediate trim can be obtained either by linear interpolation or using the listed value for larger trim.
(C) Minimum Required GM Value for intermediate draft can be obtained by linear interpolation.
(D) Load Restrictions (LR) 1, 2 and 3 are described below.

Load Restrictions:

1. At mean keel drafts greater than 9.03 m, Hold 1 must be at least 25% full by volume and Fuel Oil Tanks 6-62-4 & 6-62-1 must be 95% full.
2. At mean keel drafts greater than 9.43 m, Hold 1 must be at least 35% full by volume and Fuel Oil Tanks 6-62-4 & 6-62-1 must be 95% full.
3. At mean keel drafts greater than 9.63 m, Hold 1 must be at least 35% full by volume and Fuel Oil Tanks 6-62-4 & 6-62-1 and 6-66-2 & 6-66-1 must be 95% full.

GAIN IN GM DUE TO BALLASTING

Load Case VCG (Lowest value is most conservative) = 12.01 m

WB Tank	100% Full MT	VCG m-BL	Vessel Displacement (MT)									
			30,000	31,000	32,000	33,000	34,000	35,000	36,000	37,000		
FORE PEAK TANK	685	9.774	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04		
SWB1S	1401	9.440	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10		
SWB1P	1401	9.440	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10		
SWB2S	348	10.409	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
SWB2P	298	10.389	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01		
SWB3S	209	1.075	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.06		
SWB3P	209	1.075	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.06		
SWB4S	494	2.219	0.16	0.15	0.15	0.14	0.14	0.14	0.13	0.13		
SWB4C	210	0.928	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.06		
SWB4P	494	2.219	0.16	0.15	0.15	0.14	0.14	0.14	0.13	0.13		
SWB5S	181	9.282	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01		
SWB5P	181	9.282	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01		

WB Tank	100% Full MT	VCG m-BL	Vessel Displacement (MT)									
			38,000	39,000	40,000	41,000	42,000	43,000	44,000	45,000		
FORE PEAK TANK	685	9.774	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03		
SWB1S	1401	9.440	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08		
SWB1P	1401	9.440	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08		
SWB2S	348	10.409	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
SWB2P	298	10.389	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
SWB3S	209	1.075	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05		
SWB3P	209	1.075	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05		
SWB4S	494	2.219	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.11		
SWB4C	210	0.928	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05		
SWB4P	494	2.219	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.11		
SWB5S	181	9.282	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
SWB5P	181	9.282	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		

Note:

This table is for reference and estimation purposes only. Actual calculations should be performed using the loading table or the shipboard loading program.

TANK CAPACITIES AND FREE SURFACE CORRECTIONS

FUEL OIL											
Assumes at 0.8336 MTON/M3											
TANK DESCRIPTION	FRAMES	VOL [M3]		WT [MTON]		95% CENTERS			VMFS [M-MTON]		
		100%	95%	100%	95%	LCG [M-FP]	VCG [M-BL]	TCG [M P+]	SLACK	95%	
SHIPS FUEL 1S 6-34-1	34-40	230.8	219.3	192.4	182.8	38.986	1.235	-3.741	651	341	
SHIPS FUEL 1P 6-34-2	34-40	227.4	216.0	189.6	180.1	39.014	1.226	3.702	638	344	
SHIPS FUEL 2S 6-40-1	40-45	350.2	332.7	291.9	277.3	55.098	1.003	-5.628	1938	742	
SHIPS FUEL 2P 6-40-2	40-45	350.2	332.7	291.9	277.3	55.098	1.003	5.628	1938	742	
SHIPS FUEL 3S 6-49-1	49-54	361.7	343.7	301.5	286.5	85.998	0.988	-9.567	1779	719	
SHIPS FUEL 3C 6-49-01	49-54	263.4	250.2	219.5	208.6	86.265	0.891	0.000	760	381	
SHIPS FUEL 3P 6-49-2	49-54	361.7	343.7	301.5	286.5	85.998	0.988	9.567	1779	719	
SHIPS FUEL 4S 6-58-1	58-62	250.9	238.4	209.2	198.7	114.765	1.003	-9.417	1240	496	
SHIPS FUEL 4C 6-58-0	58-62	210.2	199.6	175.2	166.4	114.880	0.950	0.000	546	287	
SHIPS FUEL 4P 6-58-2	58-62	250.5	237.9	208.8	198.4	114.822	1.002	9.412	1238	494	
SHIPS FUEL 5S 6-62-1	62-66	279.7	265.7	233.2	221.5	127.149	1.428	-9.876	1084	24	
SHIPS FUEL 5C 6-62-01	62-66	200.3	190.2	166.9	158.6	127.666	0.951	-0.038	542	284	
SHIPS FUEL 5P 6-62-4	62-66	279.7	265.7	233.1	221.5	127.182	1.429	9.869	1083	24	
SHIPS FUEL 6S 6-66-1	66-68	163.0	154.9	135.9	129.1	136.539	2.269	-9.203	952	14	
SHIPS FUEL 6P 6-66-2	66-68	150.8	143.2	125.7	119.4	136.589	1.812	8.051	946	9	
SHIPS FUEL 7 6-72-0	72-75	132.3	125.6	110.3	104.7	156.846	0.961	0.000	378	176	
FUEL SERV TANK S 3-75-3	75-79	300.4	285.3	250.4	237.9	168.348	12.198	-12.958	239	177	
SHIPS FUEL 9 3-79-3	79-82	186.8	177.4	155.7	147.9	179.229	11.863	-12.730	183	151	
FUEL SETT TANK 4-79-6	79-81.5	224.3	213.0	186.9	177.6	178.260	11.978	12.936	157	150	
FUEL SERV TANK P 3-81.5-2	81.5-85	279.8	265.8	233.2	221.6	187.952	12.398	12.669	209	162	
FUEL OVRFLW TANK 3-82-1	82-85	244.7	232.5	204.0	193.8	188.645	12.408	-12.663	183	138	
TOTAL		5,298.5	5,033.6	4416.8	4196.0	114.401	3.727	-0.613	18462	6571	

Minimum Required VMFS 3876

LUBE OIL											
Assumes at 0.9211 MTON/M3											
TANK DESCRIPTION	FRAMES	VOL [M3]		WT [MTON]		95% CENTERS			VMFS [M-MTON]		
		100%	95%	100%	95%	LCG [M-FP]	VCG [M-BL]	TCG [M P+]	SLACK	95%	
LO STORAGE TK 1 3-82.5-1	82.5-85	126.2	119.9	116.3	110.5	189.358	12.298	-1.955	37	32	
LO STORAGE TK 2 3-82.5-3	82.5-85	126.2	119.9	116.3	110.5	189.358	12.298	-5.858	37	32	
LO SETTLING TK 3-73.5-2	73.5-75	26.7	25.3	24.6	23.3	159.772	12.261	13.233	20	6	
LO SUMP 1 6-68-3	68-72	23.7	22.5	21.8	20.7	145.456	2.406	-7.375	5	5	
LO SUMP 2 6-68-1	68-72	25.0	23.7	23.0	21.8	145.774	2.427	-2.837	5	5	
LO SUMP 3 6-68-2	68-72	25.0	23.7	23.0	21.8	145.774	2.427	2.837	5	5	
LO SUMP 4 6-68-4	68-72	23.7	22.5	21.8	20.7	145.456	2.406	7.375	5	5	
LO DRAIN TK 4-79-1	79-80	122.5	116.4	112.9	107.2	176.077	7.649	-8.139	492	273	
TOTAL		499.0	474.1	459.6	436.6	175.983	9.227	-3.267	606	363	

Minimum Required VMFS 606

TANK CAPACITIES AND FREE SURFACE CORRECTIONS (CONT.)

CARGO OIL : DFM			Assumes at 0.8336 MTON/M3								
TANK DESCRIPTION	FRAMES	VOL [M3]		WT [MTON]		95% CENTERS			VMFS [M-MTON]		
		100%	95%	100%	95%	LCG [M-FP]	VCG [M-BL]	TCG [M P+]	SLACK	95%	
CARGO FUEL 1C 4-24-0	24-30	1,144.3	1,087.0	953.8	906.2	20.135	12.967	0.000	1103	1088	
CARGO FUEL 2C 4-30-0	30-34	1,276.0	1,212.2	1063.7	1010.5	28.260	12.627	0.000	2421	2277	
CARGO FUEL 3S 4-34-1	34-39.5	701.0	665.9	584.3	555.1	38.210	10.394	-6.102	572	557	
CARGO FUEL 3C 4-34-0	34-38.5	354.8	337.1	295.8	281.0	35.975	10.113	0.000	76	76	
CARGO FUEL 3P 4-34-2	34-39.5	701.0	665.9	584.3	555.1	38.210	10.394	6.102	572	557	
CF SLOP TANK 4-38.5-0	38.5-39.5	141.9	134.8	118.3	112.4	42.100	10.113	0.000	31	31	
TOTAL		4,318.9	4,102.9	3600.2	3420.2	30.426	11.703	0.000	4775	4586	
Minimum Required VMFS									2421		

CARGO OIL : JP-5			Assumes at 0.8136 MTON/M3								
TANK DESCRIPTION	FRAMES	VOL [M3]		WT [MTON]		95% CENTERS			VMFS [M-MTON]		
		100%	95%	100%	95%	LCG [M-FP]	VCG [M-BL]	TCG [M P+]	SLACK	95%	
CARGO FUEL 1C 4-24-0	24-30	1,144.3	1,087.0	931.0	884.4	20.135	12.967	0.000	1077	1062	
CARGO FUEL 2C 4-30-0	30-34	1,276.0	1,212.2	1038.2	986.3	28.260	12.627	0.000	2363	2222	
CARGO FUEL 3S 4-34-1	34-39.5	701.0	665.9	570.3	541.8	38.210	10.394	-6.102	558	543	
CARGO FUEL 3C 4-34-0	34-38.5	354.8	337.1	288.7	274.2	35.975	10.113	0.000	74	74	
CARGO FUEL 3P 4-34-2	34-39.5	701.0	665.9	570.3	541.8	38.210	10.394	6.102	558	543	
CF SLOP TANK 4-38.5-0	38.5-39.5	141.9	134.8	115.5	109.7	42.100	10.113	0.000	30	30	
TOTAL		4,318.9	4,102.9	3513.8	3338.1	30.426	11.703	0.000	4660	4476	
Minimum Required VMFS									2363		

FRESH WATER				Assumes at 1.0000 MTON/M3					
TANK DESCRIPTION	FRAMES	VOL [M3]	WT [MTON]	100% CENTERS			VMFS [M-MTON]		
		100%	100%	LCG [M-FP]	VCG [M-BL]	TCG [M P+]	SLACK	100%	
SHIP POTW Tk A 3-79-1	79-80.5	100.5	100.5	176.895	12.400	-5.155	59	-	
DISTILLED WTR TK 3-79-0	79-82	119.2	119.2	179.250	12.400	0.000	25	-	
CARGO POTW TK A 3-79-2	79-80.5	100.5	100.5	176.895	12.400	5.155	59	-	
SHIP POTW TK F 3-80.5-1	79-82	100.5	100.5	181.605	12.400	-5.155	59	-	
CARGO POTW TK F 3-80.5-2	80.5-82	100.5	100.5	181.605	12.400	5.155	59	-	
TOTAL		521.2	521.2	179.250	12.400	0.000	261	-	
Minimum Required VMFS							143		

SALT WATER BALLAST					Assumes at 1.0250 MTON/M3			
TANK DESCRIPTION		FRAMES	VOL [M3]	WT [MTON]	100% CENTERS			VMFS [M-MTON]
			100%	100%	LCG [M-FP]	VCG [M-BL]	TCG [M P+]	SLACK
FORE PEAK TANK	6-M-0	M-13	668.5	685.2	2.900	9.774	0.000	780
SWB1S	6-24-1	24-34	1,367.1	1401.3	23.345	9.440	-5.198	242
SWB1P	6-24-2	24-34	1,367.1	1401.3	23.345	9.440	5.198	242
SWB2S	4-34-3	34-39.5	339.4	347.9	37.641	10.409	-11.279	96
SWB2P	4-35-2	35-39.5	290.4	297.6	38.515	10.389	11.504	72
SWB3S	6-45-1	45-49	203.7	208.8	70.338	1.075	-9.864	773
SWB3P	6-45-2	45-49	203.7	208.8	70.338	1.075	9.864	773
SWB4S	6-54-1	54-58	481.6	493.6	101.560	2.219	-11.532	1888
SWB4C	6-54-01	54-58	204.8	209.9	101.786	0.928	0.000	748
SWB4P	6-54-2	54-58	481.6	493.6	101.560	2.219	11.532	1888
SWB5S	4-83-1	83-85	176.2	180.6	190.007	9.282	-6.824	1568
SWB5P	4-83-2	83-85	176.2	180.6	190.007	9.282	6.824	1568
TOTAL			5,960.2	6109.2	51.003	7.539	-0.082	10638

TANK CAPACITIES AND FREE SURFACE CORRECTIONS (CONT.)

MISC TANKS												
TANK DESCRIPTION		FRAMES	VOL [M3]		DENSITY MTON/M3	WT [MTON]		100% or 95% CENTERS			VMFS * [M-MTON]	
			100%	95%	-	100%	95%	LCG [M-FP]	VCG [M-BL]	TCG [M P+]	SLACK	95%
AVIATION FUEL	3-82.5-2	82.5-85	-	123.2	0.8136	-	100.2	188.968	12.298	3.881	45	45
JP-5 SERVICE TK	3-84-2	84-85	-	21.2	0.8136	-	17.3	191.810	12.298	6.925	1	1
AVIATION FUEL OVRFW TK	4-79-2	79-81	-	171.7	0.8136	-	139.7	177.939	7.867	8.843	681	394
EDG FUEL SERVICE TK	03-73-1	73-74	-	11.4	0.8336	-	9.5	156.878	30.330	-8.223	3	3
FUEL LEAKAGE TK	6-68.5-0	68.5-69	-	3.5	0.8336	-	2.9	142.748	0.950	0.000	1	1
MCHRY OLY WST (OIL)	5-71-1A	71.5-72	-	20.5	0.9211	-	18.9	151.558	4.671	-12.918	13	12
CARGO HLD OLY WST (OIL)	6-62-2A	62-63	-	4.6	0.9211	-	4.2	123.515	0.940	0.788	1	1
WST OIL TK	6-69-0	69-70	-	14.0	0.9211	-	12.9	144.710	0.950	0.000	3	3
MCHRY OLY WST (WTR) **	5-71-1B	71-71.5	14.2	-	1.0000	14.2	-	150.002	4.642	-12.990	9	-
CARGO HLD OLY WST (WTR) **	6-62-2B	62-63	4.9	-	1.0000	4.9	-	121.945	1.000	0.788	1	-
FW DRAIN TK **	6-70-0	70-72	38.7	-	1.0000	38.7	-	149.419	1.001	0.000	16	-
FOOD WASTE TK **	3-77-2	77-77.5	7.8	-	1.0250	8.0	-	169.502	13.416	10.345	1	-
GRAV WTR COLL TK **	3-77-4	77-79	97.2	-	1.0250	99.7	-	171.079	12.416	14.045	40	-
MDG CLNG TK **	6-68-0	68-68.5	2.5	-	1.0250	2.6	-	140.807	1.500	0.000	1	-
VCHT TK **	3-75-6	75-77	5.3	-	1.0250	5.4	-	167.215	11.777	12.763	1	-
FWD FOAM TK	5-44-2	-	-	0.6	1.0000	-	0.6	50.898	15.449	11.854	-	-
AFT FOAM TK	1-65-1	-	-	1.4	1.0000	-	1.4	131.950	19.916	-13.314	-	-
TOTAL			542.7		-	481.1		171.829	9.351	5.789	817	460
Minimum Required VMFS											136	

* Free surface moment is zero if tank is 100% full or completely empty
** Capacity and CGs listed is 100%.

TANK VARIABLE TCG TABLE [M P+]

TANK DESCRIPTION		TANK FILL LEVEL [%] FULL									
		5	15	25	35	45	55	65	75	85	95
SHIPS FUEL 5S	6-62-1	-7.080	-7.676	-8.011	-8.252	-8.441	-8.595	-8.726	-8.838	-9.360	-9.876
SHIPS FUEL 5P	6-62-4	7.080	7.676	8.010	8.252	8.437	8.589	8.718	8.830	9.352	9.869
SHIPS FUEL 6S	6-66-1	-3.344	-4.374	-4.991	-5.415	-5.755	-6.037	-6.871	-7.834	-8.593	-9.203
SHIPS FUEL 6P	6-66-2	3.532	4.336	4.826	5.205	5.512	5.738	5.936	6.414	7.311	8.051

TANK DESCRIPTION		TANK FILL LEVEL [%] FULL									
		10	20	30	40	50	60	70	80	90	100
SWB1S	6-24-1	-2.129	-2.463	-2.672	-2.848	-3.430	-3.984	-4.532	-5.056	-5.517	-5.918
SWB1P	6-24-2	2.129	2.463	2.672	2.848	3.430	3.984	4.532	5.056	5.517	5.918
SWB4S	6-54-1	-9.073	-9.292	-9.436	-9.535	-9.616	-9.684	-10.279	-10.801	-11.207	-11.532
SWB4P	6-54-2	9.073	9.292	9.436	9.535	9.616	9.684	10.279	10.801	11.207	11.532

For fill levels intermediate of those listed, use linear interpolation to obtain the correct TCG

CARGO/STORAGE SPACES

DESIGN LOADS FOR CARGO DECKS			
LOCATION		DESIGN LOAD [MT/M2]	DUNNAGE [KG/M2]
01 LEVEL	FWD FR. 48	3.2	50
MAIN DECK	ALL OF DECK	3.2	50
SECOND DECK	CARGO HOLDS	3.2	100
THIRD DECK	CARGO HOLDS	3.2	100
FOURTH DECK	CARGO HOLDS	5.2	100
TANK TOP	CARGO HOLDS	5.2	50

CARGO HOLD 1									
COMPARTMENT		DECK	AREA [M2]	VOLUME [M3]	CENTERS			LONGITUDINAL BOUNDS	
					LCG [M-FP]	VCG [M-BL]	TCG [M P+]	AFT [M-FP]	FWD [M-FP]
5-40-01	H1-TANK TOP	Tanktop	585.0	1784.0	62.381	3.525	0.000	77.100	45.600
4-40-01	H1-4TH DECK	4th Dk	756.0	2306.0	61.792	7.700	0.000	77.100	45.600
3-40-01	H1-3RD DECK	3rd Dk	778.0	2373.0	61.491	11.875	0.000	77.100	45.600
2-40-01	H1-2ND DECK	2nd Dk	559.0	1705.0	61.237	15.975	0.003	77.100	45.600

CARGO HOLD 2									
COMPARTMENT		DECK	AREA [M ²]	VOLUME [M ³]	CENTERS			LONGITUDINAL BOUNDS	
					LCG [M-FP]	VCG [M-BL]	TCG [M P+]	AFT [M-FP]	FWD [M-FP]
5-49-01	H2-TANK TOP	Tanktop	679.0	2071.0	91.850	3.525	0.000	108.600	77.100
4-49-01	H2-4TH DECK	4th Dk	796.0	2425.0	92.766	7.700	-0.001	108.600	77.100
3-49-01	H2-3RD DECK	3rd Dk	791.0	2413.0	92.767	11.875	-0.002	108.600	77.100
2-49-01	H2-2ND DECK	2nd Dk	549.0	1674.0	92.723	15.975	0.008	108.600	77.100

CARGO HOLD 3									
COMPARTMENT		DECK	AREA [M2]	VOLUME [M3]	CENTERS			LONGITUDINAL BOUNDS	
					LCG [M-FP]	VCG [M-BL]	TCG [M P+]	AFT [M-FP]	FWD [M-FP]
4-58-02	H3-4TH DECK	4th Dk	478.0	1458.0	121.147	7.700	-0.001	132.235	108.600
3-58-02	H3-3RD DECK	3rd Dk	488.0	1488.0	121.161	11.875	0.000	132.235	108.600
2-58-02	H3-2ND DECK	2nd Dk	325.0	991.0	121.380	15.975	0.042	132.235	108.600

CARGO/STORAGE SPACES

2nd DECK AFT SPECIALTY									
COMPARTMENT		DECK	AREA [M2]	VOLUME [M3]	CENTERS			LONGITUDINAL BOUNDS	
					LCG [M-FP]	VCG [M-BL]	TCG [M P+]	AFT [M-FP]	FWD [M-FP]
2-66-01	SPARE PARTS HOLD 4	2nd DECK	467.0	1915.0	152.700	15.975	-1.694	161.980	133.720
2-75-0	SPARE PARTS HOLD 5		260.0	1066.0	168.007	15.975	-0.341	174.540	161.980
2-79-0	SPARE PARTS HOLD 6		471.0	1913.0	183.833	15.975	3.103	193.380	174.540
2-67.5-1	PIPE & BAR STOCK		25.0	103.0	142.515	15.750	-11.170	146.280	138.730
2-70-1	PLATE & SHEET METAL		21.0	86.0	149.435	15.750	-11.170	152.560	146.280
2-71-0	US MAIL		13.0	38.0	150.990	15.975	0.000	152.560	149.420
2-72-0	OXIDIZING AGENTS STRM		13.0	38.0	154.130	15.975	0.000	155.700	152.560
2-77-2	4.3L STOREROOM		5.0	15.0	170.330	15.975	1.250	171.400	169.260
2-77-01	PYROTECHNICS STOREROOM		20.0	62.0	172.299	15.975	-0.318	174.540	169.260
2-79-1	CHILL CAT. 8 CARGO		29.0	88.0	177.687	15.975	-12.810	180.820	174.540
2-81-1	CARGO FLAMMABLE LIQUID		62.0	190.0	186.625	15.975	-12.599	193.380	180.820

TRANSFER DECK PRE-STAGING									
COMPARTMENT		DECK	AREA [M2]	VOLUME [M3]	CENTERS			LONGITUDINAL BOUNDS	
					LCG [M-FP]	VCG [M-BL]	TCG [M P+]	AFT [M-FP]	FWD [M-FP]
-	PRE-STAGING FWD	MAIN DECK	223.0	669.0	28.462	20.125	-1.746	35.100	21.100
-	PRE-STAGING MID		228.0	684.0	73.802	20.125	1.128	91.100	59.600
-	FREEZE/CHILL PRE-STAGING		192.0	538.0	120.371	20.125	0.000	130.580	111.740
-	OUTSIZED CARGO		67.0	202.0	138.822	20.125	9.510	143.140	133.720
1-24-01	HANDLING AREA 1		1101.0	4513.0	71.425	20.125	0.001	108.600	35.100
1-58-01	HANDLING AREA 2		714.0	2926.0	134.407	20.125	-1.472	171.400	108.600
1-70.5-0	HANGAR		278.0	1139.0	160.611	20.125	2.339	171.400	149.420
-	UNREP STATIONS		1914.0	7849.0	144.737	20.125	0.223	202.650	35.100
-	ELEVATORS		175.0	717.0	97.197	20.125	-2.405	171.400	45.600

01 LEVEL SPECIALTY									
COMPARTMENT		DECK	AREA [M2]	VOLUME [M3]	CENTERS			LONGITUDINAL BOUNDS	
					LCG [M-FP]	VCG [M-BL]	TCG [M P+]	AFT [M-FP]	FWD [M-FP]
01-24-01	AHE & MHE STOWAGE	01 LEVEL	232.0	757.0	23.795	24.100	-3.291	35.100	14.100
-	HAZ MAT CONTAINER		55.0	150.0	25.633	24.100	0.004	28.975	22.850
01-41-2	WHITE PHOSPHORUS		23.0	59.0	54.338	24.100	7.057	59.600	49.100
01-41-1	MEDICAL SUPPLIES		17.0	57.0	51.714	24.100	-7.054	54.350	49.100
01-42.5-1	EOD & SWO NO 1		11.0	31.0	56.956	24.100	-7.055	59.600	54.350
01-46.5-2	EOD & SWO NO 2		10.0	26.0	71.183	24.100	7.056	73.600	68.350
01-44-2	PLYWOOD & LUMBER		26.0	85.0	63.511	24.100	7.057	67.475	59.600
01-44.5-1	FUZES, PRIMERS, & DETONATORS		11.0	30.0	64.163	24.100	-7.054	67.475	61.350
-	THERMITE LOCKER		0.5	0.2	83.468	24.100	15.814	83.970	82.970
01-34-01	HANDLING SPACE		313.0	1025.0	56.455	24.100	0.001	77.100	35.100

CREW AND EFFECTS

CONSTANTS						
NAME	WEIGHT [MTON]	CENTERS			LONGITUDINAL BOUNDS	
		LCG [M-FP]	VCG [M-BL]	TCG [M P+]	AFT [M-FP]	FWD [M-FP]
HELICOPTERS	21.2	161.980	21.600	0.000	171.400	149.420
CREW	29.0	128.010	32.840	0.000	155.700	108.600
TOTAL	50.2	142.356	28.093	0.000	-	-

PROVISIONS						
COMPARTMENT		WEIGHT [MTON]	CENTERS			
			LCG [M-FP]	VCG [M-BL]	TCG [M P+]	
DRY PROVISIONS STORE	01-62-1	10.4	123.510	24.290	-10.760	
CHILL STOREROOM	01-64-3	7.8	130.990	24.290	-10.870	
DAIRY STOREROOM	01-63.5-1	4.3	127.180	24.290	-10.760	
FREEZE STOREROOM	01-64.5-1	11.3	132.940	24.290	-4.710	
FISH STOREROOM	01-67.5-1	7.2	139.710	24.290	-4.710	
THAW ROOM	01-64-1	0.0	128.620	24.290	-4.710	
DRY PROVISIONS ANNEX	01-69.5-2	8.0	146.870	24.290	5.600	
MEDICAL STORES	02-66-1	11.9	134.880	27.180	-4.710	
TOTAL		60.9	133.683	24.855	-5.605	

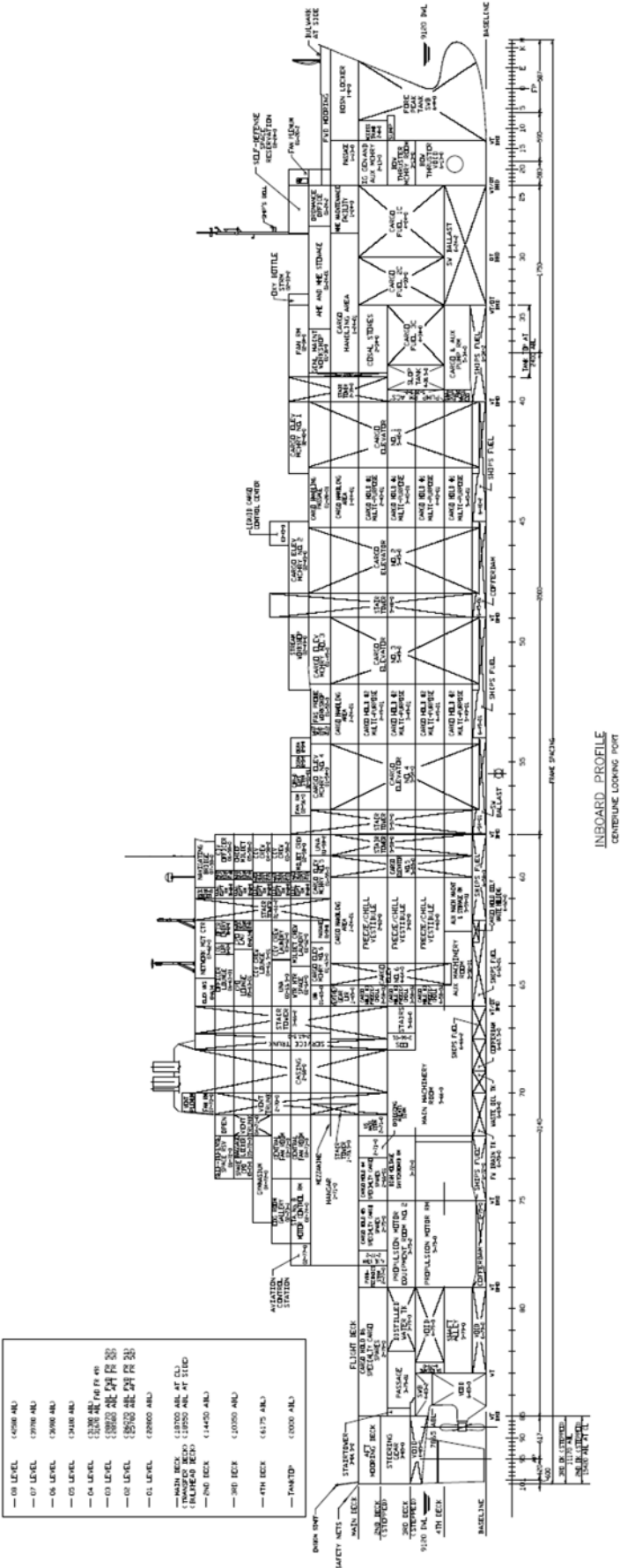
STORES						
COMPARTMENT		WEIGHT [MTON]	CENTERS			
			LCG [M-FP]	VCG [M-BL]	TCG [M P+]	
GENERAL STORES (COSAL STORES)	2-34-0	32.2	37.450	15.975	0.090	
AVIATION STORES (AVIATION SPARES)	01-76-1	11.0	168.260	24.000	-7.000	
TOTAL		43.2	70.758	18.018	-1.715	

ALLOWABLE SHEAR FORCES AND BENDING MOMENTS

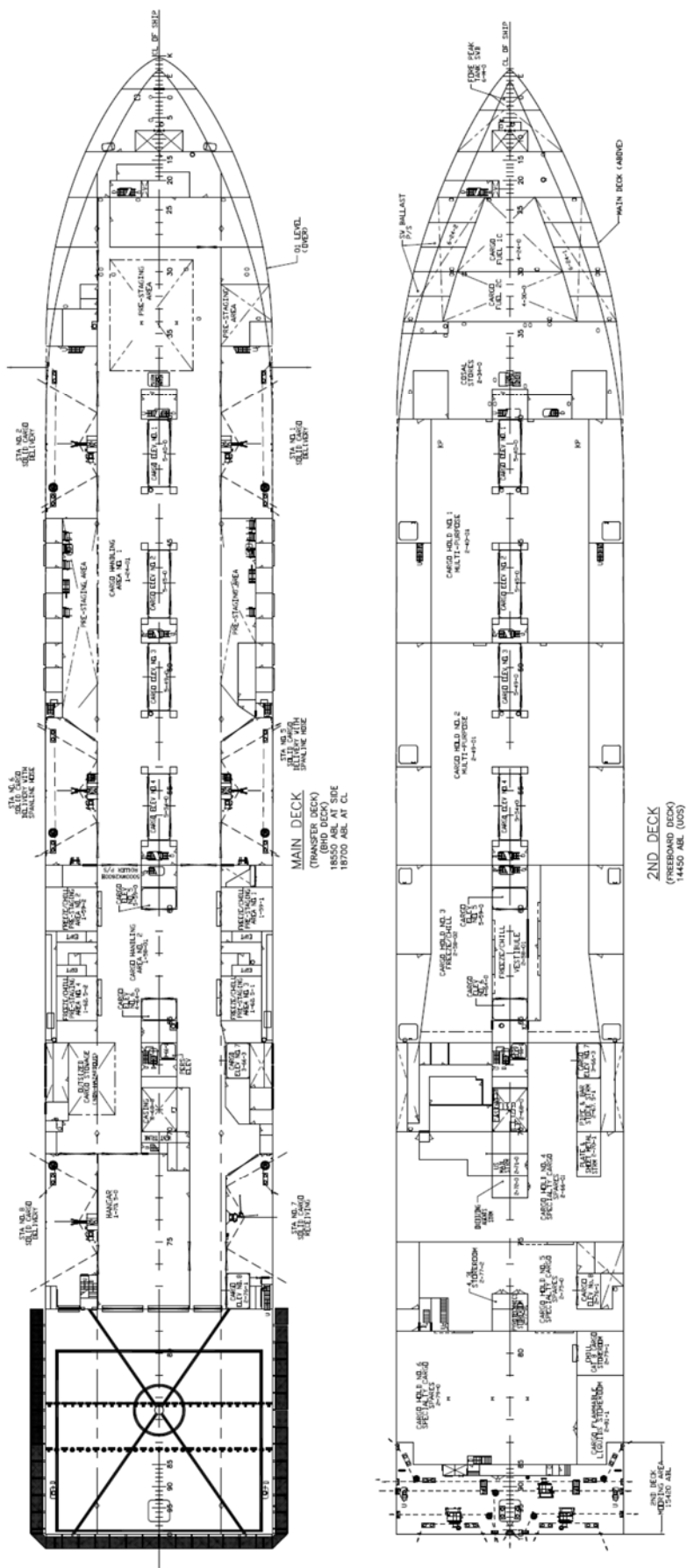
PERMISSIBLE STILL-WATER BENDING MOMENTS (SWBM)				
FRAME	LOCATION [M-FP]	SWBM HOG AT SEA, POSITIVE [M-MTON]	SWBM SAG AT SEA, NEGATIVE [M-MTON]	SWBM IN PORT, POS. OR NEG. [M-MTON]
32	28.10	204,350	-193,700	206,275
39	42.10	204,350	-187,700	232,000
45	63.10	204,350	-187,700	279,725
49	77.10	203,000	-175,650	281,450
57	105.10	201,100	-173,750	279,975
66	133.72	201,100	-173,750	268,600
69	143.14	182,000	-163,200	225,375
73	155.70	137,950	-123,450	171,775
77	168.26	102,750	-92,600	124,800

PERMISSIBLE STILL-WATER SHEAR FORCES (SWSF)				
FRAME	LOCATION [M-FP]	SWSF AT SEA, POSITIVE [M-MTON]	SWSF AT SEA, NEGATIVE [M-MTON]	SWSF IN PORT, POS. OR NEG. [M-MTON]
32	28.10	4,100	-4,450	6,100
39	42.10	4,150	-4,550	6,300
45	63.10	4,600	-4,900	6,550
49	77.10	4,600	-4,900	6,550
57	105.10	4,400	-4,400	5,750
66	133.72	4,500	-4,250	6,050
69	143.14	4,300	-3,950	5,900
73	155.70	3,000	-2,650	4,700
77	168.26	3,300	-3,070	4,450

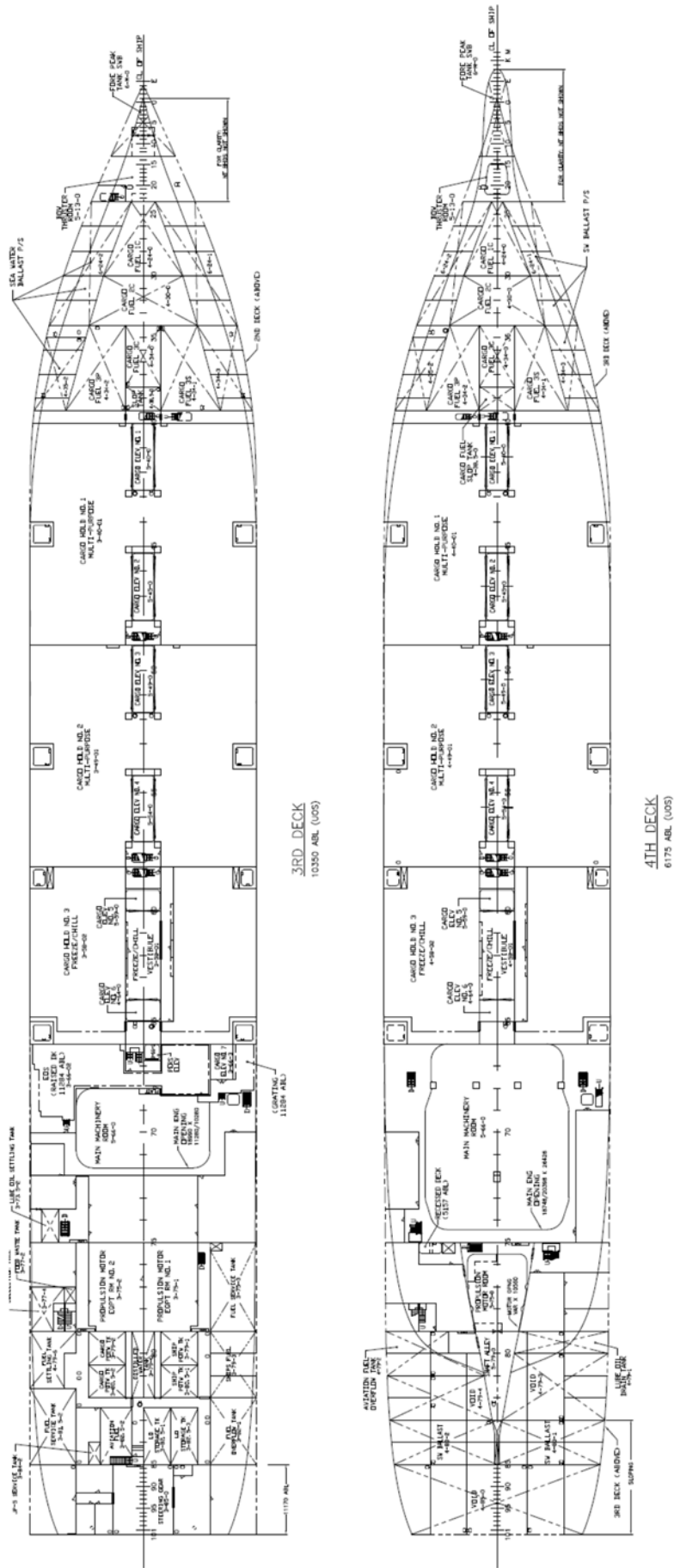
INBOARD PROFILE



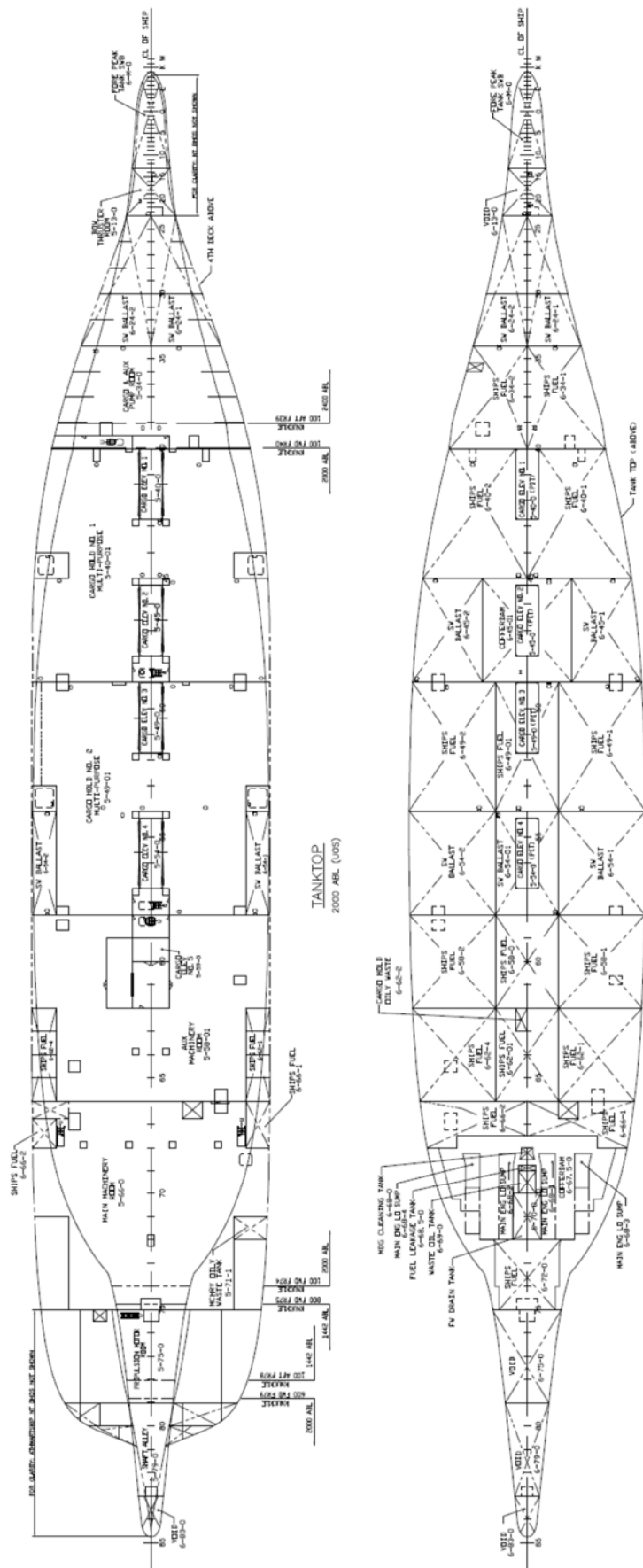
PLAN VIEW MAIN AND 2ND DECK



PLAN VIEW 3RD and 4TH Deck



PLAN VIEW TANK TOP AND DOUBLE BOTTOM



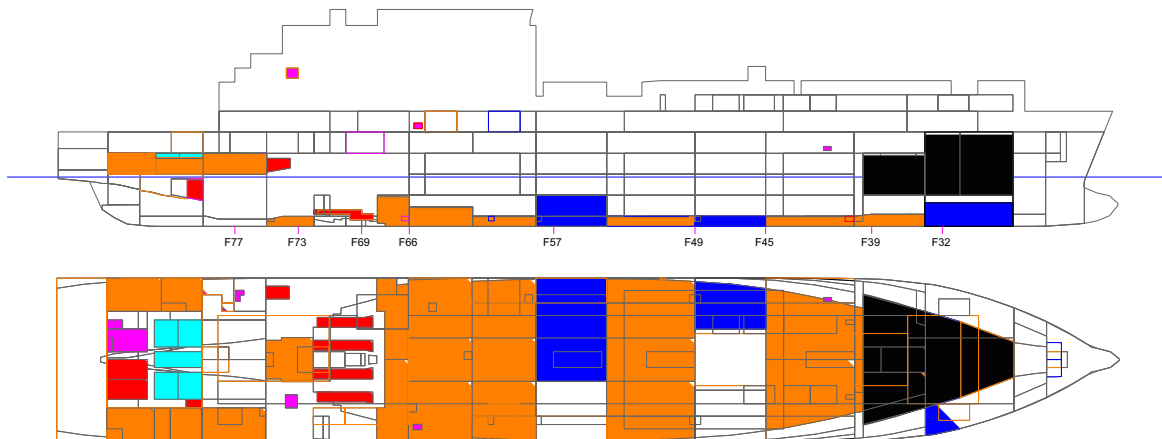
APPENDIX A

Appendix A

Example Loading Conditions

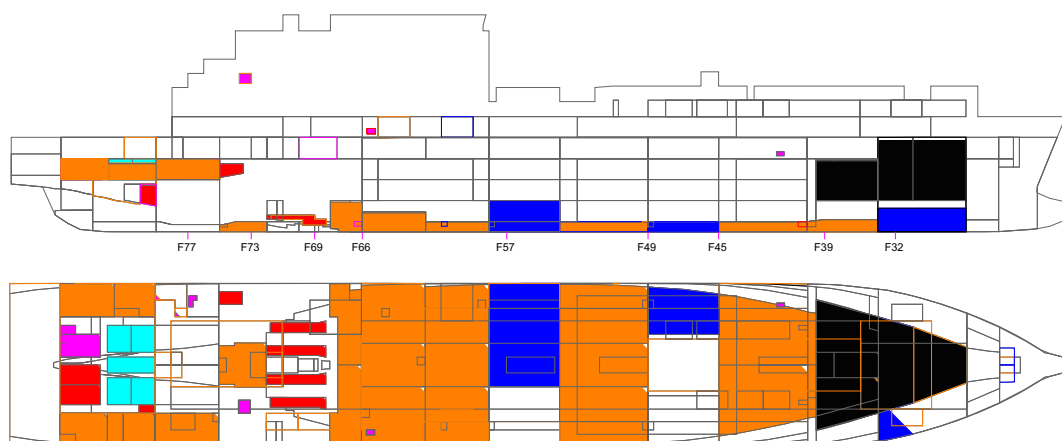
Load Line

Load Line Weight Summary



Group	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT	Group Min FS m-MT
Lightship	25,254.1	14.310	107.601A	0.020S	0.0	
Cargo Oil	3,420.2	11.703	30.426A	0.000P	4,586.0	2,421.0
Fuel Oil	4,196.0	3.727	114.401A	0.613S	6,574.0	3,876.0
Lube Oil	436.6	9.226	175.988A	3.267S	606.0	606.0
Fresh Water	521.2	12.400	179.250A	0.000	143.0	143.0
Ballast	1,612.9	1.970	63.863A	4.806P	839.1	
Misc.	161.5	13.208	182.550A	5.311P	136.0	136.0
Stores & Constant	154.3	23.994	118.887A	2.692S	0.0	
M/P Cargo Hold 1	2,512.7	8.811	61.796A	0.000P	0.0	
M/P Cargo Hold 2	2,669.3	8.567	92.489A	0.000P	0.0	
Freeze/Chill Cargo Hold 3	922.4	11.361	121.211A	0.010P	0.0	
2nd DK Aft Specialty	1,149.0	15.961	167.577A	1.027S	0.0	
Transfer DK Pre-Staging	474.1	20.125	76.811A	0.742P	0.0	
01 Level Specialty	94.2	24.100	48.344A	0.010P	0.0	
ICODES	0.0	--	--	--	0.0	
Misc. Weights	1,200.0	20.000	112.700A	2.400S	0.0	
Displacement	44,778.5	12.198	100.612A	0.000S	12,884.1	
Deadweight	19,524.4					
Avail Deadweight	0.5	--Summer Load Line--				

Load Line Trim and Stability Summary



Loading

Displacement	44,778.5 MT	Specific Gravity	1.0250
Deadweight	19,524.4 MT		
Avail Deadweight	0.5 MT	--Summer Load Line--	

Stability

KMt	15.342 m	LCF Draft	9.780 m
VCG (Upright)	12.198 m	LCF	111.236A m-FP
GMt (Solid)	3.144 m	LCB	100.612A m-FP
FS Correction	0.288 m	LCG	100.612A m-FP
GMt (Corrected)	2.857 m	TP1cm	58.0 MT/cm
GMt Required	2.434 m	MT1cm	772 m-MT/cm
GMt Margin	0.423 m	Trim at Perps	0.000A m
--Required GM--		Heel Angle	0.00 deg
		Propeller Immersion	146.2 %

Drafts - Perps

AP	9.780 m
MS	9.780 m
FP	9.780 m

Drafts - Marks

AFT	9.780 m
MS	9.780 m
FWD	9.780 m

Strength --At Sea--

Shear (Min)	-2,949.6 MT	42.100A m-FP	64.8 %
Shear (Max)	2,095.4 MT	168.260A m-FP	63.5 %
Shear (Max %Allow)	-2,949.6 MT	42.100A m-FP	64.8 %
Moment (Max Hog)	133,356.3H m-MT	89.784A m-FP	---
Moment (Max Sag)	---	---	---
Moment (Max %Allow)	128,076.2H m-MT	77.100A m-FP	63.1 %

Bridge Visibility - Cargo Visibility - ABS

Actual	298.696 m	Required	<402.250 m
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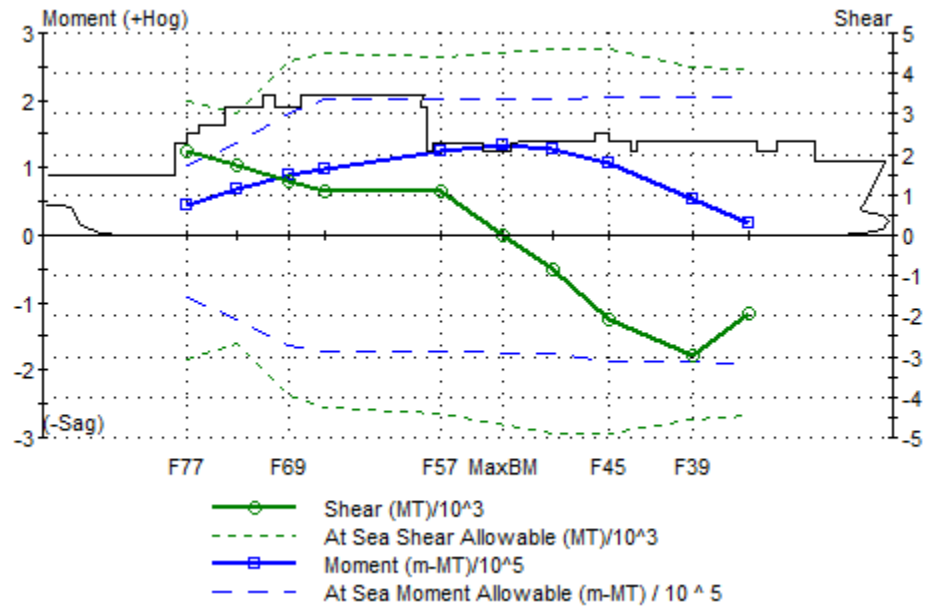
Air Draft

Actual	50.510 m
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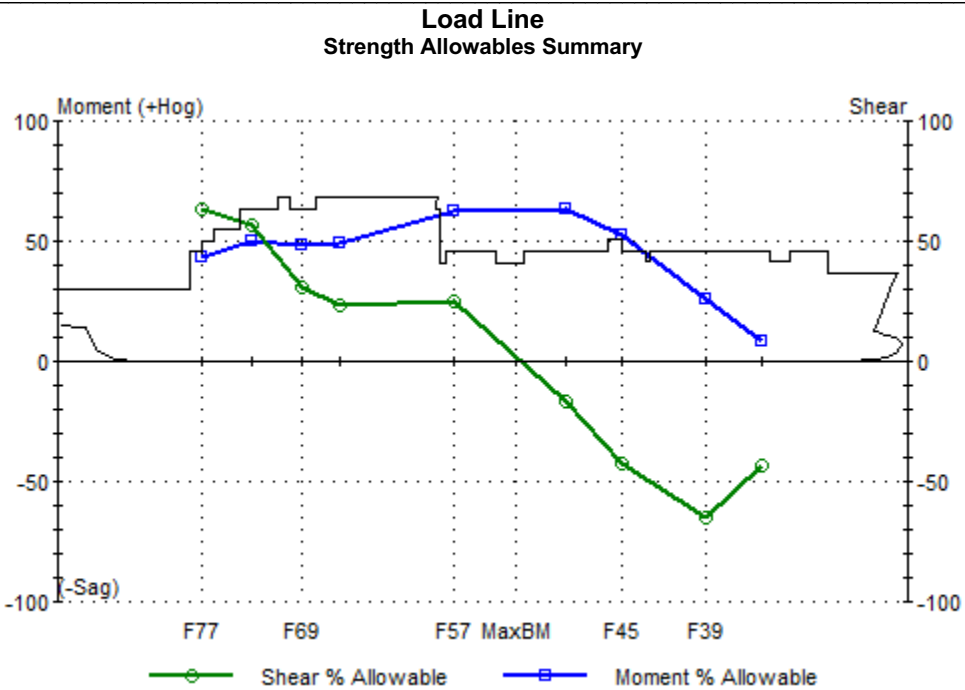
Notes

Drafts from Keel
Hull from Trimmed Tables
Tanks from Tables

Load Line
Strength Values Summary

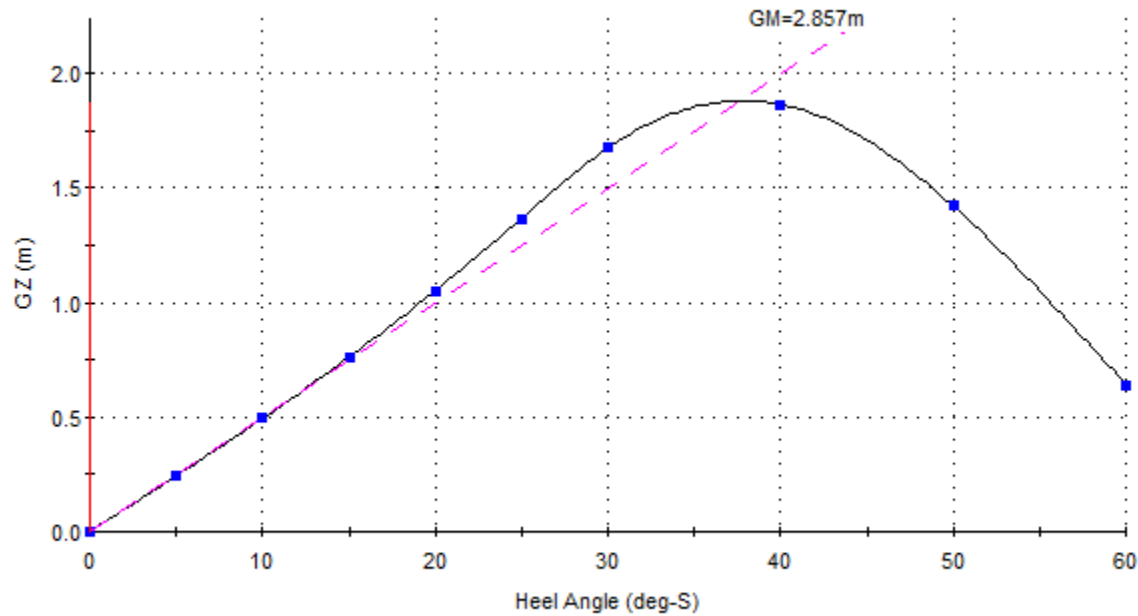


Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Wt MT	Buoy MT	Shear MT	Wt Mom m-MT	Buoy Mom m-MT	Moment m-MT
F77	168.260A	5,130.1	3,034.6	2,095.4	76,411.1	32,313.3	44,097.8H
F73	155.700A	7,494.2	5,784.9	1,709.3	155,768.3	86,858.3	68,910.0H
F69	143.140A	10,501.2	9,166.8	1,334.4	268,225.7	180,238.8	87,987.0H
F66	133.720A	13,022.0	11,955.5	1,066.4	378,918.3	279,628.1	99,290.1H
F57	105.100A	22,049.1	20,948.6	1,100.5	874,793.2	749,459.5	125,333.7H
MaxBM	89.784A	25,852.5	25,853.2	-0.7	1,241,218.0	1,107,861.7	133,356.3H
F49	77.100A	29,064.4	29,893.6	-829.2	1,589,516.0	1,461,439.8	128,076.2H
F45	63.100A	32,139.3	34,237.5	-2,098.2	2,018,511.6	1,910,623.9	107,887.7H
F39	42.100A	36,979.2	39,928.8	-2,949.6	2,744,705.6	2,691,948.5	52,757.1H
F32	28.100A	40,654.7	42,585.4	-1,930.6	3,287,665.5	3,270,891.0	16,774.6H



Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Shear MT	Allow MT	% Allow	Moment m-MT	Allow m-MT	%Allow
F77	168.260A	2,095.4	3,300.0	63.5	44,097.8H	102,750.0H	42.9
F73	155.700A	1,709.3	3,000.0	57.0	68,910.0H	137,950.0H	50.0
F69	143.140A	1,334.4	4,300.0	31.0	87,987.0H	182,000.0H	48.3
F66	133.720A	1,066.4	4,500.0	23.7	99,290.1H	201,100.0H	49.4
F57	105.100A	1,100.5	4,400.0	25.0	125,333.7H	201,100.0H	62.3
MaxBM	89.784A	-0.7	---	---	133,356.3H	---	---
F49	77.100A	-829.2	-4,900.0	16.9	128,076.2H	203,000.0H	63.1
F45	63.100A	-2,098.2	-4,900.0	42.8	107,887.7H	204,350.0H	52.8
F39	42.100A	-2,949.6	-4,550.0	64.8	52,757.1H	204,350.0H	25.8
F32	28.100A	-1,930.6	-4,450.0	43.4	16,774.6H	204,350.0H	8.2

Load Line
Righting Arm Summary



Angle (deg)	0.00	5.00S	10.00S	15.00S	20.00S	25.00S	30.00S	40.00S	50.00S	60.00S
GZ (m)	0.000	0.242	0.494	0.762	1.053	1.368	1.675	1.865	1.421	0.642

Notes

GZ Curve from KN Table
Tanks from Tables
Disp. of Hull = 44,778.5MT

Load Line

Deadweight Details by Group (All Tanks in Loaded Groups)

Cargo Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
4-24-0 FO 1C	95.0	1,087.0	0.8336	906.2	953.9	12.967	20.135A	0.000S	1,088.0
4-30-0 FO 2C	95.0	1,212.2	0.8336	1,010.5	1,063.7	12.627	28.260A	0.000P	2,277.0
4-34-1 FO 3S	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.102S	557.0
4-34-0 FO 3C	95.0	337.1	0.8336	281.0	295.8	10.113	35.975A	0.000P	76.0
4-34-2 FO 3P	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.103P	557.0
4-38.5-0 SLOP	95.0	134.8	0.8336	112.4	118.3	10.113	42.100A	0.000P	31.0
Cargo Oil Totals	95.0	4,102.9		3,420.2	3,600.2	11.703	30.426A	0.000P	4,586.0

Fuel Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-34-1 Ships FO	95.0	219.3	0.8336	182.8	192.4	1.235	38.986A	3.741S	341.0
6-34-2 Ships FO	95.0	216.0	0.8336	180.1	189.6	1.226	39.014A	3.702P	344.0
6-40-1 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628S	742.0
6-40-2 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628P	742.0
6-49-1 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567S	719.0
6-49-01 Ship FO	95.0	250.2	0.8336	208.6	219.5	0.891	86.265A	0.000S	381.0
6-49-2 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567P	719.0
6-58-1 Ships FO	95.0	238.4	0.8336	198.7	209.2	1.003	114.765A	9.417S	496.0
6-58-0 Ships FO	95.0	199.6	0.8336	166.4	175.2	0.950	114.880A	0.000	287.0
6-58-2 Ships FO	95.0	237.9	0.8336	198.4	208.8	1.002	114.822A	9.412P	494.0
6-62-1 Ships FO	95.0	265.7	0.8336	221.5	233.2	1.428	127.149A	9.876S	24.0
6-62-01 Ship FO	95.0	190.2	0.8336	158.6	166.9	0.951	127.666A	0.038S	284.0
6-62-4 Ships FO	95.0	265.7	0.8336	221.5	233.1	1.429	127.182A	9.869P	24.0
6-66-1 Ships FO	95.0	154.9	0.8336	129.1	135.9	2.269	136.539A	9.203S	14.0
6-66-2 Ships FO	95.0	143.2	0.8336	119.4	125.7	1.812	136.586A	8.051P	9.0
6-72-0 Ships FO	95.0	125.6	0.8336	104.7	110.3	0.961	156.846A	0.000S	176.0
3-75-3 FO Serv	95.0	285.3	0.8336	237.9	250.4	12.198	168.348A	12.958S	177.0
3-79-3 Ships FO	95.0	177.4	0.8336	147.9	155.7	11.863	179.229A	12.730S	151.0
4-79-6 FO Settl	95.0	213.0	0.8336	177.6	186.9	11.978	178.260A	12.936P	150.0
3-81.5-2 FO Serv	95.0	265.8	0.8336	221.6	233.3	12.398	187.952A	12.669P	162.0
3-82-1 FO Overfl	95.0	232.5	0.8336	193.8	204.0	12.408	188.645A	12.663S	138.0
Fuel Oil Totals	95.0	5,033.6		4,196.0	4,416.8	3.727	114.401A	0.613S	6,574.0

Lube Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-1 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	1.953S	32.0
3-82.5-3 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	5.858S	32.0
3-73.5-2 LO Sett	95.0	25.3	0.9211	23.3	24.6	12.261	159.773A	13.233P	6.0
6-68-3 Sump 1	95.0	22.5	0.9211	20.7	21.8	2.406	145.512A	7.375S	5.0
6-68-1 Sump 2	95.0	23.7	0.9211	21.8	23.0	2.427	145.792A	2.837S	5.0
6-68-2 Sump 3	95.0	23.7	0.9211	21.8	23.0	2.427	145.792A	2.837P	5.0
6-68-4 Sump 4	95.0	22.5	0.9211	20.7	21.8	2.406	145.477A	7.375P	5.0
4-79-1 LO Drain	95.0	116.4	0.9211	107.2	112.9	7.649	176.077A	8.139S	273.0
Lube Oil Totals	95.0	474.0		436.6	459.6	9.226	175.988A	3.267S	363.0

Fresh Water

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-79-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155S	0.0
3-79-0 Dist. WTR	100.0	119.2	1.0000	119.2	119.2	12.400	179.250A	0.000S	0.0
3-79-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155P	0.0
3-80.5-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	181.605A	5.155S	0.0
3-80.5-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	181.605A	5.155P	0.0
Fresh Water Totals	100.0	521.2		521.2	521.2	12.400	179.250A	0.000	0.0

Ballast

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-M-0 F Pk SWB	--	0.0	1.0250	0.0	685.2	9.774	2.900A	0.000	0.0
6-24-1 SWB	25.0	341.8	1.0250	350.3	1,401.3	2.373	24.015A	2.577S	419.5
6-24-2 SWB	25.0	341.8	1.0250	350.3	1,401.3	2.373	24.015A	2.577P	419.5
4-34-3 SWB	--	0.0	1.0250	0.0	347.9	10.409	37.641A	11.279S	0.0
4-35-2 SWB	--	0.0	1.0250	0.0	297.6	10.389	38.515A	11.504P	0.0
6-45-1 SWB	--	0.0	1.0250	0.0	208.8	1.075	70.338A	9.864S	0.0
6-45-2 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864P	0.0
6-54-1 SWB	--	0.0	1.0250	0.0	493.6	2.219	101.560A	11.532S	0.0
6-54-01 SWB	100.0	204.8	1.0250	209.9	209.9	0.928	101.786A	0.000S	0.0
6-54-2 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532P	0.0
4-83-1 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824S	0.0
4-83-2 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824P	0.0
Ballast Totals	26.4	1,573.6		1,612.9	6,109.1	1.970	63.863A	4.806P	839.1

Misc.

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-2 Av FO	95.0	123.2	0.8136	100.2	105.5	12.298	188.968A	3.881P	45.0
3-84-2 JP-5 Ser	95.0	21.2	0.8136	17.3	18.2	12.298	191.810A	6.925P	1.0
4-79-2 Av FO Of	--	0.0	0.8136	0.0	147.0	7.867	177.939A	8.843P	0.0
03-73-1 EDGF S	95.0	11.4	0.8336	9.5	10.0	30.330	156.878A	8.223S	3.0
6-68.5-0 FO Lea	--	0.0	0.8336	0.0	3.1	0.950	142.748A	0.000	0.0
5-71-1A MOW/O	--	0.0	0.9211	0.0	19.9	4.671	151.558A	12.918S	0.0
6-62-2A COW/O	--	0.0	0.9211	0.0	4.5	0.940	123.515A	0.788P	0.0
6-69-0 Waste O.	--	0.0	0.9211	0.0	13.6	0.950	144.710A	0.000	0.0
5-71-1B MOW/W	--	0.0	1.0000	0.0	14.2	4.642	150.002A	12.990S	0.0
6-62-2B COW/W	--	0.0	1.0000	0.0	4.8	1.000	121.945A	0.788P	0.0
6-70-0 FW Drain	--	0.0	1.0000	0.0	38.7	1.001	149.419A	0.000	0.0
3-77-2 Food Wst	25.0	2.0	1.0250	2.0	8.0	12.620	169.694A	10.345P	1.0
3-77-4 Gray Wtr	25.0	24.3	1.0250	24.9	99.7	10.876	171.066A	14.005P	38.8
6-68-0 MDG Cln	--	0.0	1.0250	0.0	2.6	1.500	140.807A	0.000	0.0
3-75-6 VCHT Sg	100.0	5.3	1.0250	5.4	5.4	11.777	167.215A	12.763P	0.0
5-44-2 Fwd Foam	100.0	0.7	1.0000	0.7	0.7	15.449	50.898A	11.854P	0.0
1-65-1 Aft Foam	100.0	1.5	1.0000	1.5	1.5	19.916	131.950A	13.314S	0.0
Misc. Totals	33.7	189.5		161.5	497.3	13.208	182.550A	5.311P	88.8

Stores & Constant

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Dry Prov Stores	10.4	24.290	123.510A	10.760S
Chill Storeroom	7.8	24.290	130.990A	10.870S
Dairy Storeroom	4.3	24.290	127.180A	10.760S
Freeze Storeroom	11.3	24.290	132.940A	4.710S
Fish Storeroom	7.2	24.290	139.710A	4.710S
Thaw Room	0.0	24.290	128.620A	4.710S
Dry Prov Annex	8.0	24.290	146.870A	5.600P
Medical Stores	11.9	27.180	134.880A	4.710S
General Stores	32.2	15.975	37.450A	0.090P
Aviation Stores	11.0	24.000	168.260A	7.000S
Helicopters	21.2	21.600	161.980A	0.000
Crew	29.0	32.840	128.010A	0.000
Stores & Constant Totals	154.3	23.994	118.887A	2.692S

M/P Cargo Hold 1

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H1-Tank Top	679.2	3.525	62.381A	0.000
H1-4th Deck	878.0	7.700	61.792A	0.000
H1-3rd Deck	556.0	11.875	61.491A	0.000
H1-2nd Deck	399.5	15.975	61.237A	0.003P
M/P Cargo Hold 1 Totals	2,512.7	8.811	61.796A	0.000P

M/P Cargo Hold 2

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H2-Tank Top	788.5	3.525	91.850A	0.000
H2-4th Deck	923.3	7.700	92.766A	0.001S
H2-3rd Deck	565.3	11.875	92.767A	0.002S
H2-2nd Deck	392.2	15.975	92.723A	0.008P
M/P Cargo Hold 2 Totals	2,669.3	8.567	92.489A	0.000P

Freeze/Chill Cargo Hold 3

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H3-4th Deck	341.6	7.700	121.147A	0.001S
H3-3rd Deck	348.6	11.875	121.161A	0.000
H3-2nd Deck	232.2	15.975	121.380A	0.042P
Freeze/Chill Cargo Hold 3 Totals	922.4	11.361	121.211A	0.010P

2nd DK Aft Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Spare Parts H4	388.9	15.975	152.700A	1.694S
Spare Parts H5	212.0	15.975	168.007A	0.341S
Spare Parts H6	384.1	15.975	183.833A	3.103P
Pipe & Bar Stock	45.0	15.750	142.515A	11.170S
Plt & Sht Metal	28.0	15.750	149.435A	11.170S
US Mail	3.0	15.975	150.990A	0.000
Oxidizing Agent	1.1	15.975	154.130A	0.000
4.3L Locker	3.8	15.975	170.330A	1.250P
Pyrotechnics	18.0	15.975	172.299A	0.318S
Chill Cat 8 Cargo	20.6	15.975	177.687A	12.810S
Cargo Flam Liq	44.5	15.975	186.625A	12.599S
2nd DK Aft Specialty Totals	1,149.0	15.961	167.577A	1.027S

Transfer DK Pre-Staging

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Pre-Staging Fwd	154.2	20.125	28.462A	1.746S
Pre-Staging Mid	157.6	20.125	73.802A	1.128P
Freeze/Chill Pre	115.7	20.125	120.371A	0.000
Outsize Cargo Sto	46.6	20.125	138.822A	9.510P
Handling Area 1	0.0	20.125	71.425A	0.001P
Handling Area 2	0.0	20.125	134.407A	1.472S
Hangar	0.0	20.125	160.611A	2.339P
UNREP Stations	0.0	20.125	144.737A	0.223P
Elevators	0.0	20.125	97.197A	2.405S
Transfer DK Pre-Staging Totals	474.1	20.125	76.811A	0.742P

01 Level Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
AHE & MHE Sto	28.1	24.100	23.795A	3.291S
Haz Matl	0.0	24.100	25.633A	0.004P
White Phosphor.	22.0	24.100	54.338A	7.057P
Medical Supplies	11.0	24.100	51.714A	7.054S
EOD & SWD 1	14.5	24.100	56.956A	7.055S
EOD & SWD 2	14.5	24.100	71.183A	7.056P
Plywood&Lumber	3.0	24.100	63.511A	7.057P
Fuze, Prim & Det	1.0	24.100	64.163A	7.054S
Thermite Locker	0.1	24.100	83.468A	15.814P
Handling Space	0.0	24.100	56.455A	0.001P
01 Level Specialty Totals	94.2	24.100	48.344A	0.010P

Misc. Weights

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Load Line Wt	1,200.0	20.000	112.700A	2.400S
Misc. Weights Totals	1,200.0	20.000	112.700A	2.400S

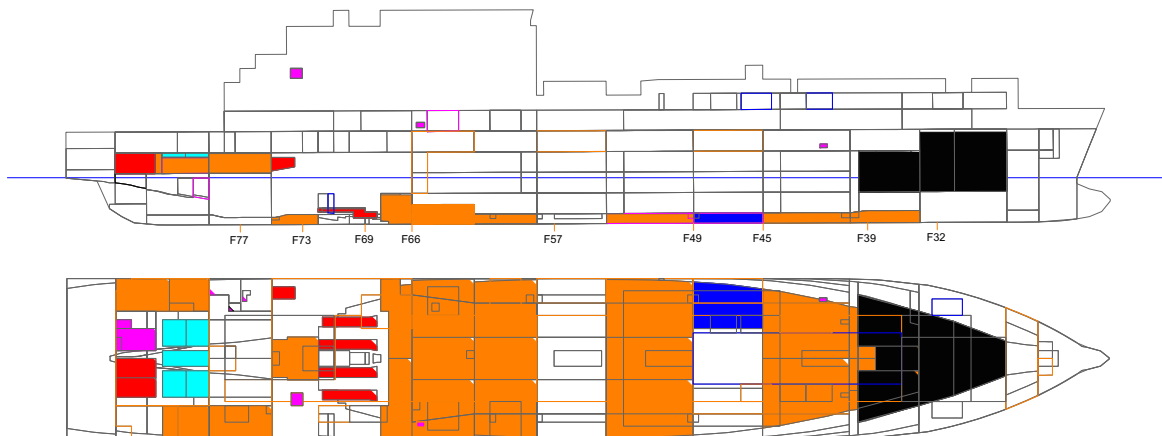
APPENDIX B

Appendix B

Example Loading Conditions

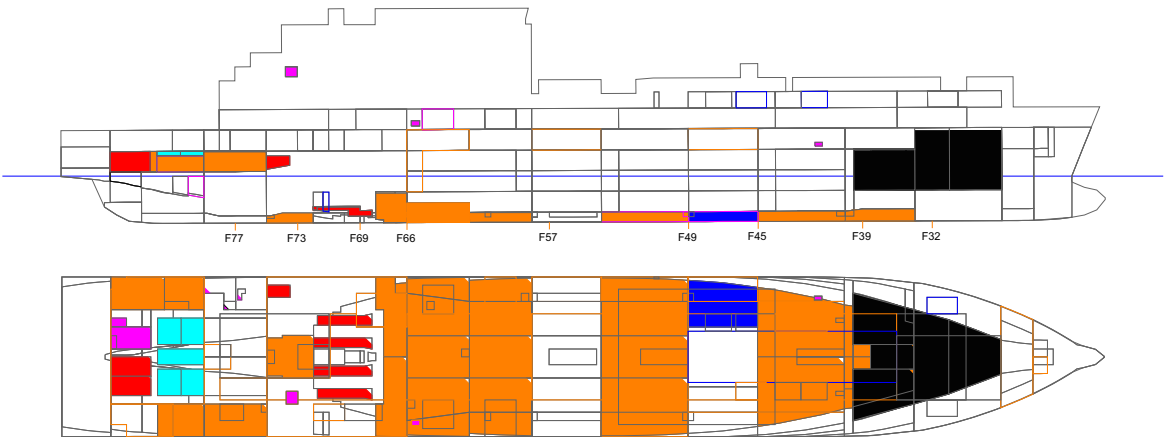
Full Load Departure

Full Load Departure Weight Summary



Group	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT	Group Min FS m-MT
Lightship	25,254.1	14.310	107.601A	0.020S	0.0	
Cargo Oil	3,307.8	11.757	30.029A	0.000P	4,555.0	2,421.0
Fuel Oil	4,002.2	3.307	110.806A	0.029S	6,436.0	3,876.0
Lube Oil	324.9	9.830	176.343A	1.704S	606.0	606.0
Fresh Water	521.2	12.400	179.250A	0.000	143.0	143.0
Ballast	208.8	1.075	70.338A	9.864P	0.0	
Misc.	157.4	13.238	182.947A	5.118P	136.0	136.0
Stores & Constant	154.3	23.994	118.887A	2.692S	0.0	
M/P Cargo Hold 1	2,512.7	8.811	61.796A	0.000P	0.0	
M/P Cargo Hold 2	2,669.3	8.567	92.489A	0.000P	0.0	
Freeze/Chill Cargo Hold 3	922.4	11.361	121.211A	0.010P	0.0	
2nd DK Aft Specialty	1,148.7	15.961	167.577A	1.028S	0.0	
Transfer DK Pre-Staging	474.1	20.125	76.811A	0.742P	0.0	
01 Level Specialty	104.2	24.100	49.862A	0.668S	0.0	
ICODES	0.0	--	--	--	0.0	
Displacement	41,762.2	12.333	101.067A	0.009P	11,876.0	
Deadweight	16,508.0					
Avail Deadweight	3,016.8	--Summer Load Line--				

Full Load Departure
Trim and Stability Summary



Loading

Displacement	41,762.2 MT	Specific Gravity	1.0250
Deadweight	16,508.0 MT		
Avail Deadweight	3,016.8 MT	--Summer Load Line--	

Stability

KMt	15.554 m	LCF Draft	9.256 m
VCG (Upright)	12.333 m	LCF	111.022A m-FP
GMt (Solid)	3.221 m	LCB	101.067A m-FP
FS Correction	0.284 m	LCG	101.067A m-FP
GMt (Corrected)	2.936 m	TP1cm	56.6 MT/cm
GMt Required	2.518 m	MT1cm	740 m-MT/cm
GMt Margin	0.418 m	Trim at Perps	0.667A m
--Required GM--		Heel Angle	0.19P deg
		Propeller Immersion	142.4 %

Drafts - Perps

AP	9.552 m
MS	9.219 m
FP	8.885 m

Drafts - Marks

AFT	9.565 m
MS	9.219 m
FWD	8.893 m

Strength --At Sea--

Shear (Min)	-2,679.9 MT	42.100A m-FP	58.9 %
Shear (Max)	2,076.7 MT	168.260A m-FP	62.9 %
Shear (Max %Allow)	2,076.7 MT	168.260A m-FP	62.9 %
Moment (Max Hog)	142,027.1H m-MT	99.644A m-FP	---
Moment (Max Sag)	--- m-MT	--- m-FP	---
Moment (Max %Allow)	140,289.4H m-MT	105.100A m-FP	69.8 %

Bridge Visibility - Cargo Visibility - ABS

Actual	325.203 m	Required	<402.250 m
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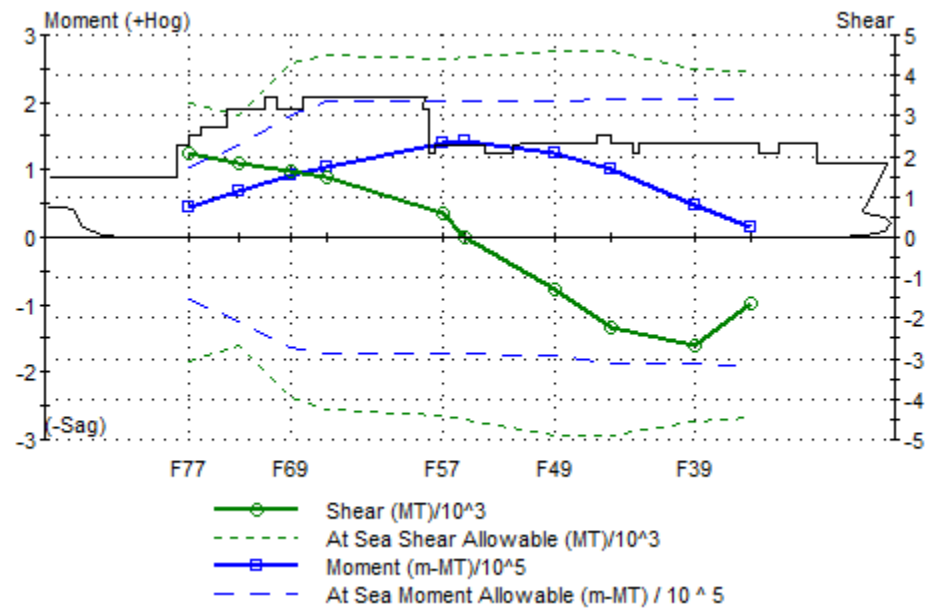
Air Draft

Actual	51.012 m
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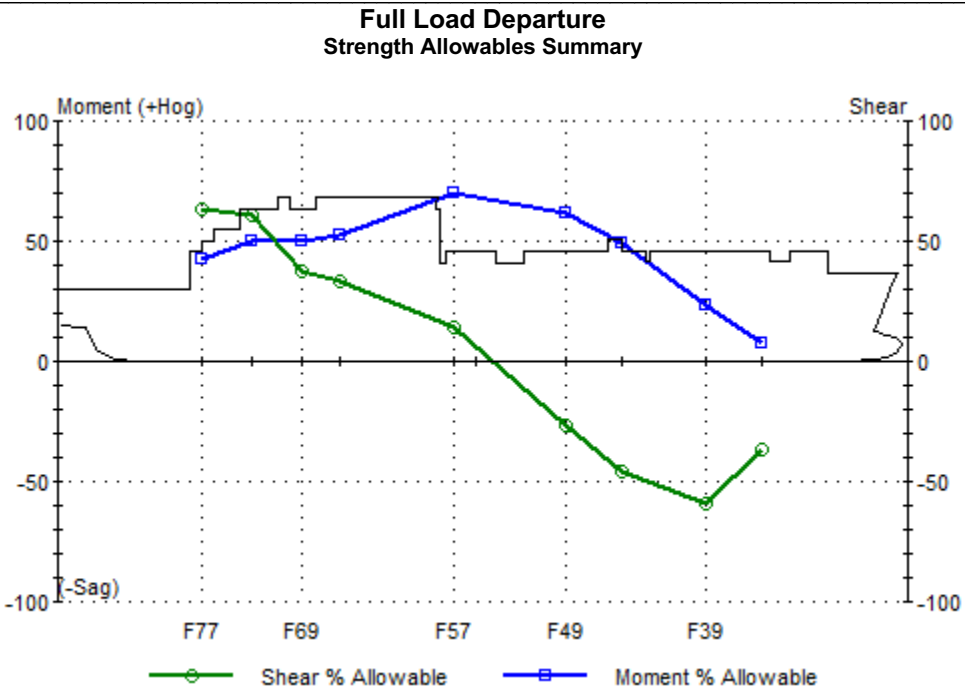
Notes

Drafts from Keel
Hull from Trimmed Tables
Tanks from Tables

Full Load Departure
Strength Values Summary

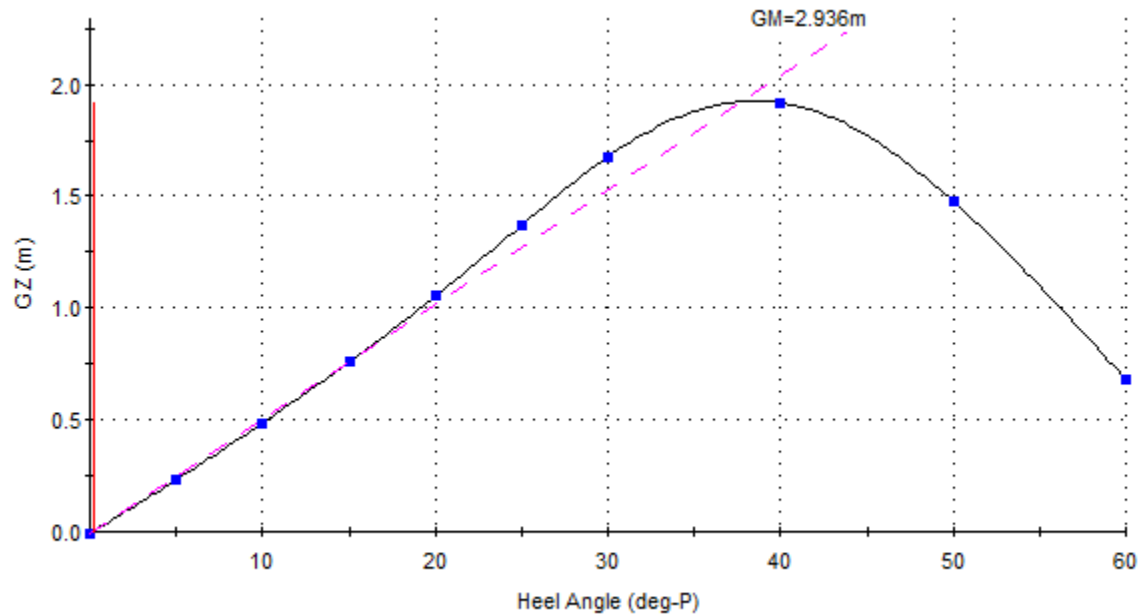


Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Wt MT	Buoy MT	Shear MT	Wt Mom m-MT	Buoy Mom m-MT	Moment m-MT
F77	168.260A	4,828.8	2,752.1	2,076.7	71,622.3	28,048.8	43,573.6H
F73	155.700A	7,188.8	5,356.4	1,832.4	147,148.5	78,148.8	68,999.7H
F69	143.140A	10,191.6	8,574.0	1,617.6	255,747.7	165,134.5	90,613.2H
F66	133.720A	12,712.1	11,227.9	1,484.3	363,521.8	258,312.2	105,209.6H
F57	105.100A	20,361.8	19,751.0	610.9	841,098.2	700,808.8	140,289.4H
MaxBM	99.644A	21,397.2	21,397.7	-0.5	955,106.9	813,079.8	142,027.1H
F49	77.100A	26,851.0	28,147.8	-1,296.7	1,496,601.0	1,371,785.4	124,815.6H
F45	63.100A	29,932.6	32,185.0	-2,252.4	1,894,623.4	1,794,402.6	100,220.8H
F39	42.100A	34,719.6	37,399.5	-2,679.9	2,574,495.0	2,527,588.8	46,906.1H
F32	28.100A	38,154.1	39,788.2	-1,634.1	3,084,753.6	3,069,154.7	15,599.0H



Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Shear MT	Allow MT	% Allow	Moment m-MT	Allow m-MT	%Allow
F77	168.260A	2,076.7	3,300.0	62.9	43,573.6H	102,750.0H	42.4
F73	155.700A	1,832.4	3,000.0	61.1	68,999.7H	137,950.0H	50.0
F69	143.140A	1,617.6	4,300.0	37.6	90,613.2H	182,000.0H	49.8
F66	133.720A	1,484.3	4,500.0	33.0	105,209.6H	201,100.0H	52.3
F57	105.100A	610.9	4,400.0	13.9	140,289.4H	201,100.0H	69.8
MaxBM	99.644A	-0.5	---	---	142,027.1H	---	---
F49	77.100A	-1,296.7	-4,900.0	26.5	124,815.6H	203,000.0H	61.5
F45	63.100A	-2,252.4	-4,900.0	46.0	100,220.8H	204,350.0H	49.0
F39	42.100A	-2,679.9	-4,550.0	58.9	46,906.1H	204,350.0H	23.0
F32	28.100A	-1,634.1	-4,450.0	36.7	15,599.0H	204,350.0H	7.6

Full Load Departure
Righting Arm Summary



Angle (deg)	0.00	5.00P	10.00P	15.00P	20.00P	25.00P	30.00P	40.00P	50.00P	60.00P
GZ (m)	-0.009	0.232	0.485	0.756	1.052	1.370	1.677	1.918	1.476	0.680

Notes

GZ Curve from KN Table
Tanks from Tables
Disp. of Hull = 41,762.2MT

Full Load Departure
Deadweight Details by Group (All Tanks in Loaded Groups)

Cargo Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
4-24-0 FO 1C	95.0	1,087.0	0.8336	906.2	953.9	12.967	20.135A	0.000S	1,088.0
4-30-0 FO 2C	95.0	1,212.2	0.8336	1,010.5	1,063.7	12.627	28.260A	0.000P	2,277.0
4-34-1 FO 3S	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.102S	557.0
4-34-0 FO 3C	95.0	337.1	0.8336	281.0	295.8	10.113	35.975A	0.000P	76.0
4-34-2 FO 3P	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.103P	557.0
4-38.5-0 SLOP	--	0.0	0.8336	0.0	118.3	10.113	42.100A	0.000	0.0
Cargo Oil Totals	91.9	3,968.1		3,307.8	3,600.2	11.757	30.029A	0.000P	4,555.0

Fuel Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-34-1 Ships FO	95.0	219.3	0.8336	182.8	192.4	1.235	38.986A	3.741S	341.0
6-34-2 Ships FO	95.0	216.0	0.8336	180.1	189.6	1.226	39.014A	3.702P	344.0
6-40-1 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628S	742.0
6-40-2 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628P	742.0
6-49-1 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567S	719.0
6-49-01 Ship FO	95.0	250.2	0.8336	208.6	219.5	0.891	86.265A	0.000S	381.0
6-49-2 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567P	719.0
6-58-1 Ships FO	95.0	238.4	0.8336	198.7	209.2	1.003	114.765A	9.417S	496.0
6-58-0 Ships FO	95.0	199.6	0.8336	166.4	175.2	0.950	114.880A	0.000	287.0
6-58-2 Ships FO	95.0	237.9	0.8336	198.4	208.8	1.002	114.822A	9.412P	494.0
6-62-1 Ships FO	95.0	265.7	0.8336	221.5	233.2	1.428	127.149A	9.876S	24.0
6-62-01 Ship FO	95.0	190.2	0.8336	158.6	166.9	0.951	127.666A	0.038S	284.0
6-62-4 Ships FO	95.0	265.7	0.8336	221.5	233.1	1.429	127.182A	9.869P	24.0
6-66-1 Ships FO	95.0	154.9	0.8336	129.1	135.9	2.269	136.539A	9.203S	14.0
6-66-2 Ships FO	95.0	143.2	0.8336	119.4	125.7	1.812	136.586A	8.051P	9.0
6-72-0 Ships FO	95.0	125.6	0.8336	104.7	110.3	0.961	156.846A	0.000S	176.0
3-75-3 FO Serv	95.0	285.3	0.8336	237.9	250.4	12.198	168.348A	12.958S	177.0
3-79-3 Ships FO	95.0	177.4	0.8336	147.9	155.7	11.863	179.229A	12.730S	151.0
4-79-6 FO Settl	95.0	213.0	0.8336	177.6	186.9	11.978	178.260A	12.936P	150.0
3-81.5-2 FO Serv	95.0	265.8	0.8336	221.6	233.3	12.398	187.952A	12.669P	162.0
3-82-1 FO Overfl	--	0.0	0.8336	0.0	204.0	12.408	188.645A	12.663S	0.0
Fuel Oil Totals	90.6	4,801.1		4,002.2	4,416.8	3.307	110.806A	0.029S	6,436.0

Lube Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-1 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	1.953S	32.0
3-82.5-3 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	5.858S	32.0
3-73.5-2 LO Sett	95.0	25.3	0.9211	23.3	24.6	12.261	159.773A	13.233P	6.0
6-68-3 Sump 1	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376S	4.8
6-68-1 Sump 2	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836S	5.0
6-68-2 Sump 3	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836P	5.0
6-68-4 Sump 4	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376P	5.0
4-79-1 LO Drain	--	0.0	0.9211	0.0	112.9	7.649	176.077A	8.139S	0.0
Lube Oil Totals	70.7	352.8		324.9	459.6	9.830	176.343A	1.704S	89.8

Fresh Water

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-79-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155S	0.0
3-79-0 Dist. WTR	100.0	119.2	1.0000	119.2	119.2	12.400	179.250A	0.000S	0.0
3-79-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155P	0.0
3-80.5-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	181.605A	5.155S	0.0
3-80.5-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	181.605A	5.155P	0.0
Fresh Water Totals	100.0	521.2		521.2	521.2	12.400	179.250A	0.000	0.0

Ballast

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-M-0 F Pk SWB	--	0.0	1.0250	0.0	685.2	9.774	2.900A	0.000	0.0
6-24-1 SWB	--	0.0	1.0250	0.0	1,401.3	9.440	23.345A	5.198S	0.0
6-24-2 SWB	--	0.0	1.0250	0.0	1,401.3	9.440	23.345A	5.198P	0.0
4-34-3 SWB	--	0.0	1.0250	0.0	347.9	10.409	37.641A	11.279S	0.0
4-35-2 SWB	--	0.0	1.0250	0.0	297.6	10.389	38.515A	11.504P	0.0
6-45-1 SWB	--	0.0	1.0250	0.0	208.8	1.075	70.338A	9.864S	0.0
6-45-2 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864P	0.0
6-54-1 SWB	--	0.0	1.0250	0.0	493.6	2.219	101.560A	11.532S	0.0
6-54-01 SWB	--	0.0	1.0250	0.0	209.9	0.928	101.786A	0.000	0.0
6-54-2 SWB	--	0.0	1.0250	0.0	493.6	2.219	101.560A	11.532P	0.0
4-83-1 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824S	0.0
4-83-2 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824P	0.0
Ballast Totals	3.4	203.7		208.8	6,109.1	1.075	70.338A	9.864P	0.0

Misc.

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-2 Av FO	95.0	123.2	0.8136	100.2	105.5	12.298	188.968A	3.881P	45.0
3-84-2 JP-5 Ser	95.0	21.2	0.8136	17.3	18.2	12.298	191.810A	6.925P	1.0
4-79-2 Av FO Of	--	0.0	0.8136	0.0	147.0	7.867	177.939A	8.843P	0.0
03-73-1 EDGF S	95.0	11.4	0.8336	9.5	10.0	30.330	156.878A	8.223S	3.0
6-68.5-0 FO Lea	--	0.0	0.8336	0.0	3.1	0.950	142.748A	0.000	0.0
5-71-1A MOW/O	--	0.0	0.9211	0.0	19.9	4.671	151.558A	12.918S	0.0
6-62-2A COW/O	--	0.0	0.9211	0.0	4.5	0.940	123.515A	0.788P	0.0
6-69-0 Waste O.	--	0.0	0.9211	0.0	13.6	0.950	144.710A	0.000	0.0
5-71-1B MOW/W	--	0.0	1.0000	0.0	14.2	4.642	150.002A	12.990S	0.0
6-62-2B COW/W	--	0.0	1.0000	0.0	4.8	1.000	121.945A	0.788P	0.0
6-70-0 FW Drain	--	0.0	1.0000	0.0	38.7	1.001	149.419A	0.000	0.0
3-77-2 Food Wst	25.0	2.0	1.0250	2.0	8.0	12.620	169.694A	10.345P	1.0
3-77-4 Gray Wtr	25.0	24.3	1.0250	24.9	99.7	10.876	171.066A	14.005P	38.8
6-68-0 MDG Cln	--	0.0	1.0250	0.0	2.6	1.500	140.807A	0.000	0.0
3-75-6 VCHT Sg	25.0	1.3	1.0250	1.4	5.4	10.948	167.215A	12.763P	1.0
5-44-2 Fwd Foam	100.0	0.7	1.0000	0.7	0.7	15.449	50.898A	11.854P	0.0
1-65-1 Aft Foam	100.0	1.5	1.0000	1.5	1.5	19.916	131.950A	13.314S	0.0
Misc. Totals	33.0	185.5		157.4	497.3	13.238	182.947A	5.118P	89.8

Stores & Constant

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Dry Prov Stores	10.4	24.290	123.510A	10.760S
Chill Storeroom	7.8	24.290	130.990A	10.870S
Dairy Storeroom	4.3	24.290	127.180A	10.760S
Freeze Storeroom	11.3	24.290	132.940A	4.710S
Fish Storeroom	7.2	24.290	139.710A	4.710S
Thaw Room	0.0	24.290	128.620A	4.710S
Dry Prov Annex	8.0	24.290	146.870A	5.600P
Medical Stores	11.9	27.180	134.880A	4.710S
General Stores	32.2	15.975	37.450A	0.090P
Aviation Stores	11.0	24.000	168.260A	7.000S
Helicopters	21.2	21.600	161.980A	0.000
Crew	29.0	32.840	128.010A	0.000
Stores & Constant Totals	154.3	23.994	118.887A	2.692S

M/P Cargo Hold 1

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H1-Tank Top	679.2	3.525	62.381A	0.000
H1-4th Deck	878.0	7.700	61.792A	0.000
H1-3rd Deck	556.0	11.875	61.491A	0.000
H1-2nd Deck	399.5	15.975	61.237A	0.003P
M/P Cargo Hold 1 Totals	2,512.7	8.811	61.796A	0.000P

M/P Cargo Hold 2

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H2-Tank Top	788.5	3.525	91.850A	0.000
H2-4th Deck	923.3	7.700	92.766A	0.001S
H2-3rd Deck	565.3	11.875	92.767A	0.002S
H2-2nd Deck	392.2	15.975	92.723A	0.008P
M/P Cargo Hold 2 Totals	2,669.3	8.567	92.489A	0.000P

Freeze/Chill Cargo Hold 3

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H3-4th Deck	341.6	7.700	121.147A	0.001S
H3-3rd Deck	348.6	11.875	121.161A	0.000
H3-2nd Deck	232.2	15.975	121.380A	0.042P
Freeze/Chill Cargo Hold 3 Totals	922.4	11.361	121.211A	0.010P

2nd DK Aft Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Spare Parts H4	388.9	15.975	152.700A	1.694S
Spare Parts H5	212.0	15.975	168.007A	0.341S
Spare Parts H6	384.1	15.975	183.833A	3.103P
Pipe & Bar Stock	45.0	15.750	142.515A	11.170S
Plt & Sht Metal	28.0	15.750	149.435A	11.170S
US Mail	3.0	15.975	150.990A	0.000
Oxidizing Agent	1.1	15.975	154.130A	0.000
4.3L Locker	3.5	15.975	170.330A	1.250P
Pyrotechnics	18.0	15.975	172.299A	0.318S
Chill Cat 8 Cargo	20.6	15.975	177.687A	12.810S
Cargo Flam Liq	44.5	15.975	186.625A	12.599S
2nd DK Aft Specialty Totals	1,148.7	15.961	167.577A	1.028S

Transfer DK Pre-Staging

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Pre-Staging Fwd	154.2	20.125	28.462A	1.746S
Pre-Staging Mid	157.6	20.125	73.802A	1.128P
Freeze/Chill Pre	115.7	20.125	120.371A	0.000
Outsize Cargo Sto	46.6	20.125	138.822A	9.510P
Handling Area 1	0.0	20.125	71.425A	0.001P
Handling Area 2	0.0	20.125	134.407A	1.472S
Hangar	0.0	20.125	160.611A	2.339P
UNREP Stations	0.0	20.125	144.737A	0.223P
Elevators	0.0	20.125	97.197A	2.405S
Transfer DK Pre-Staging Totals	474.1	20.125	76.811A	0.742P

01 Level Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
AHE & MHE Sto	28.1	24.100	23.795A	3.291S
Haz Matl	0.0	24.100	25.633A	0.004P
White Phosphor.	22.0	24.100	54.338A	7.057P
Medical Supplies	11.0	24.100	51.714A	7.054S
EOD & SWD 1	14.5	24.100	56.956A	7.055S
EOD & SWD 2	14.5	24.100	71.183A	7.056P
Plywood&Lumber	3.0	24.100	63.511A	7.057P
Fuze, Prim & Det	11.0	24.100	64.163A	7.054S
Thermite Locker	0.1	24.100	83.468A	15.814P
Handling Space	0.0	24.100	56.455A	0.001P
01 Level Specialty Totals	104.2	24.100	49.862A	0.668S

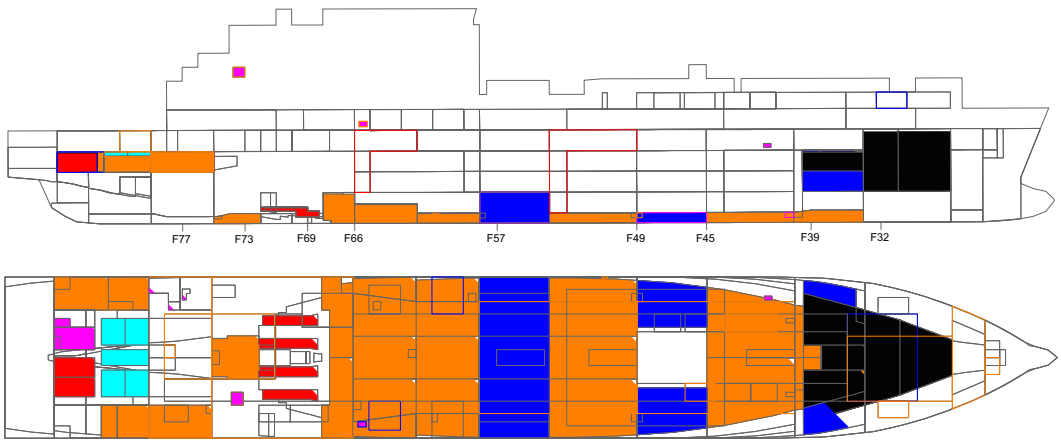
APPENDIX C

Appendix C

Example Loading Conditions

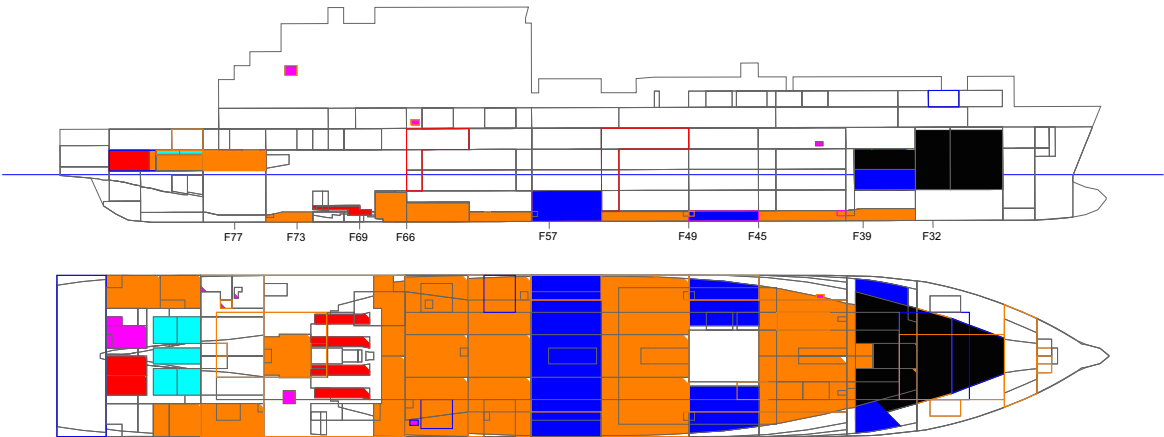
B1 Mixed Cargo Departure

B1 Mixed Cargo Departure
Weight Summary



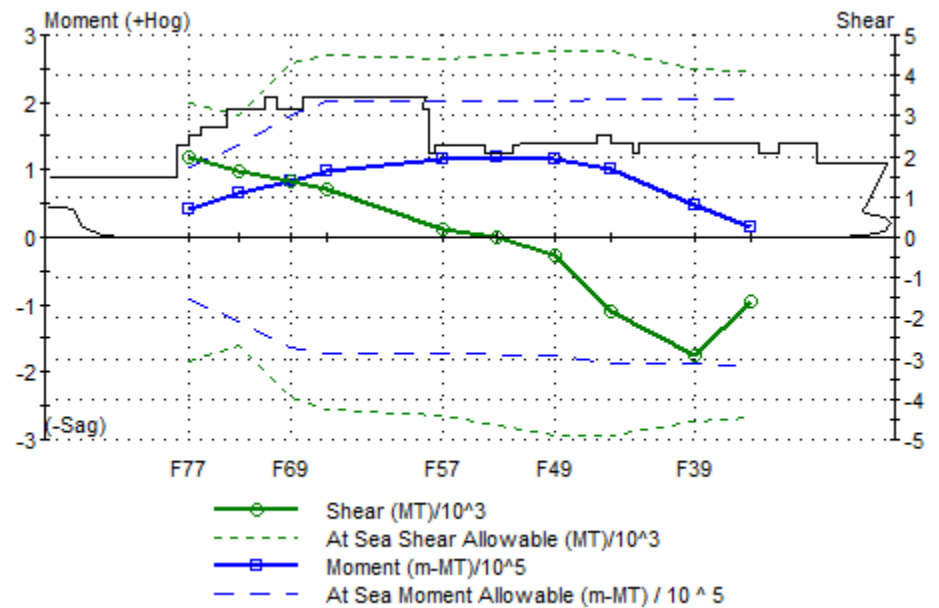
Group	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT	Group Min FS m-MT
Lightship	25,254.1	14.310	107.601A	0.020S	0.0	
Cargo Oil	3,307.8	11.757	30.029A	0.000P	4,555.0	2,421.0
Fuel Oil	4,002.2	3.307	110.806A	0.029S	6,436.0	3,876.0
Lube Oil	301.6	9.642	177.625A	2.860S	606.0	606.0
Fresh Water	521.2	12.400	179.250A	0.000	143.0	143.0
Ballast	2,086.2	3.542	81.019A	0.759P	96.0	
Misc.	157.4	13.238	182.947A	5.118P	136.0	136.0
Stores & Constant	154.3	23.994	118.887A	2.692S	0.0	
M/P Cargo Hold 1	1,341.9	10.007	61.691A	0.000P	0.0	
M/P Cargo Hold 2	3,227.9	7.629	92.400A	0.000S	0.0	
Freeze/Chill Cargo Hold 3	593.8	10.639	121.200A	0.008P	0.0	
2nd DK Aft Specialty	1,106.2	15.960	166.974A	0.610S	0.0	
Transfer DK Pre-Staging	440.1	20.125	72.020A	0.064P	0.0	
01 Level Specialty	89.7	24.100	54.076A	0.244S	0.0	
ICODES	0.0	--	--	--	0.0	
Displacement	42,584.5	11.955	100.919A	0.004S	11,972.0	
Deadweight	17,330.3					
Avail Deadweight	2,194.5	--Summer Load Line--				

B1 Mixed Cargo Departure
Trim and Stability Summary



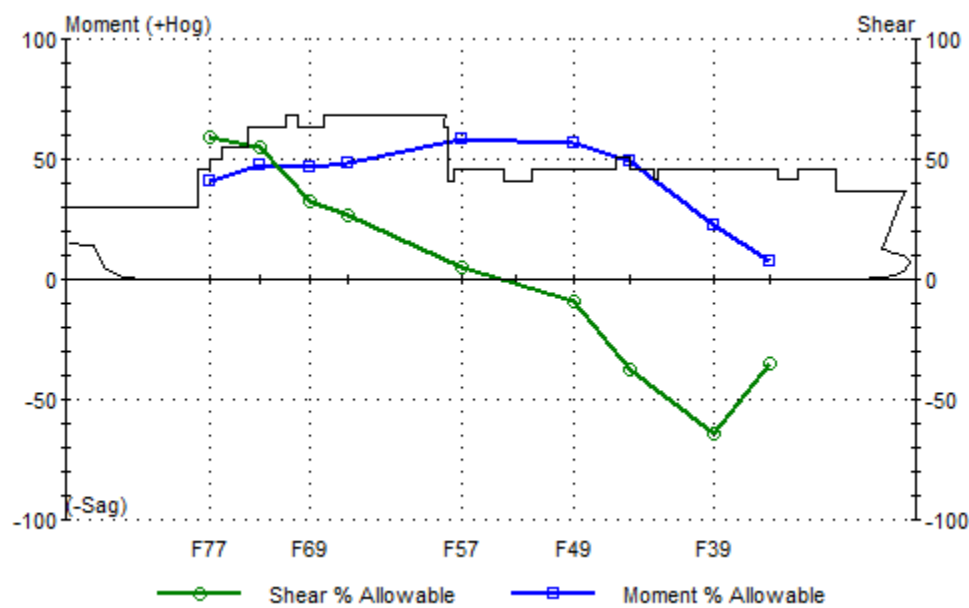
Loading			
Displacement	42,584.5 MT	Specific Gravity	1.0250
Deadweight	17,330.3 MT		
Avail Deadweight	2,194.5 MT	--Summer Load Line--	
Stability		Trim	
KMt	15.488 m	LCF Draft	9.400 m
VCG (Upright)	11.955 m	LCF	111.145A m-FP
GMt (Solid)	3.533 m	LCB	100.919A m-FP
FS Correction	0.281 m	LCG	100.919A m-FP
GMt (Corrected)	3.252 m	TP1cm	57.3 MT/cm
GMt Required	2.475 m	MT1cm	750 m-MT/cm
GMt Margin	0.777 m	Trim at Perps	0.474A m
--Required GM--		Heel Angle	0.08S deg
		Propeller Immersion	143.4 %
Drafts - Perps		Drafts - Marks	
AP	9.610 m	AFT	9.619 m
MS	9.373 m	MS	9.373 m
FP	9.136 m	FWD	9.142 m
Strength --At Sea--			
Shear (Min)	-2,930.1 MT	42.100A m-FP	64.4 %
Shear (Max)	1,961.3 MT	168.260A m-FP	59.4 %
Shear (Max %Allow)	-2,930.1 MT	42.100A m-FP	64.4 %
Moment (Max Hog)	118,790.0H m-MT	91.570A m-FP	---
Moment (Max Sag)	--- m-MT	--- m-FP	---
Moment (Max %Allow)	117,053.4H m-MT	105.100A m-FP	58.2 %
Bridge Visibility - Cargo Visibility - ABS			
Actual	317.386 m	Required	<402.250 m
Air Draft			
Actual	50.875 m		
Notes			
Drafts from Keel			
Hull from Trimmed Tables			
Tanks from Tables			

B1 Mixed Cargo Departure
Strength Values Summary



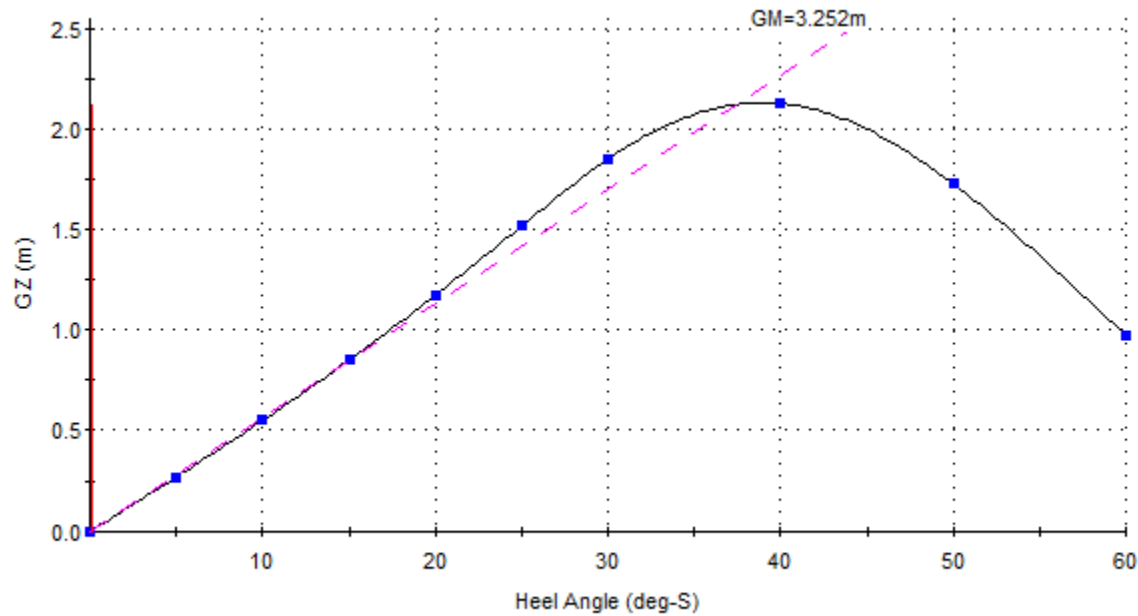
Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Wt MT	Buoy MT	Shear MT	Wt Mom m-MT	Buoy Mom m-MT	Moment m-MT
F77	168.260A	4,786.3	2,824.9	1,961.3	70,984.8	29,138.0	41,846.8H
F73	155.700A	7,123.0	5,467.9	1,655.1	145,882.1	80,389.9	65,492.1H
F69	143.140A	10,123.2	8,729.5	1,393.7	253,653.3	169,046.8	84,606.5H
F66	133.720A	12,612.3	11,419.7	1,192.5	360,634.7	263,858.3	96,776.4H
F57	105.100A	20,285.5	20,070.9	214.6	830,668.8	713,615.4	117,053.4H
MaxBM	91.570A	24,219.1	24,219.7	-0.7	1,132,037.3	1,013,247.3	118,790.0H
F49	77.100A	28,178.3	28,618.6	-440.4	1,511,196.5	1,395,603.7	115,592.8H
F45	63.100A	30,917.0	32,740.8	-1,823.8	1,925,391.9	1,825,401.9	99,990.0H
F39	42.100A	35,157.6	38,087.6	-2,930.1	2,618,300.6	2,571,658.3	46,642.4H
F32	28.100A	38,986.8	40,550.5	-1,563.7	3,138,373.9	3,123,403.0	14,970.9H

B1 Mixed Cargo Departure
Strength Allowables Summary



Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Shear MT	Allow MT	% Allow	Moment m-MT	Allow m-MT	%Allow
F77	168.260A	1,961.3	3,300.0	59.4	41,846.8H	102,750.0H	40.7
F73	155.700A	1,655.1	3,000.0	55.2	65,492.1H	137,950.0H	47.5
F69	143.140A	1,393.7	4,300.0	32.4	84,606.5H	182,000.0H	46.5
F66	133.720A	1,192.5	4,500.0	26.5	96,776.4H	201,100.0H	48.1
F57	105.100A	214.6	4,400.0	4.9	117,053.4H	201,100.0H	58.2
MaxBM	91.570A	-0.7	---	---	118,790.0H	---	---
F49	77.100A	-440.4	-4,900.0	9.0	115,592.8H	203,000.0H	56.9
F45	63.100A	-1,823.8	-4,900.0	37.2	99,990.0H	204,350.0H	48.9
F39	42.100A	-2,930.1	-4,550.0	64.4	46,642.4H	204,350.0H	22.8
F32	28.100A	-1,563.7	-4,450.0	35.1	14,970.9H	204,350.0H	7.3

B1 Mixed Cargo Departure
Righting Arm Summary



Angle (deg)	0.00	5.00S	10.00S	15.00S	20.00S	25.00S	30.00S	40.00S	50.00S	60.00S
GZ (m)	-0.004	0.267	0.550	0.850	1.173	1.518	1.851	2.127	1.727	0.970

Notes

GZ Curve from KN Table
Tanks from Tables
Disp. of Hull = 42,584.5MT

B1 Mixed Cargo Departure
Deadweight Details by Group (All Tanks in Loaded Groups)

Cargo Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
4-24-0 FO 1C	95.0	1,087.0	0.8336	906.2	953.9	12.967	20.135A	0.000S	1,088.0
4-30-0 FO 2C	95.0	1,212.2	0.8336	1,010.5	1,063.7	12.627	28.260A	0.000P	2,277.0
4-34-1 FO 3S	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.102S	557.0
4-34-0 FO 3C	95.0	337.1	0.8336	281.0	295.8	10.113	35.975A	0.000P	76.0
4-34-2 FO 3P	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.103P	557.0
4-38.5-0 SLOP	--	0.0	0.8336	0.0	118.3	10.113	42.100A	0.000	0.0
Cargo Oil Totals	91.9	3,968.1		3,307.8	3,600.2	11.757	30.029A	0.000P	4,555.0

Fuel Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-34-1 Ships FO	95.0	219.3	0.8336	182.8	192.4	1.235	38.986A	3.741S	341.0
6-34-2 Ships FO	95.0	216.0	0.8336	180.1	189.6	1.226	39.014A	3.702P	344.0
6-40-1 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628S	742.0
6-40-2 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628P	742.0
6-49-1 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567S	719.0
6-49-01 Ship FO	95.0	250.2	0.8336	208.6	219.5	0.891	86.265A	0.000S	381.0
6-49-2 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567P	719.0
6-58-1 Ships FO	95.0	238.4	0.8336	198.7	209.2	1.003	114.765A	9.417S	496.0
6-58-0 Ships FO	95.0	199.6	0.8336	166.4	175.2	0.950	114.880A	0.000	287.0
6-58-2 Ships FO	95.0	237.9	0.8336	198.4	208.8	1.002	114.822A	9.412P	494.0
6-62-1 Ships FO	95.0	265.7	0.8336	221.5	233.2	1.428	127.149A	9.876S	24.0
6-62-01 Ship FO	95.0	190.2	0.8336	158.6	166.9	0.951	127.666A	0.038S	284.0
6-62-4 Ships FO	95.0	265.7	0.8336	221.5	233.1	1.429	127.182A	9.869P	24.0
6-66-1 Ships FO	95.0	154.9	0.8336	129.1	135.9	2.269	136.539A	9.203S	14.0
6-66-2 Ships FO	95.0	143.2	0.8336	119.4	125.7	1.812	136.586A	8.051P	9.0
6-72-0 Ships FO	95.0	125.6	0.8336	104.7	110.3	0.961	156.846A	0.000S	176.0
3-75-3 FO Serv	95.0	285.3	0.8336	237.9	250.4	12.198	168.348A	12.958S	177.0
3-79-3 Ships FO	95.0	177.4	0.8336	147.9	155.7	11.863	179.229A	12.730S	151.0
4-79-6 FO Settl	95.0	213.0	0.8336	177.6	186.9	11.978	178.260A	12.936P	150.0
3-81.5-2 FO Serv	95.0	265.8	0.8336	221.6	233.3	12.398	187.952A	12.669P	162.0
3-82-1 FO Overfl	--	0.0	0.8336	0.0	204.0	12.408	188.645A	12.663S	0.0
Fuel Oil Totals	90.6	4,801.1		4,002.2	4,416.8	3.307	110.806A	0.029S	6,436.0

Lube Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-1 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	1.953S	32.0
3-82.5-3 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	5.858S	32.0
3-73.5-2 LO Sett	--	0.0	0.9211	0.0	24.6	12.261	159.772A	13.233P	0.0
6-68-3 Sump 1	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376S	4.8
6-68-1 Sump 2	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836S	5.0
6-68-2 Sump 3	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836P	5.0
6-68-4 Sump 4	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376P	5.0
4-79-1 LO Drain	--	0.0	0.9211	0.0	112.9	7.649	176.077A	8.139S	0.0
Lube Oil Totals	65.6	327.4		301.6	459.6	9.642	177.625A	2.860S	83.8

Fresh Water

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-79-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155S	0.0
3-79-0 Dist. WTR	100.0	119.2	1.0000	119.2	119.2	12.400	179.250A	0.000S	0.0
3-79-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155P	0.0
3-80.5-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	181.605A	5.155S	0.0
3-80.5-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	181.605A	5.155P	0.0
Fresh Water Totals	100.0	521.2		521.2	521.2	12.400	179.250A	0.000	0.0

Ballast

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-M-0 F Pk SWB	--	0.0	1.0250	0.0	685.2	9.774	2.900A	0.000	0.0
6-24-1 SWB	--	0.0	1.0250	0.0	1,401.3	9.440	23.345A	5.198S	0.0
6-24-2 SWB	--	0.0	1.0250	0.0	1,401.3	9.440	23.345A	5.198P	0.0
4-34-3 SWB	50.0	169.7	1.0250	174.0	347.9	8.405	37.751A	10.579S	96.0
4-35-2 SWB	100.0	290.4	1.0250	297.6	297.6	10.389	38.515A	11.504P	0.0
6-45-1 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864S	0.0
6-45-2 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864P	0.0
6-54-1 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532S	0.0
6-54-01 SWB	100.0	204.8	1.0250	209.9	209.9	0.928	101.786A	0.000S	0.0
6-54-2 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532P	0.0
4-83-1 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824S	0.0
4-83-2 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824P	0.0
Ballast Totals	34.1	2,035.4		2,086.2	6,109.1	3.542	81.019A	0.759P	96.0

Misc.

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-2 Av FO	95.0	123.2	0.8136	100.2	105.5	12.298	188.968A	3.881P	45.0
3-84-2 JP-5 Ser	95.0	21.2	0.8136	17.3	18.2	12.298	191.810A	6.925P	1.0
4-79-2 Av FO Of	--	0.0	0.8136	0.0	147.0	7.867	177.939A	8.843P	0.0
03-73-1 EDGF S	95.0	11.4	0.8336	9.5	10.0	30.330	156.878A	8.223S	3.0
6-68.5-0 FO Lea	--	0.0	0.8336	0.0	3.1	0.950	142.748A	0.000	0.0
5-71-1A MOW/O	--	0.0	0.9211	0.0	19.9	4.671	151.558A	12.918S	0.0
6-62-2A COW/O	--	0.0	0.9211	0.0	4.5	0.940	123.515A	0.788P	0.0
6-69-0 Waste O.	--	0.0	0.9211	0.0	13.6	0.950	144.710A	0.000	0.0
5-71-1B MOW/W	--	0.0	1.0000	0.0	14.2	4.642	150.002A	12.990S	0.0
6-62-2B COW/W	--	0.0	1.0000	0.0	4.8	1.000	121.945A	0.788P	0.0
6-70-0 FW Drain	--	0.0	1.0000	0.0	38.7	1.001	149.419A	0.000	0.0
3-77-2 Food Wst	25.0	2.0	1.0250	2.0	8.0	12.620	169.694A	10.345P	1.0
3-77-4 Gray Wtr	25.0	24.3	1.0250	24.9	99.7	10.876	171.066A	14.005P	38.8
6-68-0 MDG Cln	--	0.0	1.0250	0.0	2.6	1.500	140.807A	0.000	0.0
3-75-6 VCHT Sg	25.0	1.3	1.0250	1.4	5.4	10.948	167.215A	12.763P	1.0
5-44-2 Fwd Foam	100.0	0.7	1.0000	0.7	0.7	15.449	50.898A	11.854P	0.0
1-65-1 Aft Foam	100.0	1.5	1.0000	1.5	1.5	19.916	131.950A	13.314S	0.0
Misc. Totals	33.0	185.5		157.4	497.3	13.238	182.947A	5.118P	89.8

Stores & Constant

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Dry Prov Stores	10.4	24.290	123.510A	10.760S
Chill Storeroom	7.8	24.290	130.990A	10.870S
Dairy Storeroom	4.3	24.290	127.180A	10.760S
Freeze Storeroom	11.3	24.290	132.940A	4.710S
Fish Storeroom	7.2	24.290	139.710A	4.710S
Thaw Room	0.0	24.290	128.620A	4.710S
Dry Prov Annex	8.0	24.290	146.870A	5.600P
Medical Stores	11.9	27.180	134.880A	4.710S
General Stores	32.2	15.975	37.450A	0.090P
Aviation Stores	11.0	24.000	168.260A	7.000S
Helicopters	21.2	21.600	161.980A	0.000
Crew	29.0	32.840	128.010A	0.000
Stores & Constant Totals	154.3	23.994	118.887A	2.692S

M/P Cargo Hold 1

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H1-Tank Top	279.4	3.525	62.381A	0.000
H1-4th Deck	197.4	7.700	61.792A	0.000
H1-3rd Deck	706.3	11.875	61.491A	0.000
H1-2nd Deck	158.8	15.975	61.237A	0.003P
M/P Cargo Hold 1 Totals	1,341.9	10.007	61.691A	0.000P

Military Sealift Command -- USNS MEDGAR EVERS (17 May 2016)
CargoMax 2.1.0303 (10 May 2016)

Printed at: 10:41 on 08 Sep 2016
Detailed Condition Summary (IACS URL5 Report)

M/P Cargo Hold 2

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H2-Tank Top	1,278.6	3.525	91.850A	0.000
H2-4th Deck	980.7	7.700	92.766A	0.001S
H2-3rd Deck	708.5	11.875	92.767A	0.002S
H2-2nd Deck	260.1	15.975	92.723A	0.008P
M/P Cargo Hold 2 Totals	3,227.9	7.629	92.400A	0.000S

Freeze/Chill Cargo Hold 3

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H3-4th Deck	299.6	7.700	121.147A	0.001S
H3-3rd Deck	168.1	11.875	121.161A	0.000
H3-2nd Deck	126.1	15.975	121.380A	0.042P
Freeze/Chill Cargo Hold 3 Totals	593.8	10.639	121.200A	0.008P

2nd DK Aft Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Spare Parts H4	388.9	15.975	152.700A	1.694S
Spare Parts H5	212.0	15.975	168.007A	0.341S
Spare Parts H6	384.1	15.975	183.833A	3.103P
Pipe & Bar Stock	45.0	15.750	142.515A	11.170S
Plt & Sht Metal	28.0	15.750	149.435A	11.170S
US Mail	3.0	15.975	150.990A	0.000
Oxidizing Agent	1.1	15.975	154.130A	0.000
4.3L Locker	1.2	15.975	170.330A	1.250P
Pyrotechnics	18.0	15.975	172.299A	0.318S
Chill Cat 8 Cargo	8.8	15.975	177.687A	12.810S
Cargo Flam Liq	16.1	15.975	186.625A	12.599S
2nd DK Aft Specialty Totals	1,106.2	15.960	166.974A	0.610S

Transfer DK Pre-Staging

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Pre-Staging Fwd	154.2	20.125	28.462A	1.746S
Pre-Staging Mid	157.6	20.125	73.802A	1.128P
Freeze/Chill Pre	115.7	20.125	120.371A	0.000
Outsize Cargo Sto	12.6	20.125	138.822A	9.510P
Handling Area 1	0.0	20.125	71.425A	0.001P
Handling Area 2	0.0	20.125	134.407A	1.472S
Hangar	0.0	20.125	160.611A	2.339P
UNREP Stations	0.0	20.125	144.737A	0.223P
Elevators	0.0	20.125	97.197A	2.405S
Transfer DK Pre-Staging Totals	440.1	20.125	72.020A	0.064P

01 Level Specialty

Name	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL
AHE & MHE Sto	13.6	24.100	23.795A	3.291S
Haz Matl	0.0	24.100	25.633A	0.004P
White Phosphor.	22.0	24.100	54.338A	7.057P
Medical Supplies	11.0	24.100	51.714A	7.054S
EOD & SWD 1	14.5	24.100	56.956A	7.055S
EOD & SWD 2	14.5	24.100	71.183A	7.056P
Plywood&Lumber	3.0	24.100	63.511A	7.057P
Fuze, Prim & Det	11.0	24.100	64.163A	7.054S
Thermite Locker	0.1	24.100	83.468A	15.814P
Handling Space	0.0	24.100	56.455A	0.001P
01 Level Specialty Totals	89.7	24.100	54.076A	0.244S

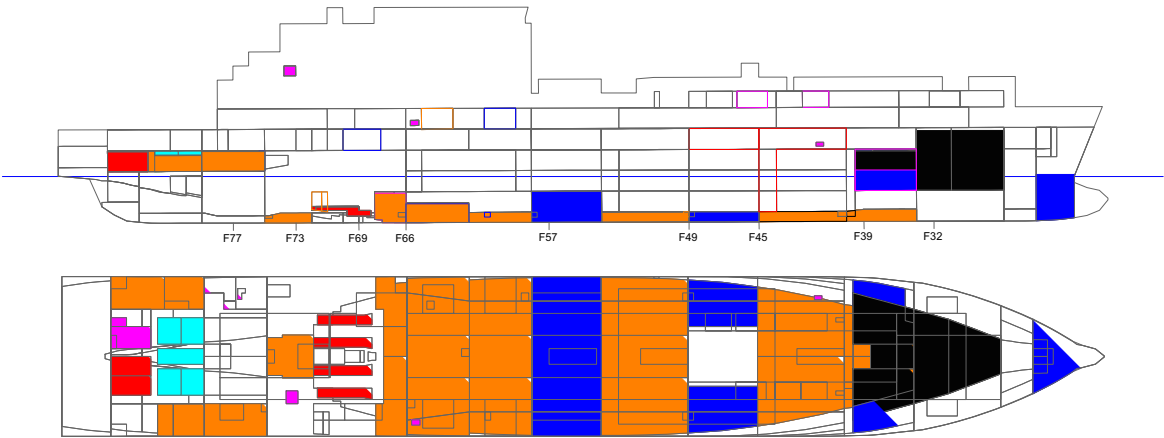
APPENDIX D

Appendix D

Example Loading Conditions

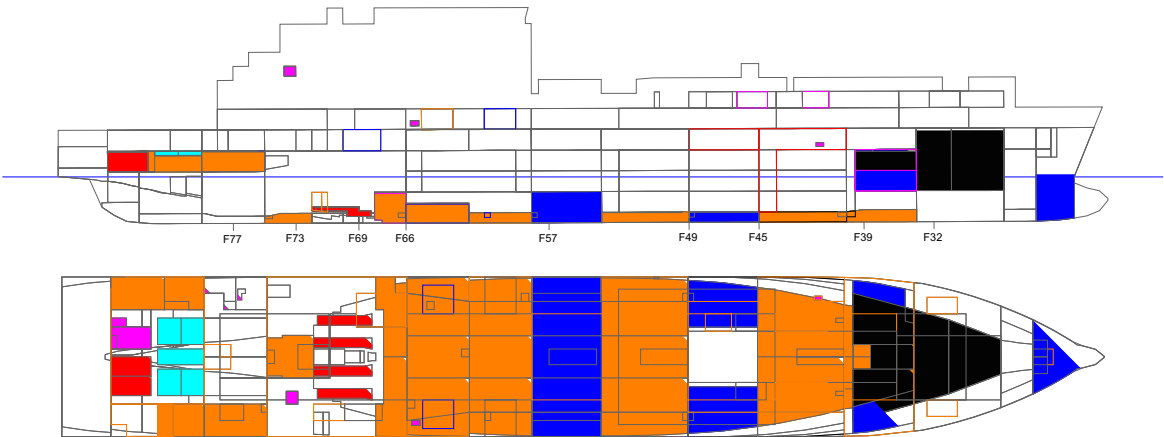
B2 Stores Cargo Departure

B2 Stores Cargo Departure
Weight Summary



Group	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT	Group Min FS m-MT
Lightship	25,254.1	14.310	107.601A	0.020S	0.0	
Cargo Oil	3,307.8	11.757	30.029A	0.000P	4,555.0	2,421.0
Fuel Oil	4,002.2	3.307	110.806A	0.029S	6,436.0	3,876.0
Lube Oil	301.6	9.642	177.625A	2.860S	606.0	606.0
Fresh Water	521.2	12.400	179.250A	0.000	143.0	143.0
Ballast	2,428.9	3.663	69.924A	0.652P	108.8	
Misc.	157.4	13.238	182.947A	5.118P	136.0	136.0
Stores & Constant	154.3	23.994	118.887A	2.692S	0.0	
M/P Cargo Hold 1	1,324.9	10.502	61.644A	0.001P	0.0	
M/P Cargo Hold 2	1,293.5	9.449	92.534A	0.001P	0.0	
Freeze/Chill Cargo Hold 3	761.0	11.122	121.203A	0.009P	0.0	
2nd DK Aft Specialty	1,101.7	15.960	167.089A	0.762S	0.0	
Transfer DK Pre-Staging	460.8	20.125	75.021A	0.489P	0.0	
01 Level Specialty	27.6	24.100	39.239A	3.666S	0.0	
ICODES	0.0	--	--	--	0.0	
Displacement	41,097.0	12.159	100.676A	0.005S	11,984.8	
Deadweight	15,842.9					
Avail Deadweight	3,682.0	--Summer Load Line--				

B2 Stores Cargo Departure
Trim and Stability Summary



Loading

Displacement	41,097.0 MT	Specific Gravity	1.0250
Deadweight	15,842.9 MT		
Avail Deadweight	3,682.0 MT	--Summer Load Line--	

Stability

KMt	15.557 m	LCF Draft	9.137 m
VCG (Upright)	12.159 m	LCF	110.337A m-FP
GMt (Solid)	3.398 m	LCB	100.676A m-FP
FS Correction	0.292 m	LCG	100.676A m-FP
GMt (Corrected)	3.107 m	TP1cm	56.1 MT/cm
GMt Required	2.447 m	MT1cm	721 m-MT/cm
GMt Margin	0.659 m	Trim at Perps	0.537A m
--Required GM--		Heel Angle	0.10S deg
		Propeller Immersion	139.8 %

Drafts - Perps

AP	9.377 m
MS	9.109 m
FP	8.841 m

Drafts - Marks

AFT	9.387 m
MS	9.109 m
FWD	8.847 m

Strength --At Sea--

Shear (Min)	-3,444.5 MT	42.100A m-FP	75.7 %
Shear (Max)	2,186.6 MT	168.260A m-FP	66.3 %
Shear (Max %Allow)	-3,444.5 MT	42.100A m-FP	75.7 %
Moment (Max Hog)	161,724.6H m-MT	90.813A m-FP	---
Moment (Max Sag)	--- m-MT	--- m-FP	---
Moment (Max %Allow)	154,422.3H m-MT	105.100A m-FP	76.8 %

Bridge Visibility - Cargo Visibility - ABS

Actual	322.843 m	Required	<402.250 m
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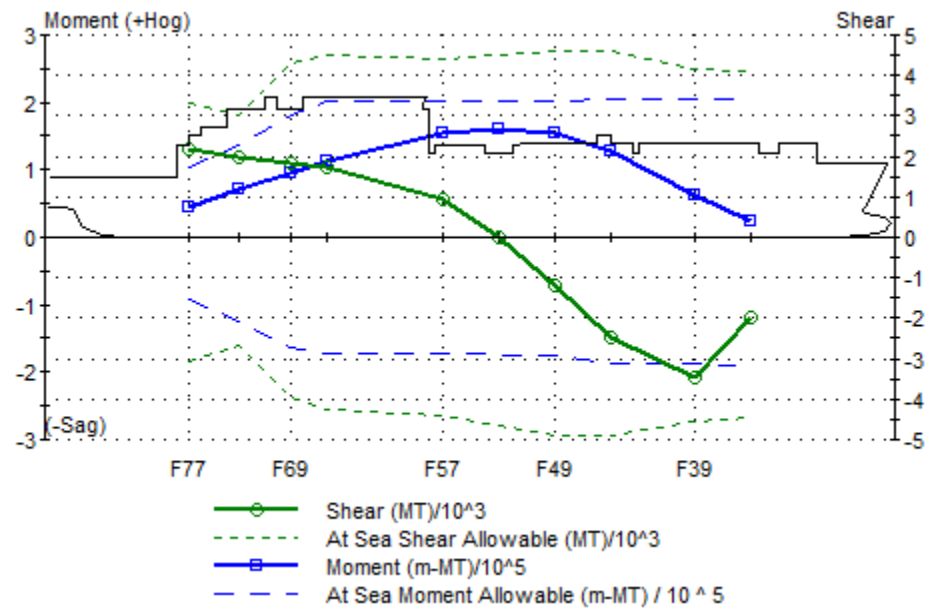
Air Draft

Actual	51.133 m
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Notes

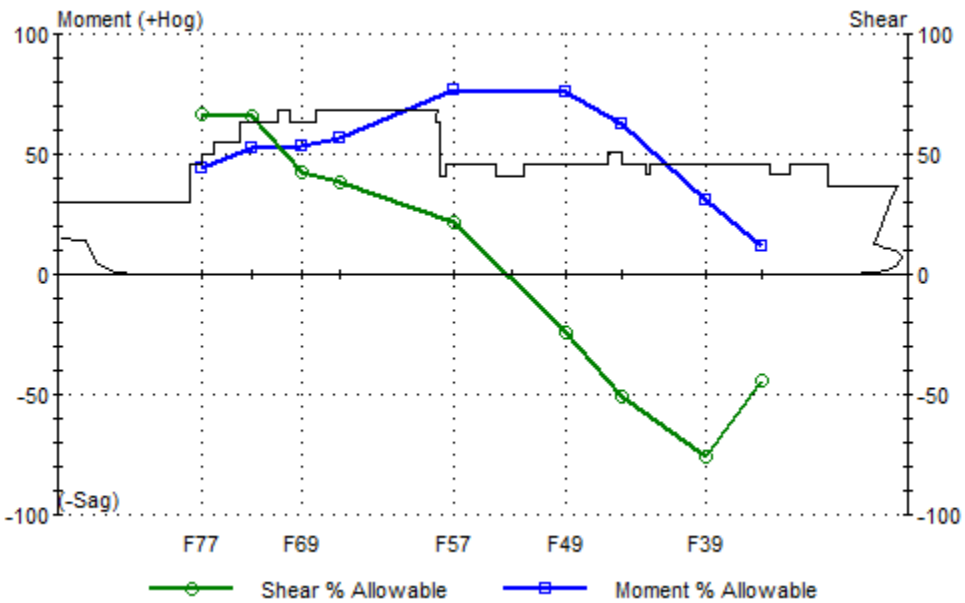
- Drafts from Keel
- Hull from Trimmed Tables
- Tanks from Tables

B2 Stores Cargo Departure
Strength Values Summary



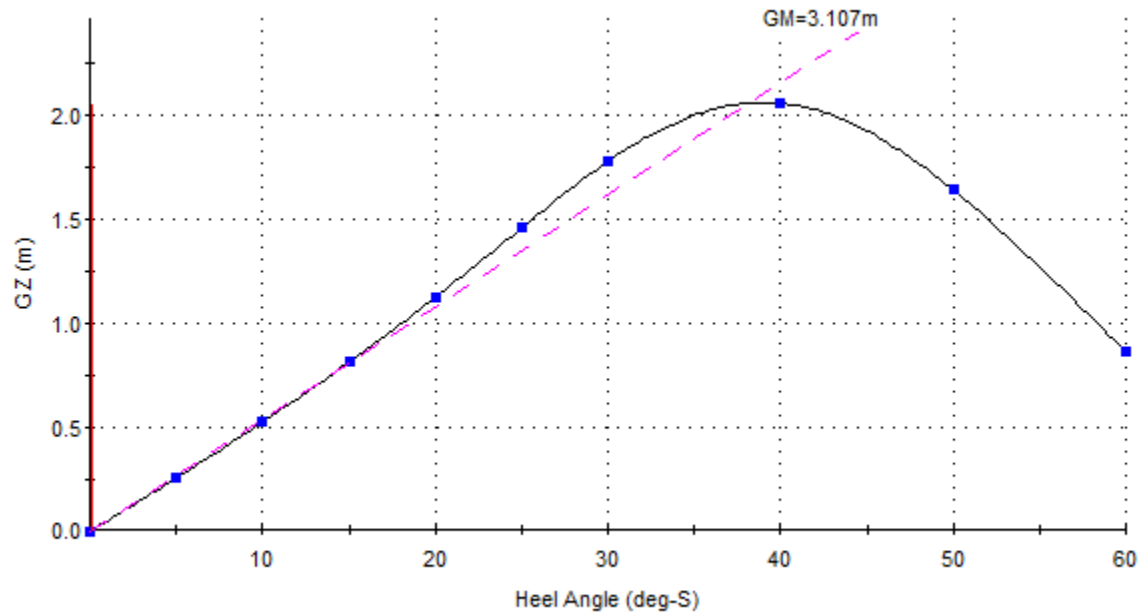
Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Wt MT	Buoy MT	Shear MT	Wt Mom m-MT	Buoy Mom m-MT	Moment m-MT
F77	168.260A	4,781.8	2,595.2	2,186.6	71,117.1	25,579.0	45,538.1H
F73	155.700A	7,118.5	5,137.4	1,981.1	145,957.9	73,315.7	72,642.1H
F69	143.140A	10,120.3	8,295.8	1,824.5	253,673.2	157,175.0	96,498.2H
F66	133.720A	12,628.5	10,907.4	1,721.1	360,717.2	247,530.7	113,186.5H
F57	105.100A	20,273.6	19,314.1	959.5	833,568.6	679,146.3	154,422.3H
MaxBM	90.813A	23,569.1	23,569.1	0.0	1,147,208.6	985,484.0	161,724.6H
F49	77.100A	26,427.2	27,614.3	-1,187.1	1,490,148.9	1,336,498.3	153,650.6H
F45	63.100A	29,133.4	31,609.6	-2,476.2	1,879,615.6	1,751,348.2	128,267.4H
F39	42.100A	33,327.5	36,771.9	-3,444.5	2,534,420.6	2,471,875.3	62,545.3H
F32	28.100A	37,156.7	39,137.7	-1,980.9	3,028,872.5	3,004,480.8	24,391.7H

B2 Stores Cargo Departure
Strength Allowables Summary



Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Shear MT	Allow MT	% Allow	Moment m-MT	Allow m-MT	%Allow
F77	168.260A	2,186.6	3,300.0	66.3	45,538.1H	102,750.0H	44.3
F73	155.700A	1,981.1	3,000.0	66.0	72,642.1H	137,950.0H	52.7
F69	143.140A	1,824.5	4,300.0	42.4	96,498.2H	182,000.0H	53.0
F66	133.720A	1,721.1	4,500.0	38.2	113,186.5H	201,100.0H	56.3
F57	105.100A	959.5	4,400.0	21.8	154,422.3H	201,100.0H	76.8
MaxBM	90.813A	0.0	---	---	161,724.6H	---	---
F49	77.100A	-1,187.1	-4,900.0	24.2	153,650.6H	203,000.0H	75.7
F45	63.100A	-2,476.2	-4,900.0	50.5	128,267.4H	204,350.0H	62.8
F39	42.100A	-3,444.5	-4,550.0	75.7	62,545.3H	204,350.0H	30.6
F32	28.100A	-1,980.9	-4,450.0	44.5	24,391.7H	204,350.0H	11.9

B2 Stores Cargo Departure
Righting Arm Summary



Angle (deg)	0.00	5.00S	10.00S	15.00S	20.00S	25.00S	30.00S	40.00S	50.00S	60.00S
GZ (m)	-0.005	0.253	0.523	0.812	1.125	1.459	1.781	2.060	1.643	0.861

Notes

GZ Curve from KN Table
Tanks from Tables
Disp. of Hull = 41,097.0MT

B2 Stores Cargo Departure
Deadweight Details by Group (All Tanks in Loaded Groups)

Cargo Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
4-24-0 FO 1C	95.0	1,087.0	0.8336	906.2	953.9	12.967	20.135A	0.000S	1,088.0
4-30-0 FO 2C	95.0	1,212.2	0.8336	1,010.5	1,063.7	12.627	28.260A	0.000P	2,277.0
4-34-1 FO 3S	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.102S	557.0
4-34-0 FO 3C	95.0	337.1	0.8336	281.0	295.8	10.113	35.975A	0.000P	76.0
4-34-2 FO 3P	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.103P	557.0
4-38.5-0 SLOP	--	0.0	0.8336	0.0	118.3	10.113	42.100A	0.000	0.0
Cargo Oil Totals	91.9	3,968.1		3,307.8	3,600.2	11.757	30.029A	0.000P	4,555.0

Fuel Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-34-1 Ships FO	95.0	219.3	0.8336	182.8	192.4	1.235	38.986A	3.741S	341.0
6-34-2 Ships FO	95.0	216.0	0.8336	180.1	189.6	1.226	39.014A	3.702P	344.0
6-40-1 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628S	742.0
6-40-2 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628P	742.0
6-49-1 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567S	719.0
6-49-01 Ship FO	95.0	250.2	0.8336	208.6	219.5	0.891	86.265A	0.000S	381.0
6-49-2 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567P	719.0
6-58-1 Ships FO	95.0	238.4	0.8336	198.7	209.2	1.003	114.765A	9.417S	496.0
6-58-0 Ships FO	95.0	199.6	0.8336	166.4	175.2	0.950	114.880A	0.000	287.0
6-58-2 Ships FO	95.0	237.9	0.8336	198.4	208.8	1.002	114.822A	9.412P	494.0
6-62-1 Ships FO	95.0	265.7	0.8336	221.5	233.2	1.428	127.149A	9.876S	24.0
6-62-01 Ship FO	95.0	190.2	0.8336	158.6	166.9	0.951	127.666A	0.038S	284.0
6-62-4 Ships FO	95.0	265.7	0.8336	221.5	233.1	1.429	127.182A	9.869P	24.0
6-66-1 Ships FO	95.0	154.9	0.8336	129.1	135.9	2.269	136.539A	9.203S	14.0
6-66-2 Ships FO	95.0	143.2	0.8336	119.4	125.7	1.812	136.586A	8.051P	9.0
6-72-0 Ships FO	95.0	125.6	0.8336	104.7	110.3	0.961	156.846A	0.000S	176.0
3-75-3 FO Serv	95.0	285.3	0.8336	237.9	250.4	12.198	168.348A	12.958S	177.0
3-79-3 Ships FO	95.0	177.4	0.8336	147.9	155.7	11.863	179.229A	12.730S	151.0
4-79-6 FO Settl	95.0	213.0	0.8336	177.6	186.9	11.978	178.260A	12.936P	150.0
3-81.5-2 FO Serv	95.0	265.8	0.8336	221.6	233.3	12.398	187.952A	12.669P	162.0
3-82-1 FO Overfl	--	0.0	0.8336	0.0	204.0	12.408	188.645A	12.663S	0.0
Fuel Oil Totals	90.6	4,801.1		4,002.2	4,416.8	3.307	110.806A	0.029S	6,436.0

Lube Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-1 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	1.953S	32.0
3-82.5-3 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	5.858S	32.0
3-73.5-2 LO Sett	--	0.0	0.9211	0.0	24.6	12.261	159.772A	13.233P	0.0
6-68-3 Sump 1	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376S	4.8
6-68-1 Sump 2	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836S	5.0
6-68-2 Sump 3	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836P	5.0
6-68-4 Sump 4	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376P	5.0
4-79-1 LO Drain	--	0.0	0.9211	0.0	112.9	7.649	176.077A	8.139S	0.0
Lube Oil Totals	65.6	327.4		301.6	459.6	9.642	177.625A	2.860S	83.8

Fresh Water

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-79-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155S	0.0
3-79-0 Dist. WTR	100.0	119.2	1.0000	119.2	119.2	12.400	179.250A	0.000S	0.0
3-79-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155P	0.0
3-80.5-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	181.605A	5.155S	0.0
3-80.5-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	181.605A	5.155P	0.0
Fresh Water Totals	100.0	521.2		521.2	521.2	12.400	179.250A	0.000	0.0

Ballast

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-M-0 F Pk SWB	50.0	334.3	1.0250	342.6	685.2	4.405	2.364A	0.000S	12.8
6-24-1 SWB	--	0.0	1.0250	0.0	1,401.3	9.440	23.345A	5.198S	0.0
6-24-2 SWB	--	0.0	1.0250	0.0	1,401.3	9.440	23.345A	5.198P	0.0
4-34-3 SWB	50.0	169.7	1.0250	174.0	347.9	8.405	37.751A	10.579S	96.0
4-35-2 SWB	100.0	290.4	1.0250	297.6	297.6	10.389	38.515A	11.504P	0.0
6-45-1 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864S	0.0
6-45-2 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864P	0.0
6-54-1 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532S	0.0
6-54-01 SWB	100.0	204.8	1.0250	209.9	209.9	0.928	101.786A	0.000S	0.0
6-54-2 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532P	0.0
4-83-1 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824S	0.0
4-83-2 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824P	0.0
Ballast Totals	39.8	2,369.6		2,428.9	6,109.1	3.663	69.924A	0.652P	108.8

Misc.

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-2 Av FO	95.0	123.2	0.8136	100.2	105.5	12.298	188.968A	3.881P	45.0
3-84-2 JP-5 Ser	95.0	21.2	0.8136	17.3	18.2	12.298	191.810A	6.925P	1.0
4-79-2 Av FO Of	--	0.0	0.8136	0.0	147.0	7.867	177.939A	8.843P	0.0
03-73-1 EDGF S	95.0	11.4	0.8336	9.5	10.0	30.330	156.878A	8.223S	3.0
6-68.5-0 FO Lea	--	0.0	0.8336	0.0	3.1	0.950	142.748A	0.000	0.0
5-71-1A MOW/O	--	0.0	0.9211	0.0	19.9	4.671	151.558A	12.918S	0.0
6-62-2A COW/O	--	0.0	0.9211	0.0	4.5	0.940	123.515A	0.788P	0.0
6-69-0 Waste O.	--	0.0	0.9211	0.0	13.6	0.950	144.710A	0.000	0.0
5-71-1B MOW/W	--	0.0	1.0000	0.0	14.2	4.642	150.002A	12.990S	0.0
6-62-2B COW/W	--	0.0	1.0000	0.0	4.8	1.000	121.945A	0.788P	0.0
6-70-0 FW Drain	--	0.0	1.0000	0.0	38.7	1.001	149.419A	0.000	0.0
3-77-2 Food Wst	25.0	2.0	1.0250	2.0	8.0	12.620	169.694A	10.345P	1.0
3-77-4 Gray Wtr	25.0	24.3	1.0250	24.9	99.7	10.876	171.066A	14.005P	38.8
6-68-0 MDG Cln	--	0.0	1.0250	0.0	2.6	1.500	140.807A	0.000	0.0
3-75-6 VCHT Sg	25.0	1.3	1.0250	1.4	5.4	10.948	167.215A	12.763P	1.0
5-44-2 Fwd Foam	100.0	0.7	1.0000	0.7	0.7	15.449	50.898A	11.854P	0.0
1-65-1 Aft Foam	100.0	1.5	1.0000	1.5	1.5	19.916	131.950A	13.314S	0.0
Misc. Totals	33.0	185.5		157.4	497.3	13.238	182.947A	5.118P	89.8

Stores & Constant

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Dry Prov Stores	10.4	24.290	123.510A	10.760S
Chill Storeroom	7.8	24.290	130.990A	10.870S
Dairy Storeroom	4.3	24.290	127.180A	10.760S
Freeze Storeroom	11.3	24.290	132.940A	4.710S
Fish Storeroom	7.2	24.290	139.710A	4.710S
Thaw Room	0.0	24.290	128.620A	4.710S
Dry Prov Annex	8.0	24.290	146.870A	5.600P
Medical Stores	11.9	27.180	134.880A	4.710S
General Stores	32.2	15.975	37.450A	0.090P
Aviation Stores	11.0	24.000	168.260A	7.000S
Helicopters	21.2	21.600	161.980A	0.000
Crew	29.0	32.840	128.010A	0.000
Stores & Constant Totals	154.3	23.994	118.887A	2.692S

M/P Cargo Hold 1

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H1-Tank Top	197.0	3.525	62.381A	0.000
H1-4th Deck	387.4	7.700	61.792A	0.000
H1-3rd Deck	388.4	11.875	61.491A	0.000
H1-2nd Deck	352.1	15.975	61.237A	0.003P
M/P Cargo Hold 1 Totals	1,324.9	10.502	61.644A	0.001P

M/P Cargo Hold 2

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H2-Tank Top	316.4	3.525	91.850A	0.000
H2-4th Deck	351.5	7.700	92.766A	0.001S
H2-3rd Deck	388.8	11.875	92.767A	0.002S
H2-2nd Deck	236.8	15.975	92.723A	0.008P
M/P Cargo Hold 2 Totals	1,293.5	9.449	92.534A	0.001P

Freeze/Chill Cargo Hold 3

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H3-4th Deck	299.3	7.700	121.147A	0.001S
H3-3rd Deck	296.6	11.875	121.161A	0.000
H3-2nd Deck	165.1	15.975	121.380A	0.042P
Freeze/Chill Cargo Hold 3 Totals	761.0	11.122	121.203A	0.009P

2nd DK Aft Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Spare Parts H4	388.9	15.975	152.700A	1.694S
Spare Parts H5	212.0	15.975	168.007A	0.341S
Spare Parts H6	384.1	15.975	183.833A	3.103P
Pipe & Bar Stock	45.0	15.750	142.515A	11.170S
Plt & Sht Metal	28.0	15.750	149.435A	11.170S
US Mail	3.0	15.975	150.990A	0.000
Oxidizing Agent	1.1	15.975	154.130A	0.000
4.3L Locker	1.2	15.975	170.330A	1.250P
Pyrotechnics	0.0	15.975	172.299A	0.318S
Chill Cat 8 Cargo	13.6	15.975	177.687A	12.810S
Cargo Flam Liq	24.8	15.975	186.625A	12.599S
2nd DK Aft Specialty Totals	1,101.7	15.960	167.089A	0.762S

Transfer DK Pre-Staging

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Pre-Staging Fwd	154.2	20.125	28.462A	1.746S
Pre-Staging Mid	157.6	20.125	73.802A	1.128P
Freeze/Chill Pre	115.7	20.125	120.371A	0.000
Outsize Cargo Sto	33.3	20.125	138.822A	9.510P
Handling Area 1	0.0	20.125	71.425A	0.001P
Handling Area 2	0.0	20.125	134.407A	1.472S
Hangar	0.0	20.125	160.611A	2.339P
UNREP Stations	0.0	20.125	144.737A	0.223P
Elevators	0.0	20.125	97.197A	2.405S
Transfer DK Pre-Staging Totals	460.8	20.125	75.021A	0.489P

01 Level Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
AHE & MHE Sto	13.6	24.100	23.795A	3.291S
Haz Matl	0.0	24.100	25.633A	0.004P
White Phosphor.	0.0	24.100	54.338A	7.057P
Medical Supplies	11.0	24.100	51.714A	7.054S
EOD & SWD 1	0.0	24.100	56.956A	7.055S
EOD & SWD 2	0.0	24.100	71.183A	7.056P
Plywood&Lumber	3.0	24.100	63.511A	7.057P
Fuze, Prim & Det	0.0	24.100	64.163A	7.054S
Thermite Locker	0.0	24.100	83.468A	15.814P
Handling Space	0.0	24.100	56.455A	0.001P
01 Level Specialty Totals	27.6	24.100	39.239A	3.666S

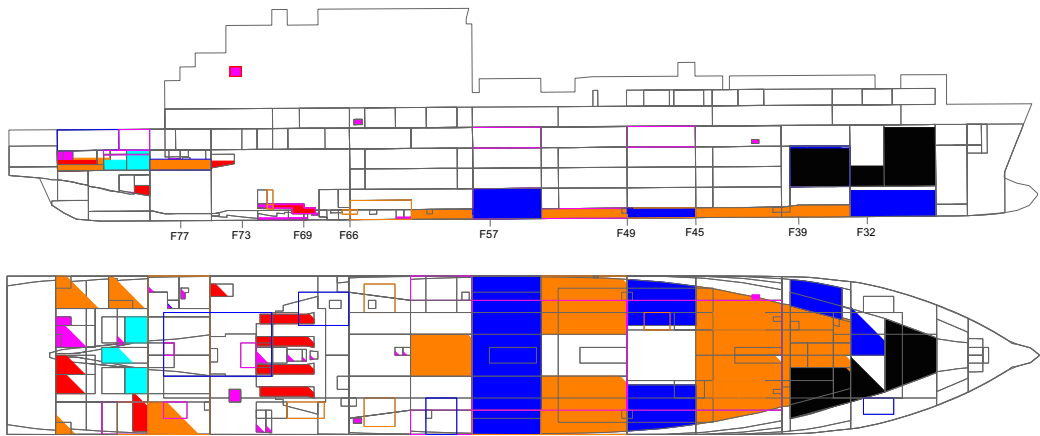
APPENDIX E

Appendix E

Example Loading Conditions

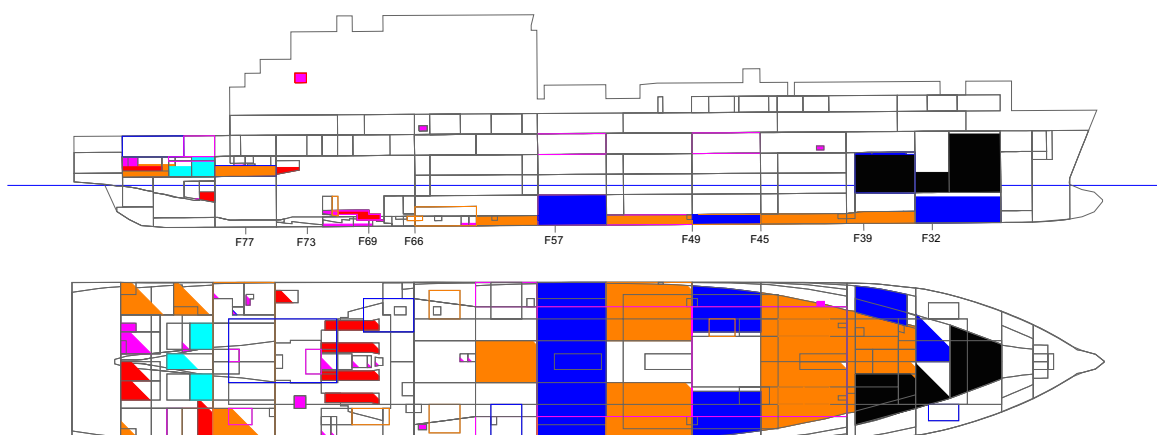
B1 Mixed Cargo Intermediate

B1 Mixed Cargo Intermediate
Weight Summary



Group	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT	Group Min FS m-MT
Lightship	25,254.1	14.310	107.601A	0.020S	0.0	
Cargo Oil	1,833.5	11.351	27.262A	1.847S	3,073.5	2,421.0
Fuel Oil	2,052.1	3.002	89.601A	0.148P	4,598.2	3,876.0
Lube Oil	265.7	7.696	171.849A	2.689S	606.0	606.0
Fresh Water	260.6	12.166	177.434A	0.000	143.0	143.0
Ballast	2,332.7	3.035	73.976A	1.949P	469.4	
Misc.	151.3	10.533	174.258A	4.225P	419.4	136.0
Stores & Constant	102.4	25.001	124.658A	2.038S	0.0	
M/P Cargo Hold 1	585.1	10.183	61.675A	0.000P	0.0	
M/P Cargo Hold 2	1,522.7	7.573	92.395A	0.000S	0.0	
Freeze/Chill Cargo Hold 3	265.3	10.553	121.199A	0.008P	0.0	
2nd DK Aft Specialty	550.9	15.960	166.903A	0.561S	0.0	
Transfer DK Pre-Staging	433.8	20.125	71.050A	0.073S	0.0	
01 Level Specialty	44.9	24.100	54.065A	0.262S	0.0	
ICODES	0.0	--	--	--	0.0	
Displacement	35,655.2	12.444	100.657A	0.009P	9,309.3	
Deadweight	10,401.0					
Avail Deadweight	9,123.8	--Summer Load Line--				

B1 Mixed Cargo Intermediate Trim and Stability Summary



Loading

Displacement	35,655.2 MT	Specific Gravity	1.0250
Deadweight	10,401.0 MT		
Avail Deadweight	9,123.8 MT	--Summer Load Line--	

Stability

KMt	16.041 m	LCF Draft	8.147 m
VCG (Upright)	12.444 m	LCF	108.181A m-FP
GMt (Solid)	3.597 m	LCB	100.657A m-FP
FS Correction	0.261 m	LCG	100.657A m-FP
GMt (Corrected)	3.336 m	TP1cm	53.3 MT/cm
GMt Required	2.696 m	MT1cm	638 m-MT/cm
GMt Margin	0.639 m	Trim at Perps	1.209A m
--Required GM--		Heel Angle	0.17P deg
		Propeller Immersion	129.1 %

Drafts - Perps

AP	8.701 m
MS	8.096 m
FP	7.492 m

Drafts - Marks

AFT	8.695 m
MS	8.096 m
FWD	7.506 m

Strength --At Sea--

Shear (Min)	-2,686.2 MT	42.100A m-FP	59.0 %
Shear (Max)	1,860.2 MT	168.260A m-FP	56.4 %
Shear (Max %Allow)	-2,686.2 MT	42.100A m-FP	59.0 %
Moment (Max Hog)	131,196.4H m-MT	93.182A m-FP	---
Moment (Max Sag)	--- m-MT	--- m-FP	---
Moment (Max %Allow)	129,197.6H m-MT	105.100A m-FP	64.2 %

Bridge Visibility - Cargo Visibility - ABS

Actual	358.195 m	Required	<402.250 m
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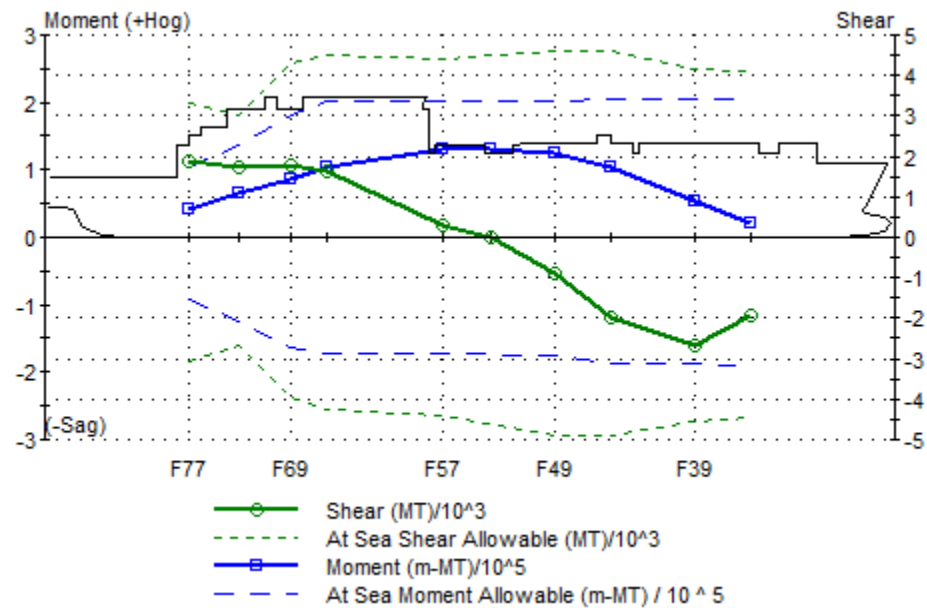
Air Draft

Actual	52.086 m
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Notes

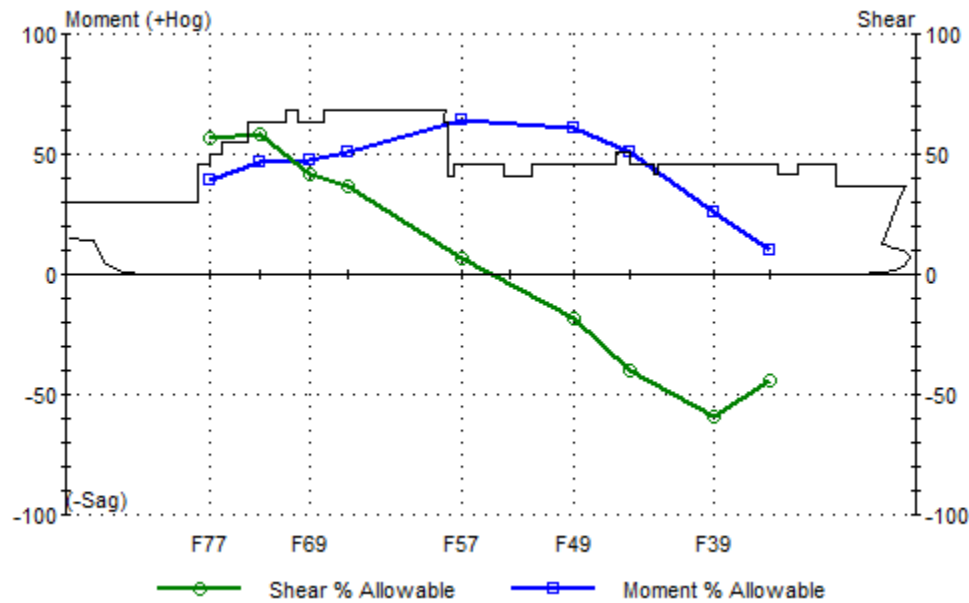
Drafts from Keel
Hull from Trimmed Tables
Tanks from Tables

B1 Mixed Cargo Intermediate
Strength Values Summary



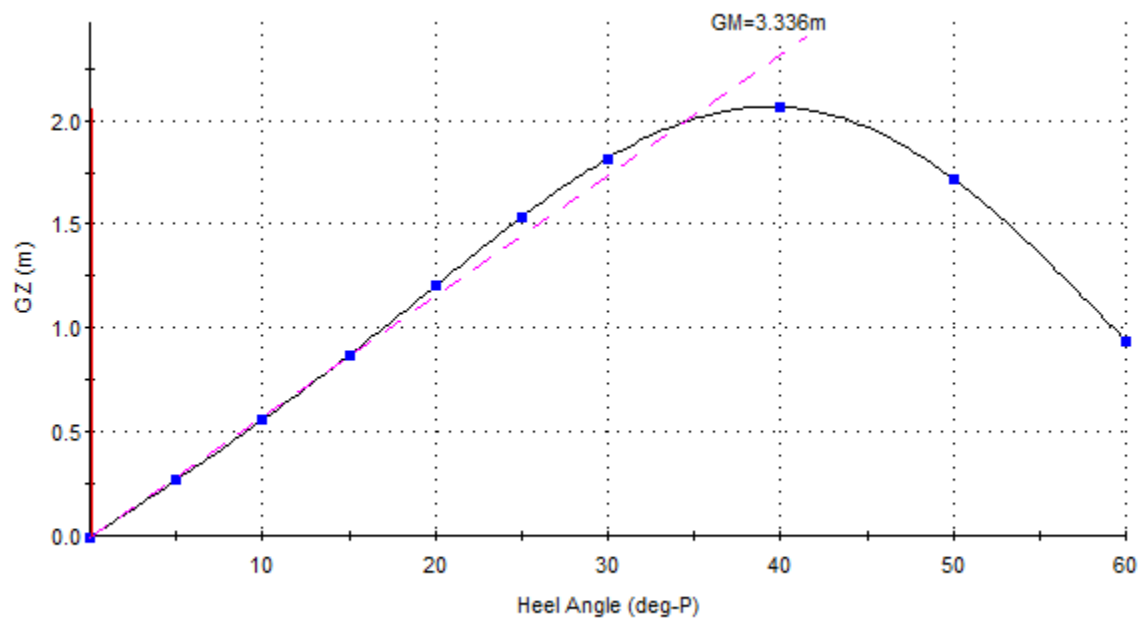
Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Wt MT	Buoy MT	Shear MT	Wt Mom m-MT	Buoy Mom m-MT	Moment m-MT
F77	168.260A	3,837.3	1,977.1	1,860.2	57,939.1	17,273.9	40,665.2H
F73	155.700A	5,936.2	4,190.0	1,746.1	119,504.3	55,205.8	64,298.4H
F69	143.140A	8,790.6	6,997.4	1,793.2	211,227.0	124,982.6	86,244.4H
F66	133.720A	10,983.3	9,333.5	1,649.8	304,679.8	201,817.1	102,862.7H
F57	105.100A	17,140.3	16,842.1	298.2	704,953.9	575,756.3	129,197.6H
MaxBM	93.182A	19,989.8	19,991.4	-1.7	926,457.6	795,261.2	131,196.4H
F49	77.100A	23,294.4	24,173.0	-878.6	1,274,616.9	1,150,534.9	124,082.0H
F45	63.100A	25,672.5	27,650.8	-1,978.3	1,617,904.8	1,513,602.0	104,302.8H
F39	42.100A	29,358.4	32,044.7	-2,686.2	2,195,186.5	2,142,795.3	52,391.2H
F32	28.100A	32,052.7	34,002.6	-1,949.9	2,625,799.8	2,606,199.4	19,600.4H

B1 Mixed Cargo Intermediate
Strength Allowables Summary



Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Shear MT	Allow MT	% Allow	Moment m-MT	Allow m-MT	%Allow
F77	168.260A	1,860.2	3,300.0	56.4	40,665.2H	102,750.0H	39.6
F73	155.700A	1,746.1	3,000.0	58.2	64,298.4H	137,950.0H	46.6
F69	143.140A	1,793.2	4,300.0	41.7	86,244.4H	182,000.0H	47.4
F66	133.720A	1,649.8	4,500.0	36.7	102,862.7H	201,100.0H	51.2
F57	105.100A	298.2	4,400.0	6.8	129,197.6H	201,100.0H	64.2
MaxBM	93.182A	-1.7	---	---	131,196.4H	---	---
F49	77.100A	-878.6	-4,900.0	17.9	124,082.0H	203,000.0H	61.1
F45	63.100A	-1,978.3	-4,900.0	40.4	104,302.8H	204,350.0H	51.0
F39	42.100A	-2,686.2	-4,550.0	59.0	52,391.2H	204,350.0H	25.6
F32	28.100A	-1,949.9	-4,450.0	43.8	19,600.4H	204,350.0H	9.6

B1 Mixed Cargo Intermediate
Righting Arm Summary



Angle (deg)	0.00	5.00P	10.00P	15.00P	20.00P	25.00P	30.00P	40.00P	50.00P	60.00P
GZ (m)	-0.009	0.267	0.558	0.870	1.203	1.534	1.817	2.065	1.719	0.938

Notes

GZ Curve from KN Table
Tanks from Tables
Disp. of Hull = 35,655.2MT

B1 Mixed Cargo Intermediate
Deadweight Details by Group (All Tanks in Loaded Groups)

Cargo Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
4-24-0 FO 1C	95.0	1,087.0	0.8336	906.2	953.9	12.967	20.135A	0.000S	1,088.0
4-30-0 FO 2C	35.0	446.6	0.8336	372.3	1,063.7	8.846	28.287A	0.000S	1,428.5
4-34-1 FO 3S	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.102S	557.0
4-34-0 FO 3C	--	0.0	0.8336	0.0	295.8	10.113	35.975A	0.000	0.0
4-34-2 FO 3P	--	0.0	0.8336	0.0	584.3	10.394	38.210A	6.102P	0.0
4-38.5-0 SLOP	--	0.0	0.8336	0.0	118.3	10.113	42.100A	0.000	0.0
Cargo Oil Totals	50.9	2,199.5		1,833.5	3,600.2	11.351	27.262A	1.847S	3,073.5

Fuel Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-34-1 Ships FO	95.0	219.3	0.8336	182.8	192.4	1.235	38.986A	3.741S	341.0
6-34-2 Ships FO	95.0	216.0	0.8336	180.1	189.6	1.226	39.014A	3.702P	344.0
6-40-1 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628S	742.0
6-40-2 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628P	742.0
6-49-1 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567S	719.0
6-49-01 Ship FO	--	0.0	0.8336	0.0	219.5	0.891	86.265A	0.000	0.0
6-49-2 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567P	719.0
6-58-1 Ships FO	--	0.0	0.8336	0.0	209.2	1.003	114.765A	9.417S	0.0
6-58-0 Ships FO	95.0	199.6	0.8336	166.4	175.2	0.950	114.880A	0.000	287.0
6-58-2 Ships FO	--	0.0	0.8336	0.0	208.8	1.002	114.822A	9.412P	0.0
6-62-1 Ships FO	--	0.0	0.8336	0.0	233.2	1.428	127.149A	9.876S	0.0
6-62-01 Ship FO	--	0.0	0.8336	0.0	166.9	0.951	127.666A	0.038S	0.0
6-62-4 Ships FO	--	0.0	0.8336	0.0	233.1	1.429	127.182A	9.869P	0.0
6-66-1 Ships FO	--	0.0	0.8336	0.0	135.9	2.269	136.539A	9.203S	0.0
6-66-2 Ships FO	--	0.0	0.8336	0.0	125.7	1.812	136.589A	8.051P	0.0
6-72-0 Ships FO	--	0.0	0.8336	0.0	110.3	0.961	156.846A	0.000	0.0
3-75-3 FO Serv	53.6	161.0	0.8336	134.2	250.4	11.380	168.378A	12.836S	239.0
3-79-3 Ships FO	--	0.0	0.8336	0.0	155.7	11.863	179.229A	12.730S	0.0
4-79-6 FO Settl	50.0	112.1	0.8336	93.5	186.9	10.842	178.062A	12.963P	106.5
3-81.5-2 FO Serv	50.0	139.9	0.8336	116.6	233.3	11.461	187.921A	12.576P	203.6
3-82-1 FO Overfl	25.0	61.2	0.8336	51.0	204.0	10.925	188.598A	12.450S	155.1
Fuel Oil Totals	46.5	2,461.8		2,052.1	4,416.8	3.002	89.601A	0.148P	4,598.2

Lube Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-1 LO Stor	50.0	63.1	0.9211	58.1	116.3	11.375	189.358A	1.953S	37.0
3-82.5-3 LO Stor	50.0	63.1	0.9211	58.1	116.3	11.375	189.358A	5.858S	37.0
3-73.5-2 LO Sett	50.0	13.3	0.9211	12.3	24.6	11.724	159.904A	13.233P	6.0
6-68-3 Sump 1	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376S	4.8
6-68-1 Sump 2	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836S	5.0
6-68-2 Sump 3	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836P	5.0
6-68-4 Sump 4	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376P	5.0
4-79-1 LO Drain	50.0	61.3	0.9211	56.4	112.9	6.848	176.044A	7.495S	415.1
Lube Oil Totals	57.8	288.4		265.7	459.6	7.696	171.849A	2.689S	514.9

Fresh Water

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-79-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155S	0.0
3-79-0 Dist. WTR	50.0	59.6	1.0000	59.6	119.2	11.375	179.250A	0.000P	25.0
3-79-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155P	0.0
3-80.5-1 Ship PT	--	0.0	1.0000	0.0	100.5	12.400	181.605A	5.155S	0.0
3-80.5-2 Cargo PT	--	0.0	1.0000	0.0	100.5	12.400	181.605A	5.155P	0.0
Fresh Water Totals	50.0	260.6		260.6	521.2	12.166	177.434A	0.000	25.0

Ballast

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-M-0 F Pk SWB	--	0.0	1.0250	0.0	685.2	9.774	2.900A	0.000	0.0
6-24-1 SWB	--	0.0	1.0250	0.0	1,401.3	9.440	23.345A	5.198S	0.0
6-24-2 SWB	30.0	410.1	1.0250	420.4	1,401.3	2.743	24.033A	2.672P	469.4
4-34-3 SWB	--	0.0	1.0250	0.0	347.9	10.409	37.641A	11.279S	0.0
4-35-2 SWB	100.0	290.4	1.0250	297.6	297.6	10.389	38.515A	11.504P	0.0
6-45-1 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864S	0.0
6-45-2 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864P	0.0
6-54-1 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532S	0.0
6-54-01 SWB	100.0	204.8	1.0250	209.9	209.9	0.928	101.786A	0.000S	0.0
6-54-2 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532P	0.0
4-83-1 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824S	0.0
4-83-2 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824P	0.0
Ballast Totals	38.2	2,275.8		2,332.7	6,109.1	3.035	73.976A	1.949P	469.4

Misc.

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-2 Av FO	50.0	64.8	0.8136	52.7	105.5	11.375	188.968A	3.881P	45.0
3-84-2 JP-5 Ser	95.0	21.2	0.8136	17.3	18.2	12.298	191.810A	6.925P	1.0
4-79-2 Av FO Of	10.0	18.1	0.8136	14.7	147.0	6.349	177.378A	7.070P	297.9
03-73-1 EDGF S	95.0	11.4	0.8336	9.5	10.0	30.330	156.878A	8.223S	3.0
6-68.5-0 FO Lea	25.0	0.9	0.8336	0.8	3.1	0.250	142.748A	0.000P	1.0
5-71-1A MOW/O	25.0	5.4	0.9211	5.0	19.9	3.481	151.524A	12.308S	5.0
6-62-2A COW/O	25.0	1.2	0.9211	1.1	4.5	0.250	123.515A	0.788P	1.0
6-69-0 Waste O.	25.0	3.7	0.9211	3.4	13.6	0.250	144.710A	0.000P	3.0
5-71-1B MOW/W	25.0	3.6	1.0000	3.6	14.2	3.299	149.990A	12.348S	3.6
6-62-2B COW/W	25.0	1.2	1.0000	1.2	4.8	0.250	121.945A	0.788P	1.0
6-70-0 FW Drain	25.0	9.7	1.0000	9.7	38.7	0.252	149.415A	0.000	16.0
3-77-2 Food Wst	25.0	2.0	1.0250	2.0	8.0	12.620	169.694A	10.345P	1.0
3-77-4 Gray Wtr	25.0	24.3	1.0250	24.9	99.7	10.876	171.066A	14.005P	38.8
6-68-0 MDG Cln	25.0	0.6	1.0250	0.6	2.6	1.125	140.807A	0.000S	1.0
3-75-6 VCHT Sg	50.0	2.7	1.0250	2.7	5.4	11.225	167.215A	12.763P	1.0
5-44-2 Fwd Foam	100.0	0.7	1.0000	0.7	0.7	15.449	50.898A	11.854P	0.0
1-65-1 Aft Foam	100.0	1.5	1.0000	1.5	1.5	19.916	131.950A	13.314S	0.0
Misc. Totals	30.7	172.9		151.3	497.3	10.533	174.258A	4.225P	419.4

Stores & Constant

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Dry Prov Stores	5.2	24.290	123.510A	10.760S
Chill Storeroom	3.9	24.290	130.990A	10.870S
Dairy Storeroom	2.2	24.290	127.180A	10.760S
Freeze Storeroom	5.7	24.290	132.940A	4.710S
Fish Storeroom	3.6	24.290	139.710A	4.710S
Thaw Room	0.0	24.290	128.620A	4.710S
Dry Prov Annex	4.0	24.290	146.870A	5.600P
Medical Stores	6.0	27.180	134.880A	4.710S
General Stores	16.1	15.975	37.450A	0.090P
Aviation Stores	5.5	24.000	168.260A	7.000S
Helicopters	21.2	21.600	161.980A	0.000
Crew	29.0	32.840	128.010A	0.000
Stores & Constant Totals	102.4	25.001	124.658A	2.038S

M/P Cargo Hold 1

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H1-Tank Top	116.5	3.525	62.381A	0.000
H1-4th Deck	68.7	7.700	61.792A	0.000
H1-3rd Deck	334.2	11.875	61.491A	0.000
H1-2nd Deck	65.7	15.975	61.237A	0.003P
M/P Cargo Hold 1 Totals	585.1	10.183	61.675A	0.000P

Military Sealift Command -- USNS MEDGAR EVERS (17 May 2016)
CargoMax 2.1.0303 (10 May 2016)

Printed at: 10:42 on 08 Sep 2016
Detailed Condition Summary (IACS URL5 Report)

M/P Cargo Hold 2

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H2-Tank Top	612.4	3.525	91.850A	0.000
H2-4th Deck	458.8	7.700	92.766A	0.001S
H2-3rd Deck	334.9	11.875	92.767A	0.002S
H2-2nd Deck	116.6	15.975	92.723A	0.008P
M/P Cargo Hold 2 Totals	1,522.7	7.573	92.395A	0.000S

Freeze/Chill Cargo Hold 3

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H3-4th Deck	138.1	7.700	121.147A	0.001S
H3-3rd Deck	72.1	11.875	121.161A	0.000
H3-2nd Deck	55.1	15.975	121.380A	0.042P
Freeze/Chill Cargo Hold 3 Totals	265.3	10.553	121.199A	0.008P

2nd DK Aft Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Spare Parts H4	194.5	15.975	152.700A	1.694S
Spare Parts H5	106.0	15.975	168.007A	0.341S
Spare Parts H6	192.0	15.975	183.833A	3.103P
Pipe & Bar Stock	22.5	15.750	142.515A	11.170S
Plt & Sht Metal	14.0	15.750	149.435A	11.170S
US Mail	1.5	15.975	150.990A	0.000
Oxidizing Agent	0.6	15.975	154.130A	0.000
4.3L Locker	0.6	15.975	170.330A	1.250P
Pyrotechnics	9.0	15.975	172.299A	0.318S
Chill Cat 8 Cargo	3.6	15.975	177.687A	12.810S
Cargo Flam Liq	6.6	15.975	186.625A	12.599S
2nd DK Aft Specialty Totals	550.9	15.960	166.903A	0.561S

Transfer DK Pre-Staging

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Pre-Staging Fwd	154.2	20.125	28.462A	1.746S
Pre-Staging Mid	157.6	20.125	73.802A	1.128P
Freeze/Chill Pre	115.7	20.125	120.371A	0.000
Outsize Cargo Sto	6.3	20.125	138.822A	9.510P
Handling Area 1	0.0	20.125	71.425A	0.001P
Handling Area 2	0.0	20.125	134.407A	1.472S
Hangar	0.0	20.125	160.611A	2.339P
UNREP Stations	0.0	20.125	144.737A	0.223P
Elevators	0.0	20.125	97.197A	2.405S
Transfer DK Pre-Staging Totals	433.8	20.125	71.050A	0.073S

01 Level Specialty

Name	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL
AHE & MHE Sto	6.8	24.100	23.795A	3.291S
Haz Matl	0.0	24.100	25.633A	0.004P
White Phosphor.	11.0	24.100	54.338A	7.057P
Medical Supplies	5.5	24.100	51.714A	7.054S
EOD & SWD 1	7.3	24.100	56.956A	7.055S
EOD & SWD 2	7.3	24.100	71.183A	7.056P
Plywood&Lumber	1.5	24.100	63.511A	7.057P
Fuze, Prim & Det	5.5	24.100	64.163A	7.054S
Thermite Locker	0.0	24.100	83.468A	15.814P
Handling Space	0.0	24.100	56.455A	0.001P
01 Level Specialty Totals	44.9	24.100	54.065A	0.262S

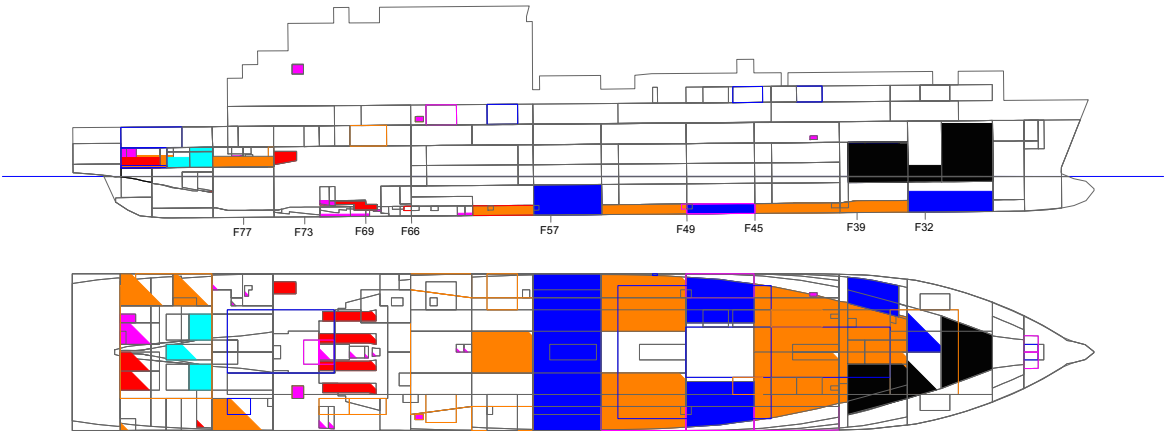
APPENDIX F

Appendix F

Example Loading Conditions

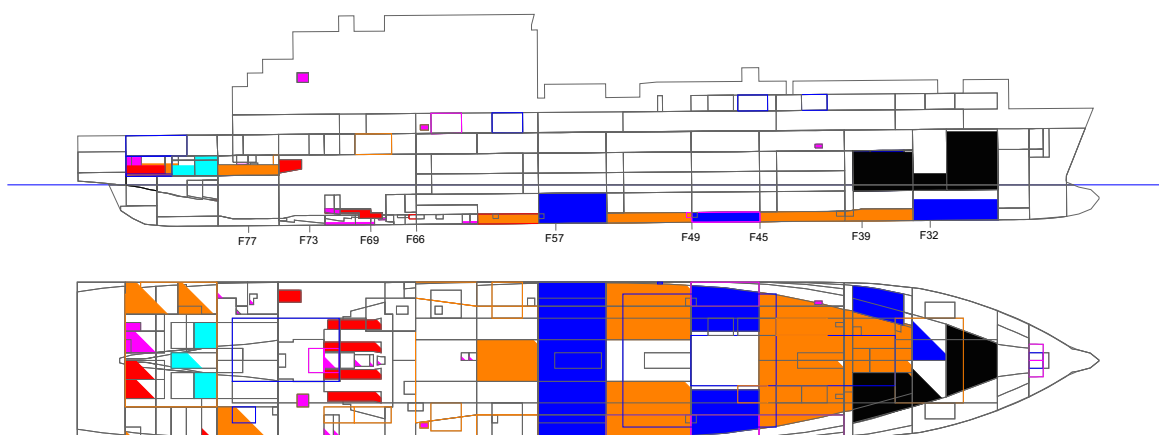
B2 Stores Cargo Intermediate

B2 Stores Cargo Intermediate
Weight Summary



Group	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT	Group Min FS m-MT
Lightship	25,254.1	14.310	107.601A	0.020S	0.0	
Cargo Oil	1,780.4	11.362	27.232A	1.903S	2,908.4	2,421.0
Fuel Oil	2,021.5	2.879	88.103A	0.339P	4,576.4	3,876.0
Lube Oil	231.6	8.064	170.438A	0.906S	606.0	606.0
Fresh Water	260.6	12.166	177.434A	0.000	143.0	143.0
Ballast	2,262.6	2.987	75.520A	1.912P	419.5	
Misc.	135.3	10.978	173.989A	3.830P	136.0	136.0
Stores & Constant	102.4	25.001	124.658A	2.038S	0.0	
M/P Cargo Hold 1	576.6	10.754	61.621A	0.001P	0.0	
M/P Cargo Hold 2	555.6	9.593	92.542A	0.001P	0.0	
Freeze/Chill Cargo Hold 3	349.0	11.101	121.202A	0.009P	0.0	
2nd DK Aft Specialty	548.7	15.960	167.020A	0.715S	0.0	
Transfer DK Pre-Staging	444.2	20.125	72.637A	0.152P	0.0	
01 Level Specialty	13.8	24.100	39.239A	3.666S	0.0	
ICODES	0.0	--	--	--	0.0	
Displacement	34,536.4	12.645	101.068A	0.025P	8,789.3	
Deadweight	9,282.2					
Avail Deadweight	10,242.6	--Summer Load Line--				

B2 Stores Cargo Intermediate Trim and Stability Summary



Loading

Displacement	34,536.4 MT	Specific Gravity	1.0250
Deadweight	9,282.2 MT		
Avail Deadweight	10,242.6 MT	--Summer Load Line--	

Stability

KMt	16.214 m	LCF Draft	7.940 m
VCG (Upright)	12.645 m	LCF	107.986A m-FP
GMt (Solid)	3.569 m	LCB	101.068A m-FP
FS Correction	0.254 m	LCG	101.068A m-FP
GMt (Corrected)	3.315 m	TP1cm	52.2 MT/cm
GMt Required	2.851 m	MT1cm	630 m-MT/cm
GMt Margin	0.464 m	Trim at Perps	1.560A m
--Required GM--		Heel Angle	0.46P deg
		Propeller Immersion	128.3 %

Drafts - Perps

AP	8.656 m
MS	7.875 m
FP	7.095 m

Drafts - Marks

AFT	8.648 m
MS	7.875 m
FWD	7.114 m

Strength --At Sea--

Shear (Min)	-2,753.0 MT	42.100A m-FP	60.5 %
Shear (Max)	1,870.7 MT	143.140A m-FP	43.5 %
Shear (Max %Allow)	-2,753.0 MT	42.100A m-FP	60.5 %
Moment (Max Hog)	141,764.8H m-MT	92.754A m-FP	---
Moment (Max Sag)	--- m-MT	--- m-FP	---
Moment (Max %Allow)	137,755.9H m-MT	105.100A m-FP	68.5 %

Bridge Visibility - Cargo Visibility - ABS

Actual	373.512 m	Required	<402.250 m
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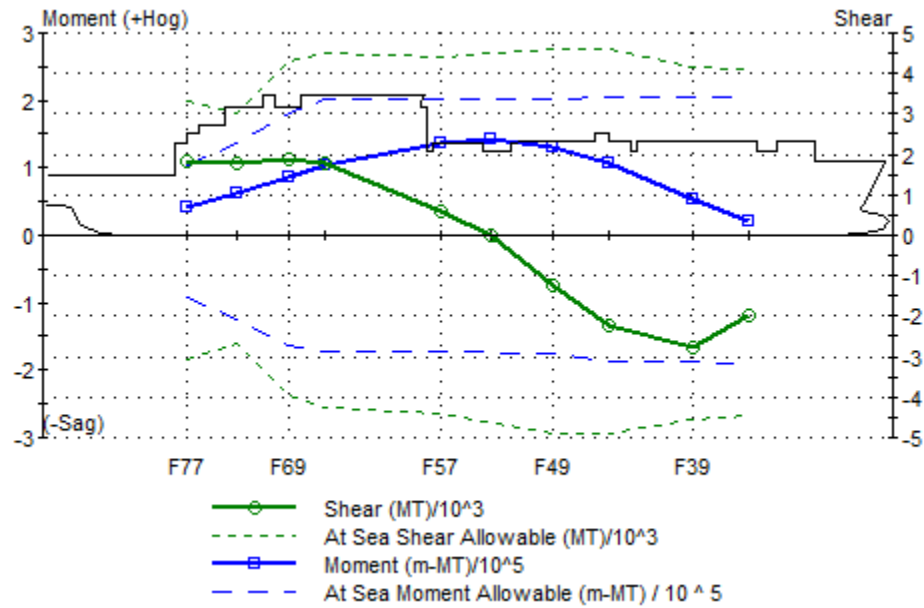
Air Draft

Actual	52.274 m
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Notes

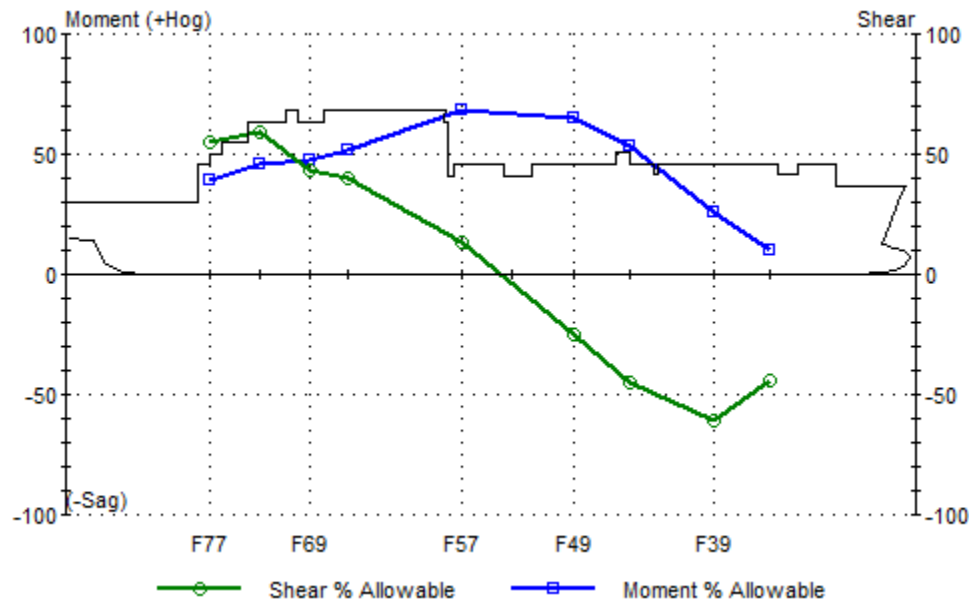
Drafts from Keel
Hull from Trimmed Tables
Tanks from Tables

B2 Stores Cargo Intermediate
Strength Values Summary



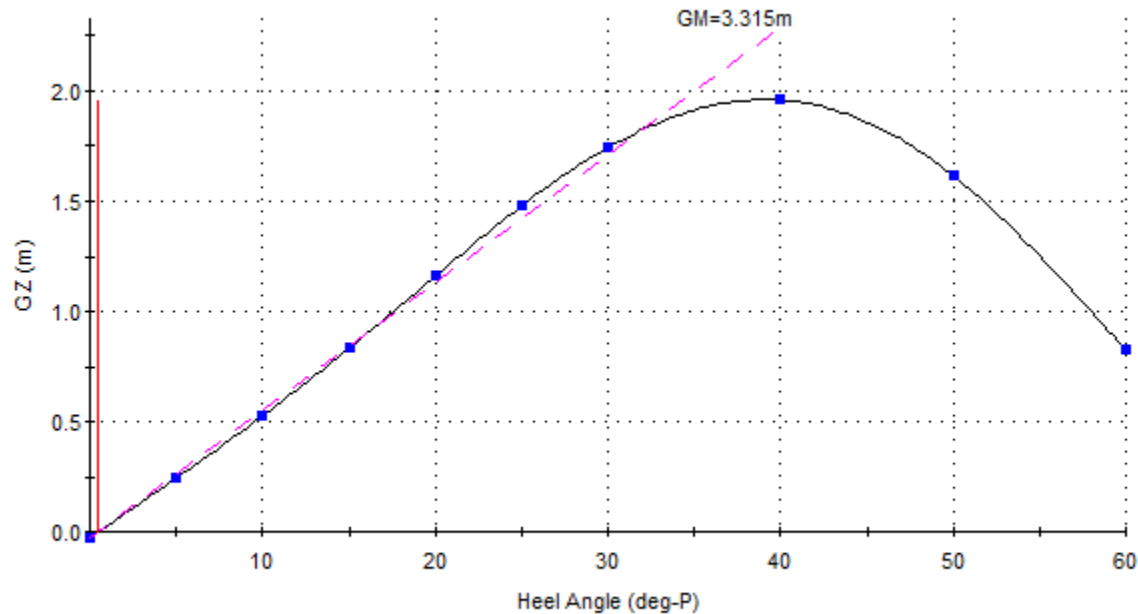
Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Wt MT	Buoy MT	Shear MT	Wt Mom m-MT	Buoy Mom m-MT	Moment m-MT
F77	168.260A	3,744.7	1,917.9	1,826.8	56,895.8	16,610.4	40,285.4H
F73	155.700A	5,853.2	4,085.6	1,767.6	117,325.2	53,525.3	63,799.9H
F69	143.140A	8,708.4	6,837.7	1,870.7	208,006.5	121,653.5	86,353.0H
F66	133.720A	10,910.7	9,126.1	1,784.6	300,730.8	196,763.2	103,967.7H
F57	105.100A	17,053.8	16,457.8	596.0	700,107.2	562,351.3	137,755.9H
MaxBM	92.754A	19,627.2	19,628.5	-1.3	926,906.5	785,141.7	141,764.8H
F49	77.100A	22,338.5	23,568.9	-1,230.4	1,255,543.2	1,123,401.4	132,141.8H
F45	63.100A	24,700.3	26,919.5	-2,219.2	1,585,340.9	1,477,130.8	108,210.1H
F39	42.100A	28,362.9	31,115.9	-2,753.0	2,141,880.8	2,088,875.6	53,005.2H
F32	28.100A	31,009.7	32,966.2	-1,956.5	2,558,471.6	2,538,481.6	19,990.0H

B2 Stores Cargo Intermediate
Strength Allowables Summary



Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Shear MT	Allow MT	% Allow	Moment m-MT	Allow m-MT	%Allow
F77	168.260A	1,826.8	3,300.0	55.4	40,285.4H	102,750.0H	39.2
F73	155.700A	1,767.6	3,000.0	58.9	63,799.9H	137,950.0H	46.2
F69	143.140A	1,870.7	4,300.0	43.5	86,353.0H	182,000.0H	47.4
F66	133.720A	1,784.6	4,500.0	39.7	103,967.7H	201,100.0H	51.7
F57	105.100A	596.0	4,400.0	13.5	137,755.9H	201,100.0H	68.5
MaxBM	92.754A	-1.3	---	---	141,764.8H	---	---
F49	77.100A	-1,230.4	-4,900.0	25.1	132,141.8H	203,000.0H	65.1
F45	63.100A	-2,219.2	-4,900.0	45.3	108,210.1H	204,350.0H	53.0
F39	42.100A	-2,753.0	-4,550.0	60.5	53,005.2H	204,350.0H	25.9
F32	28.100A	-1,956.5	-4,450.0	44.0	19,990.0H	204,350.0H	9.8

B2 Stores Cargo Intermediate
Righting Arm Summary



Angle (deg)	0.00	5.00P	10.00P	15.00P	20.00P	25.00P	30.00P	40.00P	50.00P	60.00P
GZ (m)	-0.025	0.244	0.528	0.834	1.160	1.480	1.742	1.959	1.616	0.824

Notes

GZ Curve from KN Table
Tanks from Tables
Disp. of Hull = 34,536.4MT

B2 Stores Cargo Intermediate
Deadweight Details by Group (All Tanks in Loaded Groups)

Cargo Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
4-24-0 FO 1C	95.0	1,087.0	0.8336	906.2	953.9	12.967	20.135A	0.000S	1,088.0
4-30-0 FO 2C	30.0	382.8	0.8336	319.1	1,063.7	8.487	28.290A	0.000P	1,263.4
4-34-1 FO 3S	95.0	665.9	0.8336	555.1	584.3	10.394	38.210A	6.102S	557.0
4-34-0 FO 3C	--	0.0	0.8336	0.0	295.8	10.113	35.975A	0.000	0.0
4-34-2 FO 3P	--	0.0	0.8336	0.0	584.3	10.394	38.210A	6.102P	0.0
4-38.5-0 SLOP	--	0.0	0.8336	0.0	118.3	10.113	42.100A	0.000	0.0
Cargo Oil Totals	49.5	2,135.7		1,780.4	3,600.2	11.362	27.232A	1.903S	2,908.4

Fuel Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-34-1 Ships FO	95.0	219.3	0.8336	182.8	192.4	1.235	38.986A	3.741S	341.0
6-34-2 Ships FO	95.0	216.0	0.8336	180.1	189.6	1.226	39.014A	3.702P	344.0
6-40-1 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628S	742.0
6-40-2 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628P	742.0
6-49-1 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567S	719.0
6-49-01 Ship FO	--	0.0	0.8336	0.0	219.5	0.891	86.265A	0.000	0.0
6-49-2 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567P	719.0
6-58-1 Ships FO	--	0.0	0.8336	0.0	209.2	1.003	114.765A	9.417S	0.0
6-58-0 Ships FO	95.0	199.6	0.8336	166.4	175.2	0.950	114.880A	0.000	287.0
6-58-2 Ships FO	--	0.0	0.8336	0.0	208.8	1.002	114.822A	9.412P	0.0
6-62-1 Ships FO	--	0.0	0.8336	0.0	233.2	1.428	127.149A	9.876S	0.0
6-62-01 Ship FO	--	0.0	0.8336	0.0	166.9	0.951	127.666A	0.038S	0.0
6-62-4 Ships FO	--	0.0	0.8336	0.0	233.1	1.429	127.182A	9.869P	0.0
6-66-1 Ships FO	--	0.0	0.8336	0.0	135.9	2.269	136.539A	9.203S	0.0
6-66-2 Ships FO	--	0.0	0.8336	0.0	125.7	1.812	136.589A	8.051P	0.0
6-72-0 Ships FO	--	0.0	0.8336	0.0	110.3	0.961	156.846A	0.000	0.0
3-75-3 FO Serv	53.6	161.0	0.8336	134.2	250.4	11.380	168.378A	12.836S	239.0
3-79-3 Ships FO	--	0.0	0.8336	0.0	155.7	11.863	179.229A	12.730S	0.0
4-79-6 FO Settl	50.0	112.1	0.8336	93.5	186.9	10.842	178.062A	12.963P	106.5
3-81.5-2 FO Serv	50.0	139.9	0.8336	116.6	233.3	11.461	187.921A	12.576P	203.6
3-82-1 FO Overfl	10.0	24.5	0.8336	20.4	204.0	10.585	188.578A	12.368S	133.3
Fuel Oil Totals	45.8	2,425.1		2,021.5	4,416.8	2.879	88.103A	0.339P	4,576.4

Lube Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-1 LO Stor	50.0	63.1	0.9211	58.1	116.3	11.375	189.358A	1.953S	37.0
3-82.5-3 LO Stor	50.0	63.1	0.9211	58.1	116.3	11.375	189.358A	5.858S	37.0
3-73.5-2 LO Sett	95.0	25.3	0.9211	23.3	24.6	12.261	159.773A	13.233P	6.0
6-68-3 Sump 1	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376S	4.8
6-68-1 Sump 2	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836S	5.0
6-68-2 Sump 3	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836P	5.0
6-68-4 Sump 4	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376P	5.0
4-79-1 LO Drain	10.0	12.3	0.9211	11.3	112.9	5.943	175.839A	5.720S	183.7
Lube Oil Totals	50.4	251.4		231.6	459.6	8.064	170.438A	0.906S	283.5

Fresh Water

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-79-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155S	0.0
3-79-0 Dist. WTR	50.0	59.6	1.0000	59.6	119.2	11.375	179.250A	0.000P	25.0
3-79-2 Cargo PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155P	0.0
3-80.5-1 Ship PT	--	0.0	1.0000	0.0	100.5	12.400	181.605A	5.155S	0.0
3-80.5-2 Cargo PT	--	0.0	1.0000	0.0	100.5	12.400	181.605A	5.155P	0.0
Fresh Water Totals	50.0	260.6		260.6	521.2	12.166	177.434A	0.000	25.0

Ballast

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-M-0 F Pk SWB	--	0.0	1.0250	0.0	685.2	9.774	2.900A	0.000	0.0
6-24-1 SWB	--	0.0	1.0250	0.0	1,401.3	9.440	23.345A	5.198S	0.0
6-24-2 SWB	25.0	341.8	1.0250	350.3	1,401.3	2.373	24.015A	2.577P	419.5
4-34-3 SWB	--	0.0	1.0250	0.0	347.9	10.409	37.641A	11.279S	0.0
4-35-2 SWB	100.0	290.4	1.0250	297.6	297.6	10.389	38.515A	11.504P	0.0
6-45-1 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864S	0.0
6-45-2 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864P	0.0
6-54-1 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532S	0.0
6-54-01 SWB	100.0	204.8	1.0250	209.9	209.9	0.928	101.786A	0.000S	0.0
6-54-2 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532P	0.0
4-83-1 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824S	0.0
4-83-2 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824P	0.0
Ballast Totals	37.0	2,207.4		2,262.6	6,109.1	2.987	75.520A	1.912P	419.5

Misc.

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-2 Av FO	50.0	64.8	0.8136	52.7	105.5	11.375	188.968A	3.881P	45.0
3-84-2 JP-5 Ser	95.0	21.2	0.8136	17.3	18.2	12.298	191.810A	6.925P	1.0
4-79-2 Av FO Of	--	0.0	0.8136	0.0	147.0	7.867	177.939A	8.843P	0.0
03-73-1 EDGF S	95.0	11.4	0.8336	9.5	10.0	30.330	156.878A	8.223S	3.0
6-68.5-0 FO Lea	25.0	0.9	0.8336	0.8	3.1	0.250	142.748A	0.000P	1.0
5-71-1A MOW/O	25.0	5.4	0.9211	5.0	19.9	3.481	151.524A	12.308S	5.0
6-62-2A COW/O	25.0	1.2	0.9211	1.1	4.5	0.250	123.515A	0.788P	1.0
6-69-0 Waste O.	25.0	3.7	0.9211	3.4	13.6	0.250	144.710A	0.000P	3.0
5-71-1B MOW/W	25.0	3.6	1.0000	3.6	14.2	3.299	149.990A	12.348S	3.6
6-62-2B COW/W	25.0	1.2	1.0000	1.2	4.8	0.250	121.945A	0.788P	1.0
6-70-0 FW Drain	25.0	9.7	1.0000	9.7	38.7	0.252	149.415A	0.000	16.0
3-77-2 Food Wst	25.0	2.0	1.0250	2.0	8.0	12.620	169.694A	10.345P	1.0
3-77-4 Gray Wtr	25.0	24.3	1.0250	24.9	99.7	10.876	171.066A	14.005P	38.8
6-68-0 MDG Cln	25.0	0.6	1.0250	0.6	2.6	1.125	140.807A	0.000S	1.0
3-75-6 VCHT Sg	25.0	1.3	1.0250	1.4	5.4	10.948	167.215A	12.763P	1.0
5-44-2 Fwd Foam	100.0	0.7	1.0000	0.7	0.7	15.449	50.898A	11.854P	0.0
1-65-1 Aft Foam	100.0	1.5	1.0000	1.5	1.5	19.916	131.950A	13.314S	0.0
Misc. Totals	27.3	153.5		135.3	497.3	10.978	173.989A	3.830P	121.4

Stores & Constant

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Dry Prov Stores	5.2	24.290	123.510A	10.760S
Chill Storeroom	3.9	24.290	130.990A	10.870S
Dairy Storeroom	2.2	24.290	127.180A	10.760S
Freeze Storeroom	5.7	24.290	132.940A	4.710S
Fish Storeroom	3.6	24.290	139.710A	4.710S
Thaw Room	0.0	24.290	128.620A	4.710S
Dry Prov Annex	4.0	24.290	146.870A	5.600P
Medical Stores	6.0	27.180	134.880A	4.710S
General Stores	16.1	15.975	37.450A	0.090P
Aviation Stores	5.5	24.000	168.260A	7.000S
Helicopters	21.2	21.600	161.980A	0.000
Crew	29.0	32.840	128.010A	0.000
Stores & Constant Totals	102.4	25.001	124.658A	2.038S

M/P Cargo Hold 1

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H1-Tank Top	75.3	3.525	62.381A	0.000
H1-4th Deck	163.7	7.700	61.792A	0.000
H1-3rd Deck	175.2	11.875	61.491A	0.000
H1-2nd Deck	162.4	15.975	61.237A	0.003P
M/P Cargo Hold 1 Totals	576.6	10.754	61.621A	0.001P

Military Sealift Command -- USNS MEDGAR EVERS (17 May 2016)
CargoMax 2.1.0303 (10 May 2016)

Printed at: 10:43 on 08 Sep 2016
Detailed Condition Summary (IACS URL5 Report)

M/P Cargo Hold 2

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H2-Tank Top	131.3	3.525	91.850A	0.000
H2-4th Deck	144.2	7.700	92.766A	0.001S
H2-3rd Deck	175.1	11.875	92.767A	0.002S
H2-2nd Deck	105.0	15.975	92.723A	0.008P
M/P Cargo Hold 2 Totals	555.6	9.593	92.542A	0.001P

Freeze/Chill Cargo Hold 3

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
H3-4th Deck	138.0	7.700	121.147A	0.001S
H3-3rd Deck	136.4	11.875	121.161A	0.000
H3-2nd Deck	74.6	15.975	121.380A	0.042P
Freeze/Chill Cargo Hold 3 Totals	349.0	11.101	121.202A	0.009P

2nd DK Aft Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Spare Parts H4	194.5	15.975	152.700A	1.694S
Spare Parts H5	106.0	15.975	168.007A	0.341S
Spare Parts H6	192.0	15.975	183.833A	3.103P
Pipe & Bar Stock	22.5	15.750	142.515A	11.170S
Plt & Sht Metal	14.0	15.750	149.435A	11.170S
US Mail	1.5	15.975	150.990A	0.000
Oxidizing Agent	0.6	15.975	154.130A	0.000
4.3L Locker	0.6	15.975	170.330A	1.250P
Pyrotechnics	0.0	15.975	172.299A	0.318S
Chill Cat 8 Cargo	6.0	15.975	177.687A	12.810S
Cargo Flam Liq	11.0	15.975	186.625A	12.599S
2nd DK Aft Specialty Totals	548.7	15.960	167.020A	0.715S

Transfer DK Pre-Staging

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Pre-Staging Fwd	154.2	20.125	28.462A	1.746S
Pre-Staging Mid	157.6	20.125	73.802A	1.128P
Freeze/Chill Pre	115.7	20.125	120.371A	0.000
Outsize Cargo Sto	16.7	20.125	138.822A	9.510P
Handling Area 1	0.0	20.125	71.425A	0.001P
Handling Area 2	0.0	20.125	134.407A	1.472S
Hangar	0.0	20.125	160.611A	2.339P
UNREP Stations	0.0	20.125	144.737A	0.223P
Elevators	0.0	20.125	97.197A	2.405S
Transfer DK Pre-Staging Totals	444.2	20.125	72.637A	0.152P

01 Level Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
AHE & MHE Sto	6.8	24.100	23.795A	3.291S
Haz Matl	0.0	24.100	25.633A	0.004P
White Phosphor.	0.0	24.100	54.338A	7.057P
Medical Supplies	5.5	24.100	51.714A	7.054S
EOD & SWD 1	0.0	24.100	56.956A	7.055S
EOD & SWD 2	0.0	24.100	71.183A	7.056P
Plywood&Lumber	1.5	24.100	63.511A	7.057P
Fuze, Prim & Det	0.0	24.100	64.163A	7.054S
Thermite Locker	0.0	24.100	83.468A	15.814P
Handling Space	0.0	24.100	56.455A	0.001P
01 Level Specialty Totals	13.8	24.100	39.239A	3.666S

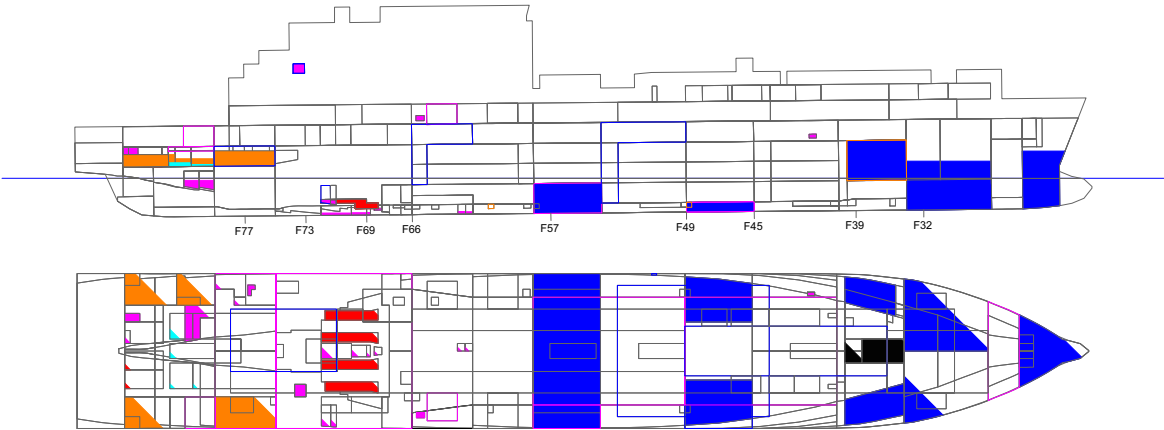
APPENDIX G

Appendix G

Example Loading Conditions

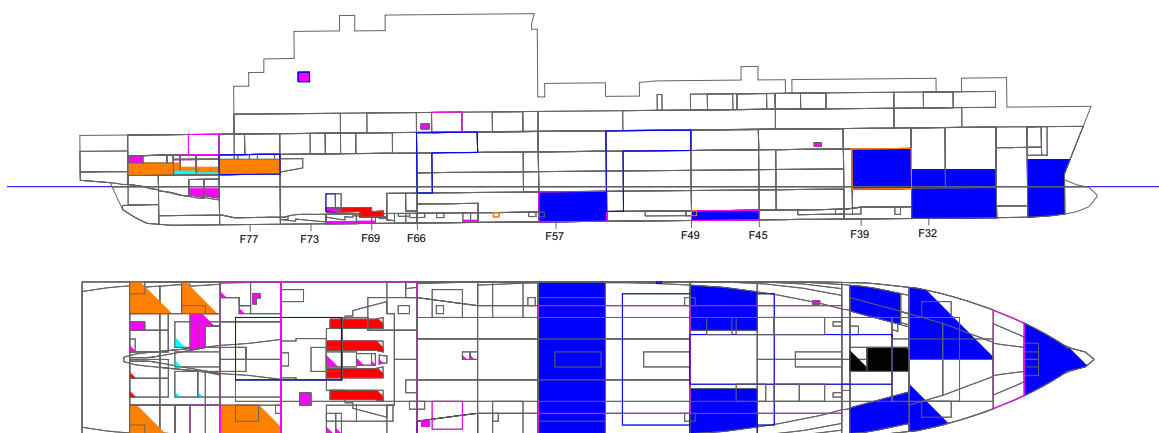
End of Deployment

End of Deployment
Weight Summary



Group	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT	Group Min FS m-MT
Lightship	25,254.1	14.310	107.601A	0.020S	0.0	
Cargo Oil	340.1	9.790	37.040A	0.000	2,421.0	2,421.0
Fuel Oil	502.1	11.478	178.829A	2.090S	3,876.0	3,876.0
Lube Oil	103.9	4.205	155.316A	0.874S	606.0	606.0
Fresh Water	52.1	10.634	180.158A	0.000	202.0	143.0
Ballast	3,896.7	4.403	52.676A	0.317P	856.8	
Misc.	170.1	9.199	171.810A	5.930P	701.1	136.0
Stores & Constant	60.5	27.058	136.426A	0.675S	0.0	
M/P Cargo Hold 1	0.0	--	--	--	0.0	
M/P Cargo Hold 2	0.0	--	--	--	0.0	
Freeze/Chill Cargo Hold 3	0.0	--	--	--	0.0	
2nd DK Aft Specialty	0.0	--	--	--	0.0	
Transfer DK Pre-Staging	427.5	20.125	70.051A	0.214S	0.0	
01 Level Specialty	118.0	24.100	25.633A	0.004P	0.0	
ICODES	0.0	--	--	--	0.0	
Displacement	30,925.2	13.040	100.921A	0.015P	8,662.8	
Deadweight	5,671.1					
Avail Deadweight	13,853.8	--Summer Load Line--				

End of Deployment Trim and Stability Summary



Loading

Displacement	30,925.2 MT	Specific Gravity	1.0250
Deadweight	5,671.1 MT		
Avail Deadweight	13,853.8 MT	--Summer Load Line--	

Stability

KMt	16.742 m	LCF Draft	7.242 m
VCG (Upright)	13.040 m	LCF	105.874A m-FP
GMt (Solid)	3.702 m	LCB	100.921A m-FP
FS Correction	0.280 m	LCG	100.921A m-FP
GMt (Corrected)	3.422 m	TP1cm	51.2 MT/cm
GMt Required	3.330 m	MT1cm	592 m-MT/cm
GMt Margin	0.092 m	Trim at Perps	1.836A m
--Required GM--		Heel Angle	0.29P deg
		Propeller Immersion	119.7 %

Drafts - Perps

AP	8.104 m
MS	7.186 m
FP	6.268 m

Drafts - Marks

AFT	8.095 m
MS	7.186 m
FWD	6.290 m

Strength --At Sea--

Shear (Min)	-3,232.4 MT	42.100A m-FP	71.0 %
Shear (Max)	2,122.6 MT	133.720A m-FP	47.2 %
Shear (Max %Allow)	-3,232.4 MT	42.100A m-FP	71.0 %
Moment (Max Hog)	161,424.7H m-MT	89.032A m-FP	---
Moment (Max Sag)	--- m-MT	--- m-FP	---
Moment (Max %Allow)	153,706.6H m-MT	77.100A m-FP	75.7 %

Bridge Visibility - Cargo Visibility - ABS

Actual	393.883 m	Required	<402.250 m
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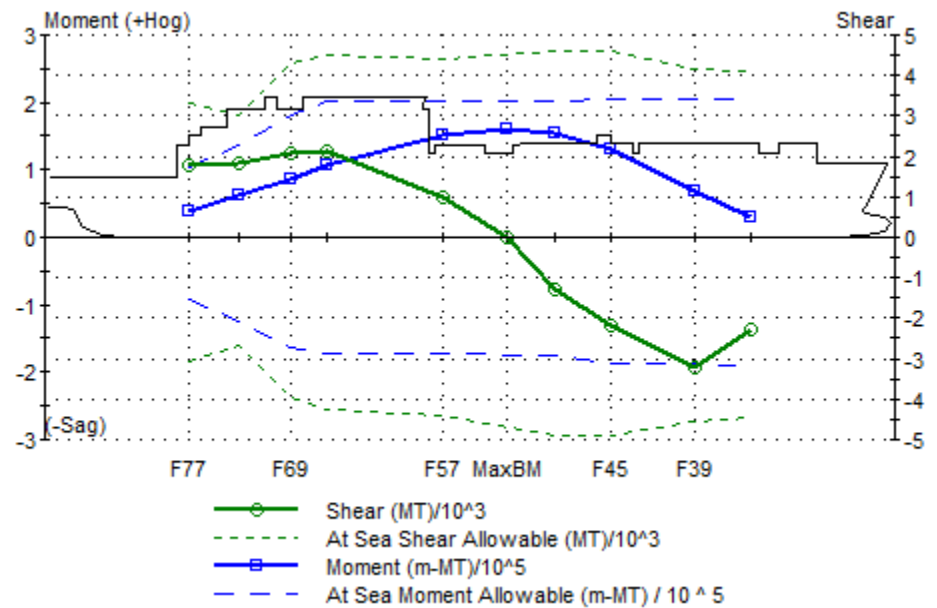
Air Draft

Actual	52.940 m
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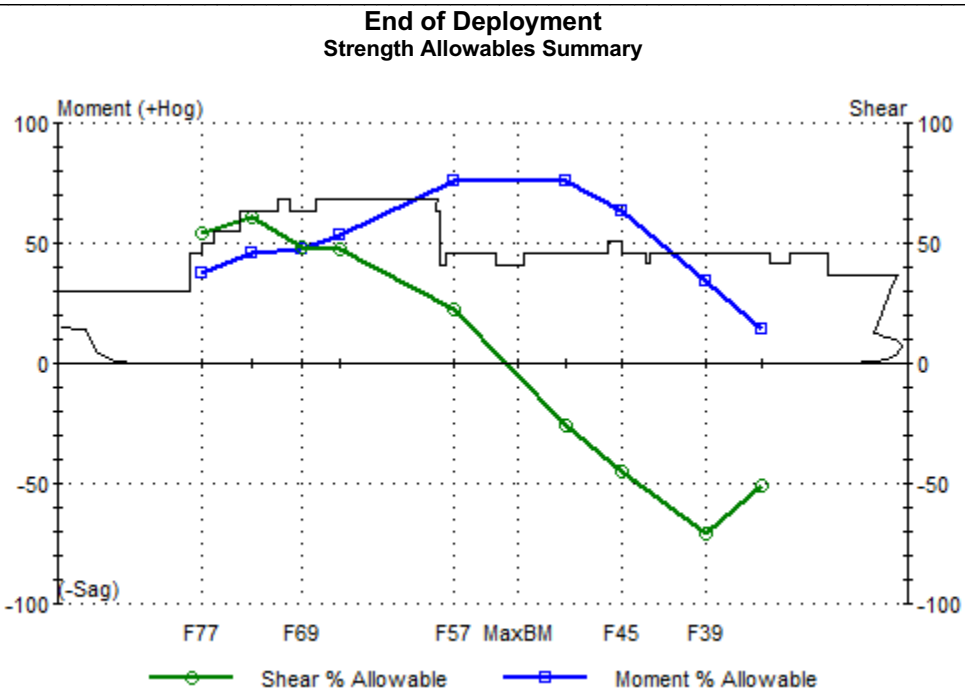
Notes

Drafts from Keel
Hull from Trimmed Tables
Tanks from Tables

End of Deployment
Strength Values Summary

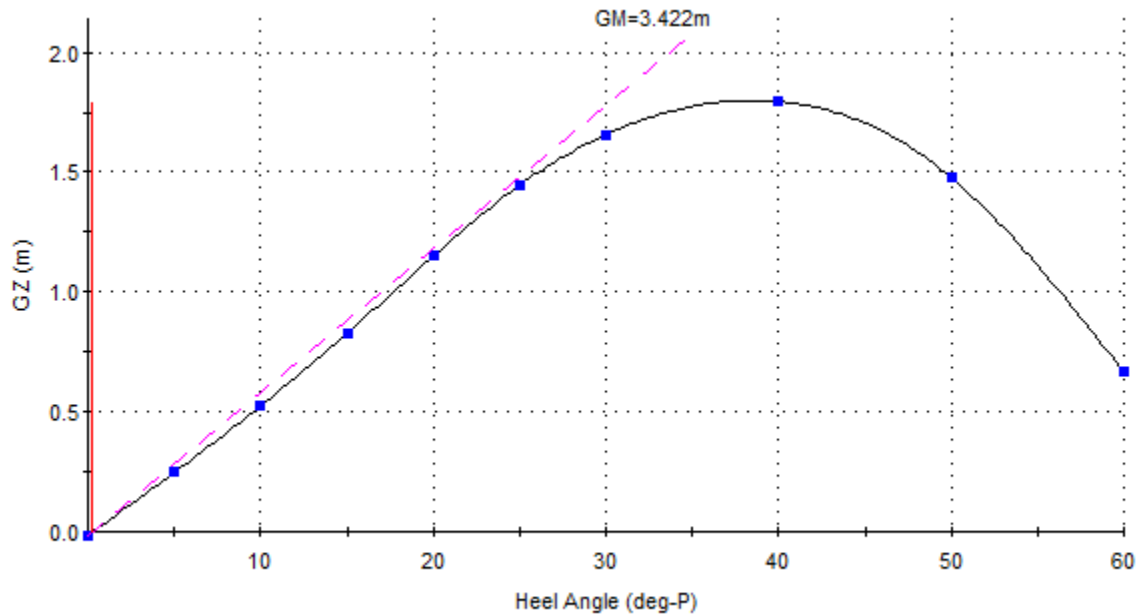


Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Wt MT	Buoy MT	Shear MT	Wt Mom m-MT	Buoy Mom m-MT	Moment m-MT
F77	168.260A	3,311.8	1,531.8	1,780.0	51,256.1	12,323.2	38,932.9H
F73	155.700A	5,291.5	3,456.0	1,835.5	105,646.3	42,875.6	62,770.7H
F69	143.140A	8,020.4	5,952.3	2,068.1	188,451.1	101,500.5	86,950.6H
F66	133.720A	10,165.7	8,043.1	2,122.6	274,373.7	167,341.5	107,032.2H
F57	105.100A	15,721.6	14,749.0	972.6	644,766.2	493,069.3	151,696.9H
MaxBM	89.032A	18,499.3	18,498.3	1.0	921,708.3	760,283.5	161,424.7H
F49	77.100A	19,936.2	21,209.7	-1,273.4	1,150,964.2	997,257.5	153,706.6H
F45	63.100A	22,033.6	24,221.8	-2,188.2	1,445,270.0	1,315,591.4	129,678.6H
F39	42.100A	24,702.2	27,934.5	-3,232.4	1,934,476.5	1,865,476.3	69,000.2H
F32	28.100A	27,278.8	29,540.7	-2,262.0	2,298,442.4	2,268,722.8	29,719.6H



Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Shear MT	Allow MT	% Allow	Moment m-MT	Allow m-MT	%Allow
F77	168.260A	1,780.0	3,300.0	53.9	38,932.9H	102,750.0H	37.9
F73	155.700A	1,835.5	3,000.0	61.2	62,770.7H	137,950.0H	45.5
F69	143.140A	2,068.1	4,300.0	48.1	86,950.6H	182,000.0H	47.8
F66	133.720A	2,122.6	4,500.0	47.2	107,032.2H	201,100.0H	53.2
F57	105.100A	972.6	4,400.0	22.1	151,696.9H	201,100.0H	75.4
MaxBM	89.032A	1.0	---	---	161,424.7H	---	---
F49	77.100A	-1,273.4	-4,900.0	26.0	153,706.6H	203,000.0H	75.7
F45	63.100A	-2,188.2	-4,900.0	44.7	129,678.6H	204,350.0H	63.5
F39	42.100A	-3,232.4	-4,550.0	71.0	69,000.2H	204,350.0H	33.8
F32	28.100A	-2,262.0	-4,450.0	50.8	29,719.6H	204,350.0H	14.5

End of Deployment
Righting Arm Summary



Angle (deg)	0.00	5.00P	10.00P	15.00P	20.00P	25.00P	30.00P	40.00P	50.00P	60.00P
GZ (m)	-0.015	0.248	0.526	0.828	1.149	1.446	1.656	1.794	1.478	0.666

Notes

GZ Curve from KN Table
Tanks from Tables
Disp. of Hull = 30,925.2MT

End of Deployment
Deadweight Details by Group (All Tanks in Loaded Groups)

Cargo Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
4-24-0 FO 1C	--	0.0	0.8336	0.0	953.9	12.967	20.135A	0.000	0.0
4-30-0 FO 2C	--	0.0	0.8336	0.0	1,063.7	12.627	28.260A	0.000	0.0
4-34-1 FO 3S	--	0.0	0.8336	0.0	584.3	10.394	38.210A	6.102S	0.0
4-34-0 FO 3C	95.0	337.1	0.8336	281.0	295.8	10.113	35.975A	0.000P	76.0
4-34-2 FO 3P	--	0.0	0.8336	0.0	584.3	10.394	38.210A	6.102P	0.0
4-38.5-0 SLOP	50.0	71.0	0.8336	59.2	118.3	8.254	42.100A	0.000S	31.0
Cargo Oil Totals	9.4	408.0		340.1	3,600.2	9.790	37.040A	0.000	107.0

Fuel Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-34-1 Ships FO	--	0.0	0.8336	0.0	192.4	1.235	38.986A	3.741S	0.0
6-34-2 Ships FO	--	0.0	0.8336	0.0	189.6	1.226	39.014A	3.702P	0.0
6-40-1 Ships FO	--	0.0	0.8336	0.0	291.9	1.003	55.098A	5.628S	0.0
6-40-2 Ships FO	--	0.0	0.8336	0.0	291.9	1.003	55.098A	5.628P	0.0
6-49-1 Ships FO	--	0.0	0.8336	0.0	301.5	0.988	85.998A	9.567S	0.0
6-49-01 Ship FO	--	0.0	0.8336	0.0	219.5	0.891	86.265A	0.000	0.0
6-49-2 Ships FO	--	0.0	0.8336	0.0	301.5	0.988	85.998A	9.567P	0.0
6-58-1 Ships FO	--	0.0	0.8336	0.0	209.2	1.003	114.765A	9.417S	0.0
6-58-0 Ships FO	--	0.0	0.8336	0.0	175.2	0.950	114.880A	0.000	0.0
6-58-2 Ships FO	--	0.0	0.8336	0.0	208.8	1.002	114.822A	9.412P	0.0
6-62-1 Ships FO	--	0.0	0.8336	0.0	233.2	1.428	127.149A	9.876S	0.0
6-62-01 Ship FO	--	0.0	0.8336	0.0	166.9	0.951	127.666A	0.038S	0.0
6-62-4 Ships FO	--	0.0	0.8336	0.0	233.1	1.429	127.182A	9.869P	0.0
6-66-1 Ships FO	--	0.0	0.8336	0.0	135.9	2.269	136.539A	9.203S	0.0
6-66-2 Ships FO	--	0.0	0.8336	0.0	125.7	1.812	136.589A	8.051P	0.0
6-72-0 Ships FO	--	0.0	0.8336	0.0	110.3	0.961	156.846A	0.000	0.0
3-75-3 FO Serv	75.9	228.0	0.8336	190.0	250.4	11.806	168.371A	12.873S	182.4
3-79-3 Ships FO	--	0.0	0.8336	0.0	155.7	11.863	179.229A	12.730S	0.0
4-79-6 FO Settl	50.0	112.1	0.8336	93.5	186.9	10.842	178.062A	12.963P	106.5
3-81.5-2 FO Serv	50.0	139.9	0.8336	116.6	233.3	11.461	187.921A	12.576P	203.6
3-82-1 FO Overfl	50.0	122.3	0.8336	102.0	204.0	11.468	188.620A	12.565S	177.6
Fuel Oil Totals	11.4	602.3		502.1	4,416.8	11.478	178.829A	2.090S	670.1

Lube Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-1 LO Stor	10.0	12.6	0.9211	11.6	116.3	10.555	189.358A	1.953S	37.0
3-82.5-3 LO Stor	10.0	12.6	0.9211	11.6	116.3	10.555	189.358A	5.858S	37.0
3-73.5-2 LO Sett	--	0.0	0.9211	0.0	24.6	12.261	159.772A	13.233P	0.0
6-68-3 Sump 1	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376S	4.8
6-68-1 Sump 2	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836S	5.0
6-68-2 Sump 3	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836P	5.0
6-68-4 Sump 4	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376P	5.0
4-79-1 LO Drain	--	0.0	0.9211	0.0	112.9	7.649	176.077A	8.139S	0.0
Lube Oil Totals	22.6	112.9		103.9	459.6	4.205	155.316A	0.874S	93.8

Fresh Water

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-79-1 Ship PT	10.0	10.0	1.0000	10.0	100.5	10.555	176.895A	5.155S	59.0
3-79-0 Dist. WTR	10.0	11.9	1.0000	11.9	119.2	10.555	179.250A	0.000S	25.0
3-79-2 Cargo PT	--	0.0	1.0000	0.0	100.5	12.400	176.895A	5.155P	0.0
3-80.5-1 Ship PT	10.0	10.0	1.0000	10.0	100.5	10.555	181.605A	5.155S	59.0
3-80.5-2 Cargo PT	20.0	20.1	1.0000	20.1	100.5	10.760	181.605A	5.155P	59.0
Fresh Water Totals	10.0	52.1		52.1	521.2	10.634	180.158A	0.000	202.0

Ballast

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-M-0 F Pk SWB	65.0	434.5	1.0250	445.4	685.2	6.112	2.812A	0.000S	106.4
6-24-1 SWB	30.0	410.1	1.0250	420.4	1,401.3	2.743	24.033A	2.672S	469.4
6-24-2 SWB	55.0	751.9	1.0250	770.7	1,401.3	4.843	23.814A	3.709P	281.0
4-34-3 SWB	100.0	339.4	1.0250	347.9	347.9	10.409	37.641A	11.279S	0.0
4-35-2 SWB	100.0	290.4	1.0250	297.6	297.6	10.389	38.515A	11.504P	0.0
6-45-1 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864S	0.0
6-45-2 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864P	0.0
6-54-1 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532S	0.0
6-54-01 SWB	100.0	204.8	1.0250	209.9	209.9	0.928	101.786A	0.000S	0.0
6-54-2 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532P	0.0
4-83-1 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824S	0.0
4-83-2 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824P	0.0
Ballast Totals	63.8	3,801.6		3,896.7	6,109.1	4.403	52.676A	0.317P	856.8

Misc.

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-2 Av FO	10.0	13.0	0.8136	10.5	105.5	10.555	188.968A	3.881P	45.0
3-84-2 JP-5 Ser	95.0	21.2	0.8136	17.3	18.2	12.298	191.810A	6.925P	1.0
4-79-2 Av FO Of	50.0	90.3	0.8136	73.5	147.0	7.160	177.871A	8.290P	579.6
03-73-1 EDGF S	95.0	11.4	0.8336	9.5	10.0	30.330	156.878A	8.223S	3.0
6-68.5-0 FO Lea	25.0	0.9	0.8336	0.8	3.1	0.250	142.748A	0.000P	1.0
5-71-1A MOW/O	25.0	5.4	0.9211	5.0	19.9	3.481	151.524A	12.308S	5.0
6-62-2A COW/O	25.0	1.2	0.9211	1.1	4.5	0.250	123.515A	0.788P	1.0
6-69-0 Waste O.	25.0	3.7	0.9211	3.4	13.6	0.250	144.710A	0.000P	3.0
5-71-1B MOW/W	25.0	3.6	1.0000	3.6	14.2	3.299	149.990A	12.348S	3.6
6-62-2B COW/W	25.0	1.2	1.0000	1.2	4.8	0.250	121.945A	0.788P	1.0
6-70-0 FW Drain	25.0	9.7	1.0000	9.7	38.7	0.252	149.415A	0.000	16.0
3-77-2 Food Wst	25.0	2.0	1.0250	2.0	8.0	12.620	169.694A	10.345P	1.0
3-77-4 Gray Wtr	25.0	24.3	1.0250	24.9	99.7	10.876	171.066A	14.005P	38.8
6-68-0 MDG Cln	25.0	0.6	1.0250	0.6	2.6	1.125	140.807A	0.000S	1.0
3-75-6 VCHT Sg	90.0	4.8	1.0250	4.9	5.4	11.667	167.215A	12.763P	1.0
5-44-2 Fwd Foam	100.0	0.7	1.0000	0.7	0.7	15.449	50.898A	11.854P	0.0
1-65-1 Aft Foam	100.0	1.5	1.0000	1.5	1.5	19.916	131.950A	13.314S	0.0
Misc. Totals	34.7	195.4		170.1	497.3	9.199	171.810A	5.930P	701.1

Stores & Constant

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Dry Prov Stores	1.0	24.290	123.510A	10.760S
Chill Storeroom	0.8	24.290	130.990A	10.870S
Dairy Storeroom	0.4	24.290	127.180A	10.760S
Freeze Storeroom	1.1	24.290	132.940A	4.710S
Fish Storeroom	0.7	24.290	139.710A	4.710S
Thaw Room	0.0	24.290	128.620A	4.710S
Dry Prov Annex	0.8	24.290	146.870A	5.600P
Medical Stores	1.2	27.180	134.880A	4.710S
General Stores	3.2	15.975	37.450A	0.090P
Aviation Stores	1.1	24.000	168.260A	7.000S
Helicopters	21.2	21.600	161.980A	0.000
Crew	29.0	32.840	128.010A	0.000
Stores & Constant Totals	60.5	27.058	136.426A	0.675S

Transfer DK Pre-Staging

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Pre-Staging Fwd	154.2	20.125	28.462A	1.746S
Pre-Staging Mid	157.6	20.125	73.802A	1.128P
Freeze/Chill Pre	115.7	20.125	120.371A	0.000
Outsize Cargo Sto	0.0	20.125	138.822A	9.510P
Handling Area 1	0.0	20.125	71.425A	0.001P
Handling Area 2	0.0	20.125	134.407A	1.472S
Hangar	0.0	20.125	160.611A	2.339P
UNREP Stations	0.0	20.125	144.737A	0.223P
Elevators	0.0	20.125	97.197A	2.405S
Transfer DK Pre-Staging Totals	427.5	20.125	70.051A	0.214S

01 Level Specialty

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
AHE & MHE Sto	0.0	24.100	23.795A	3.291S
Haz Matl	118.0	24.100	25.633A	0.004P
White Phosphor.	0.0	24.100	54.338A	7.057P
Medical Supplies	0.0	24.100	51.714A	7.054S
EOD & SWD 1	0.0	24.100	56.956A	7.055S
EOD & SWD 2	0.0	24.100	71.183A	7.056P
Plywood&Lumber	0.0	24.100	63.511A	7.057P
Fuze, Prim & Det	0.0	24.100	64.163A	7.054S
Thermite Locker	0.0	24.100	83.468A	15.814P
Handling Space	0.0	24.100	56.455A	0.001P
01 Level Specialty Totals	118.0	24.100	25.633A	0.004P

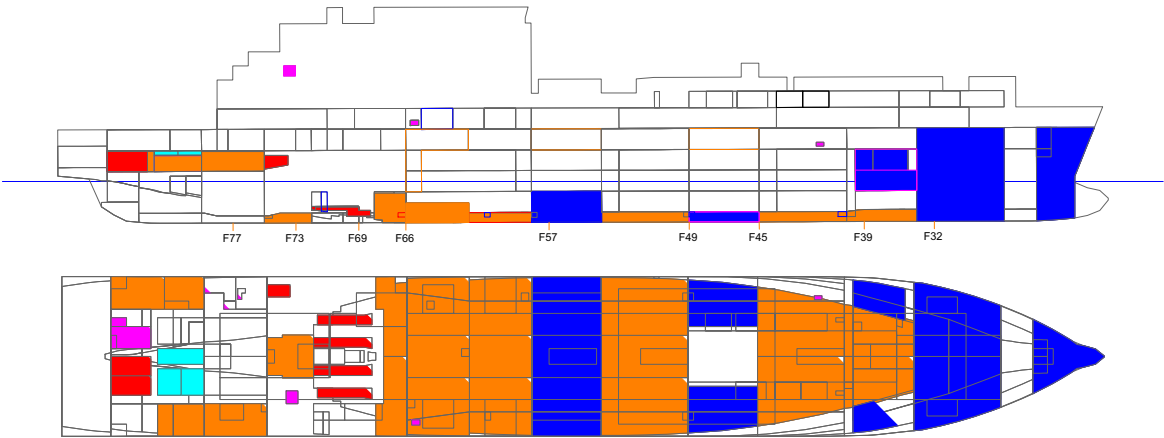
APPENDIX H

Appendix H

Example Loading Conditions

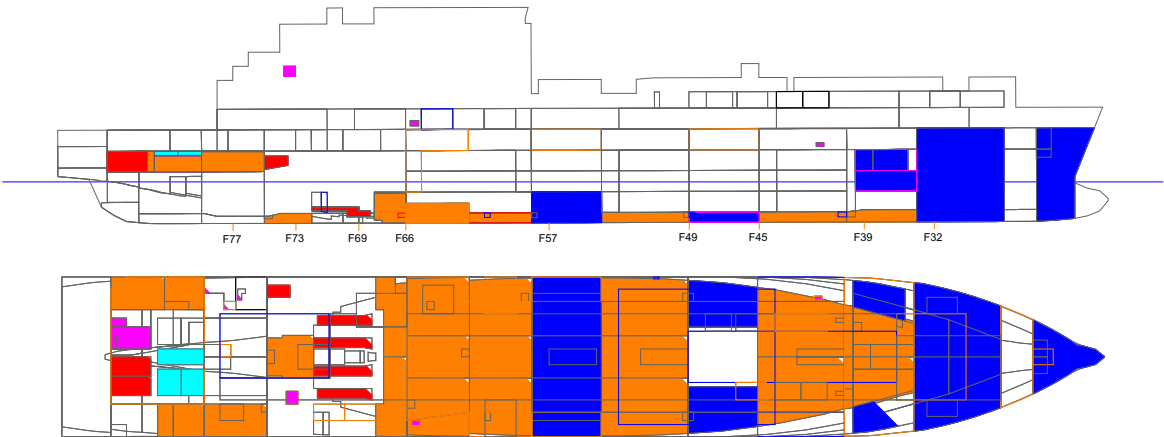
No Cargo Departure

No Cargo Departure
Weight Summary



Group	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT	Group Min FS m-MT
Lightship	25,254.1	14.310	107.601A	0.020S	0.0	
Cargo Oil	0.0	--	--	--	2,421.0	2,421.0
Fuel Oil	4,002.2	3.307	110.806A	0.029S	6,436.0	3,876.0
Lube Oil	324.9	9.830	176.343A	1.704S	606.0	606.0
Fresh Water	320.2	12.400	179.250A	3.236S	143.0	143.0
Ballast	5,574.0	7.274	42.418A	0.284P	96.0	
Misc.	157.4	13.238	182.947A	5.118P	136.0	136.0
Stores & Constant	154.3	23.994	118.887A	2.692S	0.0	
M/P Cargo Hold 1	0.0	--	--	--	0.0	
M/P Cargo Hold 2	0.0	--	--	--	0.0	
Freeze/Chill Cargo Hold 3	0.0	--	--	--	0.0	
2nd DK Aft Specialty	0.0	--	--	--	0.0	
Transfer DK Pre-Staging	0.0	--	--	--	0.0	
01 Level Specialty	0.0	--	--	--	0.0	
ICODES	0.0	--	--	--	0.0	
Displacement	35,787.2	11.963	99.452A	0.007S	9,838.0	
Deadweight	10,533.1					
Avail Deadweight	8,991.8	--Summer Load Line--				

No Cargo Departure
Trim and Stability Summary



Loading

Displacement	35,787.2 MT	Specific Gravity	1.0250
Deadweight	10,533.1 MT		
Avail Deadweight	8,991.8 MT	--Summer Load Line--	

Stability

KMt	15.890 m	LCF Draft	8.166 m
VCG (Upright)	11.963 m	LCF	107.029A m-FP
GMt (Solid)	3.927 m	LCB	99.452A m-FP
FS Correction	0.275 m	LCG	99.452A m-FP
GMt (Corrected)	3.652 m	TP1cm	52.5 MT/cm
GMt Required	2.550 m	MT1cm	618 m-MT/cm
GMt Margin	1.102 m	Trim at Perps	0.517A m
--Required GM--		Heel Angle	0.11S deg
		Propeller Immersion	124.8 %

Drafts - Perps

AP	8.406 m
MS	8.147 m
FP	7.888 m

Drafts - Marks

AFT	8.403 m
MS	8.147 m
FWD	7.894 m

Strength --At Sea--

Shear (Min)	-3,855.8 MT	42.100A m-FP	84.7 %
Shear (Max)	2,287.8 MT	133.720A m-FP	50.8 %
Shear (Max %Allow)	-3,855.8 MT	42.100A m-FP	84.7 %
Moment (Max Hog)	194,074.9H m-MT	87.055A m-FP	---
Moment (Max Sag)	--- m-MT	--- m-FP	---
Moment (Max %Allow)	188,754.2H m-MT	77.100A m-FP	93.0 %

Bridge Visibility - Cargo Visibility - ABS

Actual	335.441 m	Required	<402.250 m
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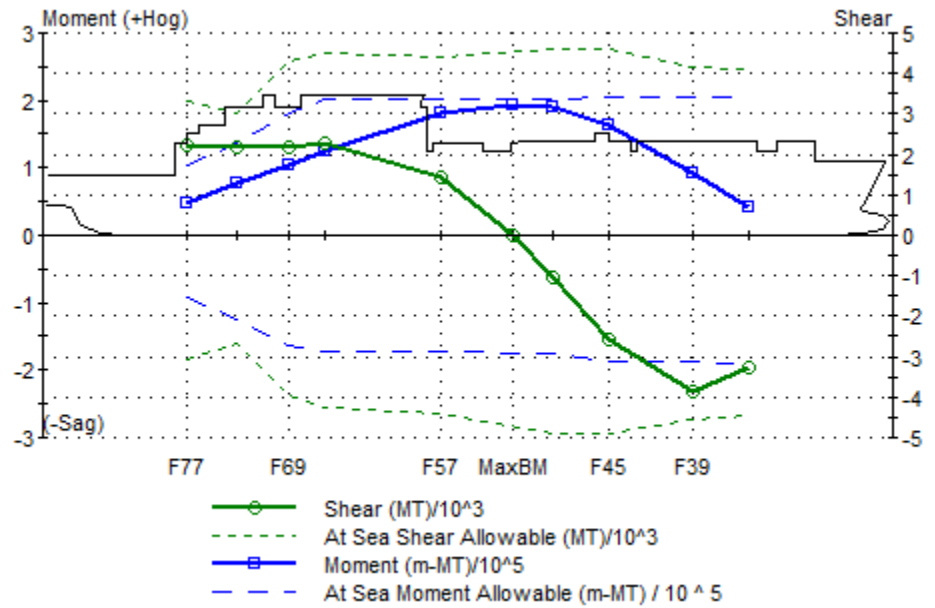
Air Draft

Actual	52.097 m
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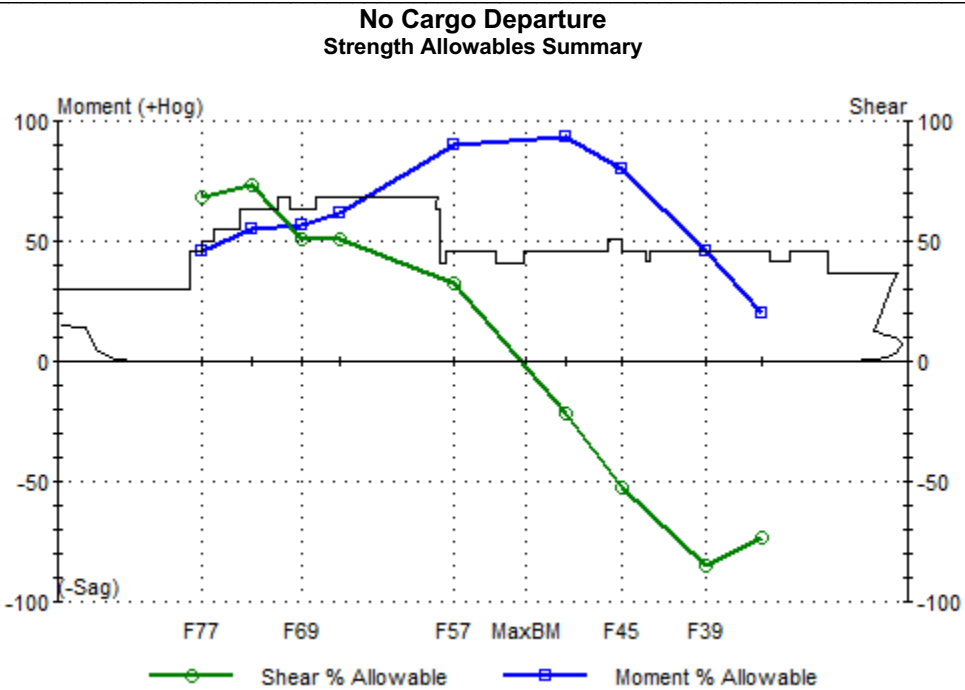
Notes

- Drafts from Keel
- Hull from Trimmed Tables
- Tanks from Tables

No Cargo Departure
Strength Values Summary

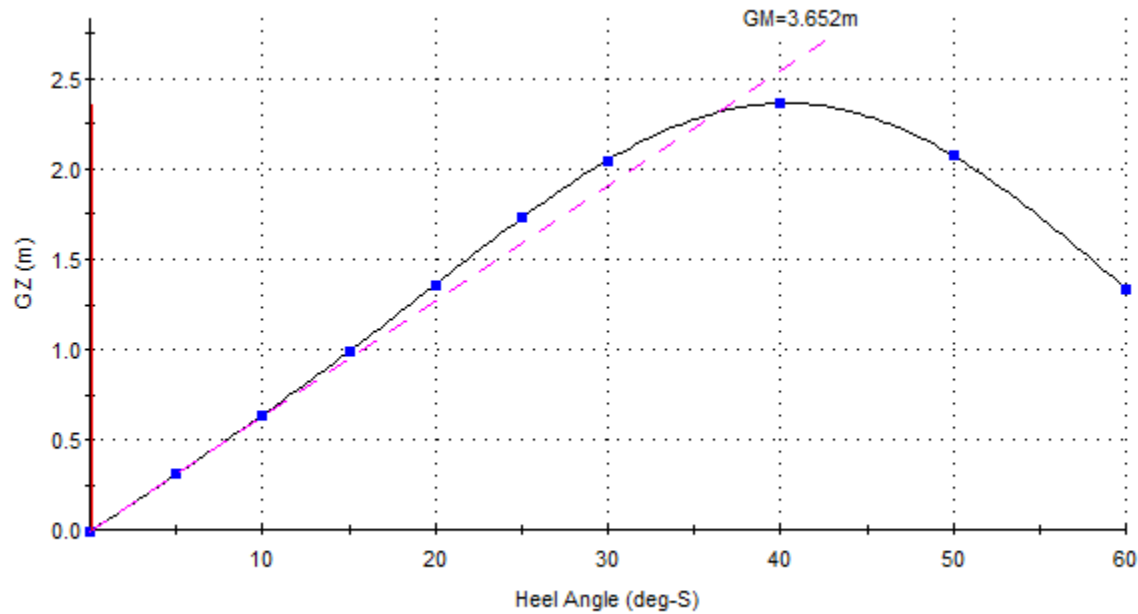


Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Wt MT	Buoy MT	Shear MT	Wt Mom m-MT	Buoy Mom m-MT	Moment m-MT
F77	168.260A	4,057.5	1,812.9	2,244.6	62,034.5	15,168.9	46,865.7H
F73	155.700A	6,149.5	3,959.5	2,190.0	126,311.8	50,604.8	75,707.0H
F69	143.140A	8,905.2	6,717.4	2,187.8	220,238.8	117,156.6	103,082.2H
F66	133.720A	11,315.9	9,028.1	2,287.8	315,242.1	191,225.2	124,016.9H
F57	105.100A	17,948.2	16,522.1	1,426.1	736,267.0	555,991.6	180,275.4H
MaxBM	87.055A	21,317.5	21,316.3	1.2	1,091,513.1	897,438.2	194,074.9H
F49	77.100A	22,885.8	23,929.9	-1,044.1	1,311,430.4	1,122,676.2	188,754.2H
F45	63.100A	24,906.2	27,479.7	-2,573.5	1,646,512.4	1,482,819.5	163,692.9H
F39	42.100A	28,157.2	32,013.1	-3,855.8	2,202,962.8	2,109,844.6	93,118.2H
F32	28.100A	30,796.0	34,059.8	-3,263.9	2,614,285.4	2,573,451.6	40,833.7H



Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Shear MT	Allow MT	% Allow	Moment m-MT	Allow m-MT	%Allow
F77	168.260A	2,244.6	3,300.0	68.0	46,865.7H	102,750.0H	45.6
F73	155.700A	2,190.0	3,000.0	73.0	75,707.0H	137,950.0H	54.9
F69	143.140A	2,187.8	4,300.0	50.9	103,082.2H	182,000.0H	56.6
F66	133.720A	2,287.8	4,500.0	50.8	124,016.9H	201,100.0H	61.7
F57	105.100A	1,426.1	4,400.0	32.4	180,275.4H	201,100.0H	89.6
MaxBM	87.055A	1.2	---	---	194,074.9H	---	---
F49	77.100A	-1,044.1	-4,900.0	21.3	188,754.2H	203,000.0H	93.0
F45	63.100A	-2,573.5	-4,900.0	52.5	163,692.9H	204,350.0H	80.1
F39	42.100A	-3,855.8	-4,550.0	84.7	93,118.2H	204,350.0H	45.6
F32	28.100A	-3,263.9	-4,450.0	73.3	40,833.7H	204,350.0H	20.0

No Cargo Departure
Righting Arm Summary



Angle (deg)	0.00	5.00S	10.00S	15.00S	20.00S	25.00S	30.00S	40.00S	50.00S	60.00S
GZ (m)	-0.007	0.309	0.639	0.990	1.361	1.729	2.049	2.364	2.072	1.337

Notes

GZ Curve from KN Table
Tanks from Tables
Disp. of Hull = 35,787.2MT

No Cargo Departure
Deadweight Details by Group (All Tanks in Loaded Groups)

Fuel Oil

Name	%Full %	TOV m3	Dens MT/m3	Weight MT	Capacity Wt MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT
6-34-1 Ships FO	95.0	219.3	0.8336	182.8	192.4	1.235	38.986A	3.741S	341.0
6-34-2 Ships FO	95.0	216.0	0.8336	180.1	189.6	1.226	39.014A	3.702P	344.0
6-40-1 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628S	742.0
6-40-2 Ships FO	95.0	332.7	0.8336	277.3	291.9	1.003	55.098A	5.628P	742.0
6-49-1 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567S	719.0
6-49-01 Ship FO	95.0	250.2	0.8336	208.6	219.5	0.891	86.265A	0.000S	381.0
6-49-2 Ships FO	95.0	343.7	0.8336	286.5	301.5	0.988	85.998A	9.567P	719.0
6-58-1 Ships FO	95.0	238.4	0.8336	198.7	209.2	1.003	114.765A	9.417S	496.0
6-58-0 Ships FO	95.0	199.6	0.8336	166.4	175.2	0.950	114.880A	0.000	287.0
6-58-2 Ships FO	95.0	237.9	0.8336	198.4	208.8	1.002	114.822A	9.412P	494.0
6-62-1 Ships FO	95.0	265.7	0.8336	221.5	233.2	1.428	127.149A	9.876S	24.0
6-62-01 Ship FO	95.0	190.2	0.8336	158.6	166.9	0.951	127.666A	0.038S	284.0
6-62-4 Ships FO	95.0	265.7	0.8336	221.5	233.1	1.429	127.182A	9.869P	24.0
6-66-1 Ships FO	95.0	154.9	0.8336	129.1	135.9	2.269	136.539A	9.203S	14.0
6-66-2 Ships FO	95.0	143.2	0.8336	119.4	125.7	1.812	136.586A	8.051P	9.0
6-72-0 Ships FO	95.0	125.6	0.8336	104.7	110.3	0.961	156.846A	0.000S	176.0
3-75-3 FO Serv	95.0	285.3	0.8336	237.9	250.4	12.198	168.348A	12.958S	177.0
3-79-3 Ships FO	95.0	177.4	0.8336	147.9	155.7	11.863	179.229A	12.730S	151.0
4-79-6 FO Settl	95.0	213.0	0.8336	177.6	186.9	11.978	178.260A	12.936P	150.0
3-81.5-2 FO Serv	95.0	265.8	0.8336	221.6	233.3	12.398	187.952A	12.669P	162.0
3-82-1 FO Overfl	--	0.0	0.8336	0.0	204.0	12.408	188.645A	12.663S	0.0
Fuel Oil Totals	90.6	4,801.1		4,002.2	4,416.8	3.307	110.806A	0.029S	6,436.0

Lube Oil

Name	%Full %	TOV m3	Dens MT/m3	Weight MT	Capacity Wt MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT
3-82.5-1 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	1.953S	32.0
3-82.5-3 LO Stor	95.0	119.9	0.9211	110.5	116.3	12.297	189.358A	5.858S	32.0
3-73.5-2 LO Sett	95.0	25.3	0.9211	23.3	24.6	12.261	159.773A	13.233P	6.0
6-68-3 Sump 1	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376S	4.8
6-68-1 Sump 2	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836S	5.0
6-68-2 Sump 3	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836P	5.0
6-68-4 Sump 4	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376P	5.0
4-79-1 LO Drain	--	0.0	0.9211	0.0	112.9	7.649	176.077A	8.139S	0.0
Lube Oil Totals	70.7	352.8		324.9	459.6	9.830	176.343A	1.704S	89.8

Fresh Water

Name	%Full %	Volume m3	Dens MT/m3	Weight MT	Capacity Wt MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT
3-79-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	176.895A	5.155S	0.0
3-79-0 Dist. WTR	100.0	119.2	1.0000	119.2	119.2	12.400	179.250A	0.000S	0.0
3-79-2 Cargo PT	--	0.0	1.0000	0.0	100.5	12.400	176.895A	5.155P	0.0
3-80.5-1 Ship PT	100.0	100.5	1.0000	100.5	100.5	12.400	181.605A	5.155S	0.0
3-80.5-2 Cargo PT	--	0.0	1.0000	0.0	100.5	12.400	181.605A	5.155P	0.0
Fresh Water Totals	61.4	320.2		320.2	521.2	12.400	179.250A	3.236S	0.0

Ballast

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-M-0 F Pk SWB	100.0	668.5	1.0250	685.2	685.2	9.774	2.900A	0.000P	0.0
6-24-1 SWB	100.0	1,367.1	1.0250	1,401.3	1,401.3	9.440	23.345A	5.918S	0.0
6-24-2 SWB	100.0	1,367.1	1.0250	1,401.3	1,401.3	9.440	23.345A	5.918P	0.0
4-34-3 SWB	50.0	169.7	1.0250	174.0	347.9	8.405	37.751A	10.579S	96.0
4-35-2 SWB	100.0	290.4	1.0250	297.6	297.6	10.389	38.515A	11.504P	0.0
6-45-1 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864S	0.0
6-45-2 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864P	0.0
6-54-1 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532S	0.0
6-54-01 SWB	100.0	204.8	1.0250	209.9	209.9	0.928	101.786A	0.000S	0.0
6-54-2 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532P	0.0
4-83-1 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824S	0.0
4-83-2 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824P	0.0
Ballast Totals	91.2	5,438.0		5,574.0	6,109.1	7.274	42.418A	0.284P	96.0

Misc.

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-2 Av FO	95.0	123.2	0.8136	100.2	105.5	12.298	188.968A	3.881P	45.0
3-84-2 JP-5 Ser	95.0	21.2	0.8136	17.3	18.2	12.298	191.810A	6.925P	1.0
4-79-2 Av FO Of	--	0.0	0.8136	0.0	147.0	7.867	177.939A	8.843P	0.0
03-73-1 EDGF S	95.0	11.4	0.8336	9.5	10.0	30.330	156.878A	8.223S	3.0
6-68.5-0 FO Lea	--	0.0	0.8336	0.0	3.1	0.950	142.748A	0.000	0.0
5-71-1A MOW/O	--	0.0	0.9211	0.0	19.9	4.671	151.558A	12.918S	0.0
6-62-2A COW/O	--	0.0	0.9211	0.0	4.5	0.940	123.515A	0.788P	0.0
6-69-0 Waste O.	--	0.0	0.9211	0.0	13.6	0.950	144.710A	0.000	0.0
5-71-1B MOW/W	--	0.0	1.0000	0.0	14.2	4.642	150.002A	12.990S	0.0
6-62-2B COW/W	--	0.0	1.0000	0.0	4.8	1.000	121.945A	0.788P	0.0
6-70-0 FW Drain	--	0.0	1.0000	0.0	38.7	1.001	149.419A	0.000	0.0
3-77-2 Food Wst	25.0	2.0	1.0250	2.0	8.0	12.620	169.694A	10.345P	1.0
3-77-4 Gray Wtr	25.0	24.3	1.0250	24.9	99.7	10.876	171.066A	14.005P	38.8
6-68-0 MDG CIn	--	0.0	1.0250	0.0	2.6	1.500	140.807A	0.000	0.0
3-75-6 VCHT Sg	25.0	1.3	1.0250	1.4	5.4	10.948	167.215A	12.763P	1.0
5-44-2 Fwd Foam	100.0	0.7	1.0000	0.7	0.7	15.449	50.898A	11.854P	0.0
1-65-1 Aft Foam	100.0	1.5	1.0000	1.5	1.5	19.916	131.950A	13.314S	0.0
Misc. Totals	33.0	185.5		157.4	497.3	13.238	182.947A	5.118P	89.8

Stores & Constant

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Dry Prov Stores	10.4	24.290	123.510A	10.760S
Chill Storeroom	7.8	24.290	130.990A	10.870S
Dairy Storeroom	4.3	24.290	127.180A	10.760S
Freeze Storeroom	11.3	24.290	132.940A	4.710S
Fish Storeroom	7.2	24.290	139.710A	4.710S
Thaw Room	0.0	24.290	128.620A	4.710S
Dry Prov Annex	8.0	24.290	146.870A	5.600P
Medical Stores	11.9	27.180	134.880A	4.710S
General Stores	32.2	15.975	37.450A	0.090P
Aviation Stores	11.0	24.000	168.260A	7.000S
Helicopters	21.2	21.600	161.980A	0.000
Crew	29.0	32.840	128.010A	0.000
Stores & Constant Totals	154.3	23.994	118.887A	2.692S

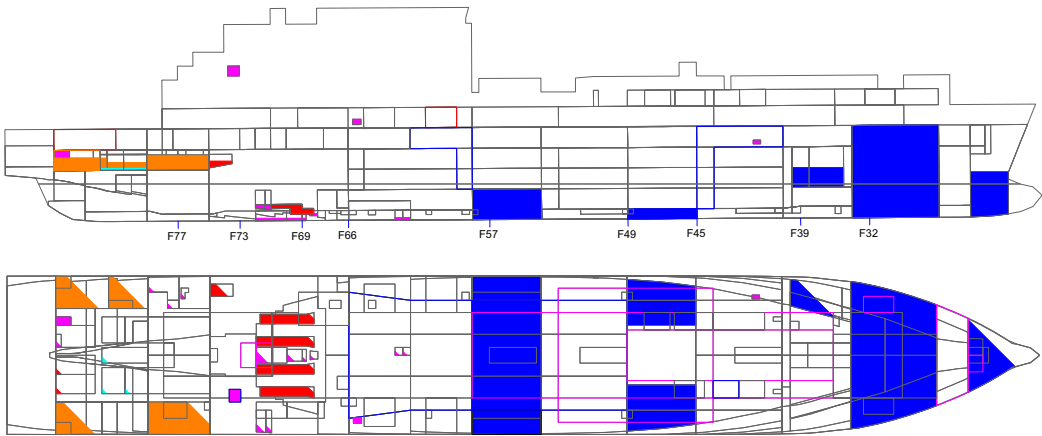
APPENDIX I

Appendix I

Example Loading Conditions

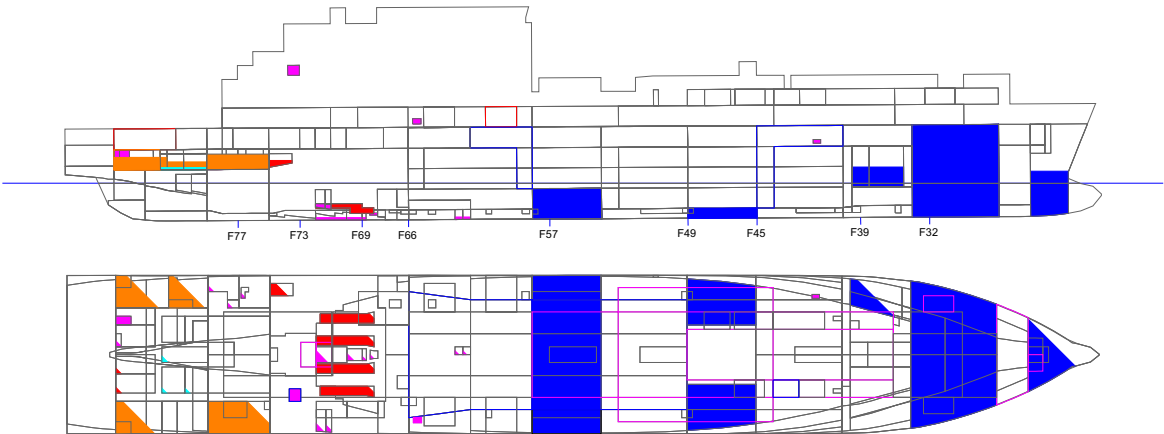
No Cargo Arrival

No Cargo Arrival
Weight Summary



Group	Weight MT	VCG m-BL	LCG m-FP	TCG m-CL	FSt m-MT	Group Min FS m-MT
Lightship	25,254.1	14.310	107.601A	0.020S	0.0	
Cargo Oil	0.0	--	--	--	2,421.0	2,421.0
Fuel Oil	502.1	11.478	178.829A	2.090S	3,876.0	3,876.0
Lube Oil	116.2	4.999	155.801A	0.617P	606.0	606.0
Fresh Water	32.0	10.555	179.250A	3.236S	143.0	143.0
Ballast	4,908.6	6.529	45.425A	0.328P	84.8	
Misc.	93.1	10.705	167.198A	3.807P	136.0	136.0
Stores & Constant	60.5	27.058	136.426A	0.675S	0.0	
M/P Cargo Hold 1	0.0	--	--	--	0.0	
M/P Cargo Hold 2	0.0	--	--	--	0.0	
Freeze/Chill Cargo Hold 3	0.0	--	--	--	0.0	
2nd DK Aft Specialty	0.0	--	--	--	0.0	
Transfer DK Pre-Staging	0.0	--	--	--	0.0	
01 Level Specialty	0.0	--	--	--	0.0	
ICODES	0.0	--	--	--	0.0	
Displacement	30,966.7	13.006	99.391A	0.011P	7,266.8	
Deadweight	5,712.5					
Avail Deadweight	13,812.3	--Summer Load Line--				

No Cargo Arrival
Trim and Stability Summary



Loading

Displacement	30,966.7 MT	Specific Gravity	1.0250
Deadweight	5,712.5 MT		
Avail Deadweight	13,812.3 MT	--Summer Load Line--	

Stability

KMt	16.578 m	LCF Draft	7.244 m
VCG (Upright)	13.006 m	LCF	105.156A m-FP
GMt (Solid)	3.572 m	LCB	99.391A m-FP
FS Correction	0.235 m	LCG	99.391A m-FP
GMt (Corrected)	3.337 m	TP1cm	51.5 MT/cm
GMt Required	3.244 m	MT1cm	566 m-MT/cm
GMt Margin	0.093 m	Trim at Perps	1.018A m
--Required GM--		Heel Angle	0.20P deg
		Propeller Immersion	114.2 %

Drafts - Perps

AP	7.726 m	AFT	7.721 m
MS	7.217 m	MS	7.217 m
FP	6.707 m	FWD	6.719 m

Strength --At Sea--

Shear (Min)	-3,555.2 MT	42.100A m-FP	78.1 %
Shear (Max)	2,402.2 MT	133.720A m-FP	53.4 %
Shear (Max %Allow)	-3,555.2 MT	42.100A m-FP	78.1 %
Moment (Max Hog)	179,138.4H m-MT	87.343A m-FP	---
Moment (Max Sag)	--- m-MT	--- m-FP	---
Moment (Max %Allow)	172,919.2H m-MT	77.100A m-FP	85.2 %

Bridge Visibility - Cargo Visibility - ABS

Actual	364.368 m	Required	<402.250 m
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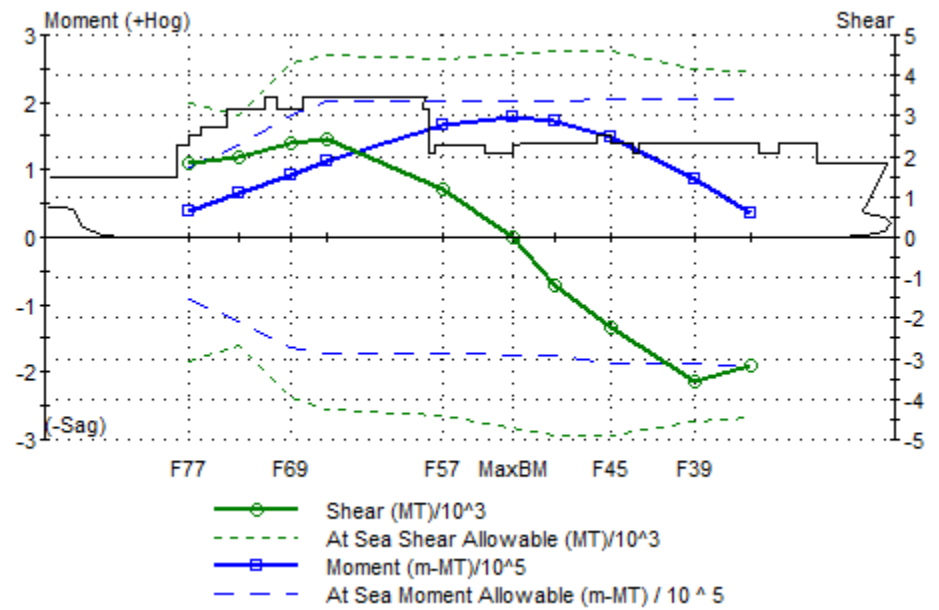
Air Draft

Actual	52.983 m
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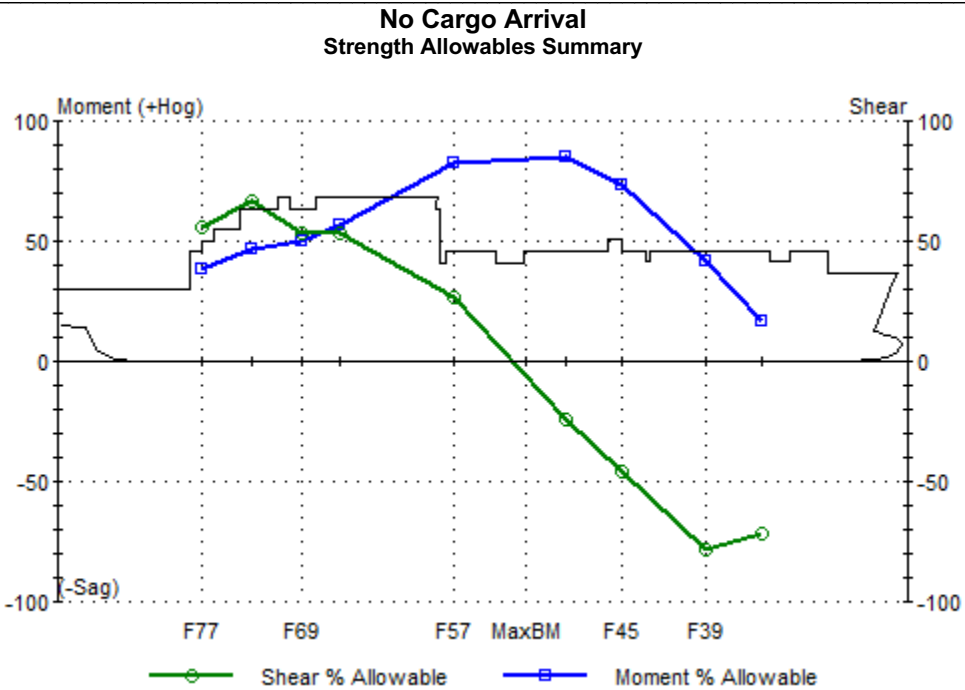
Notes

- Drafts from Keel
- Hull from Trimmed Tables
- Tanks from Tables

No Cargo Arrival
Strength Values Summary

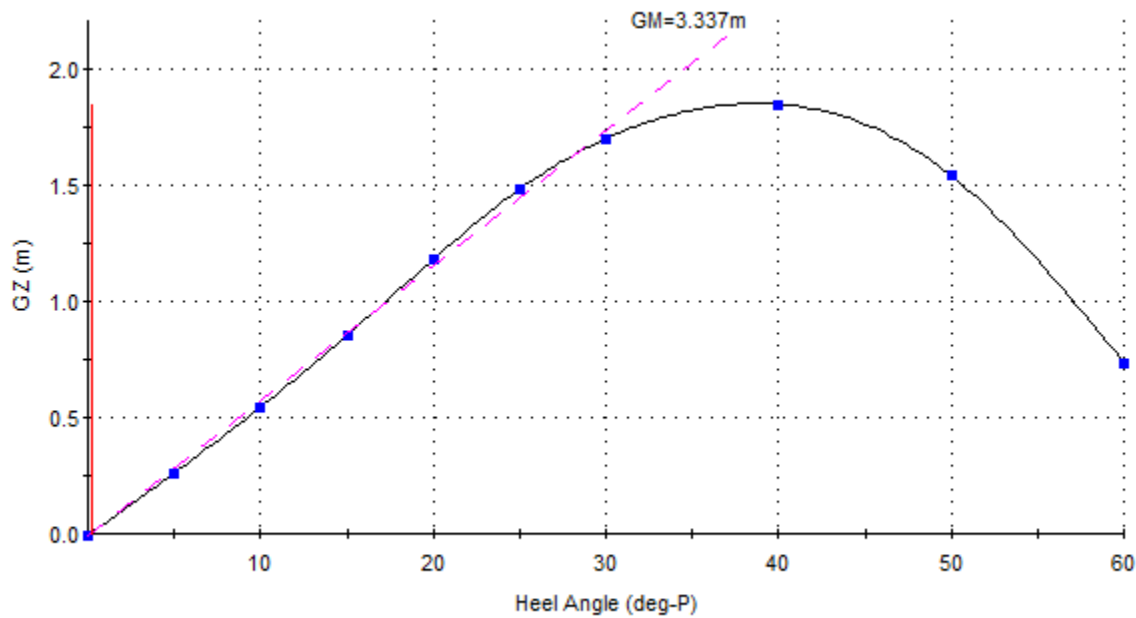


Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Wt MT	Buoy MT	Shear MT	Wt Mom m-MT	Buoy Mom m-MT	Moment m-MT
F77	168.260A	3,218.2	1,369.2	1,848.9	50,281.4	10,703.0	39,578.4H
F73	155.700A	5,206.7	3,202.9	2,003.8	103,506.8	38,627.8	64,879.0H
F69	143.140A	7,935.6	5,627.7	2,307.8	185,245.9	93,603.5	91,642.3H
F66	133.720A	10,080.8	7,678.6	2,402.2	270,369.2	156,188.9	114,180.2H
F57	105.100A	15,521.1	14,337.7	1,183.4	636,566.3	470,549.2	166,017.1H
MaxBM	87.343A	18,503.9	18,502.5	1.4	941,349.2	762,210.8	179,138.4H
F49	77.100A	19,677.1	20,860.6	-1,183.4	1,136,760.2	963,841.0	172,919.2H
F45	63.100A	21,697.6	23,943.7	-2,246.1	1,426,921.2	1,277,756.1	149,165.0H
F39	42.100A	24,243.7	27,798.9	-3,555.2	1,908,557.8	1,823,251.0	85,306.8H
F32	28.100A	26,318.1	29,496.4	-3,178.3	2,259,975.2	2,225,262.0	34,713.2H



Name	Loc m-FP	Shear - At Sea			Bending - At Sea		
		Shear MT	Allow MT	% Allow	Moment m-MT	Allow m-MT	%Allow
F77	168.260A	1,848.9	3,300.0	56.0	39,578.4H	102,750.0H	38.5
F73	155.700A	2,003.8	3,000.0	66.8	64,879.0H	137,950.0H	47.0
F69	143.140A	2,307.8	4,300.0	53.7	91,642.3H	182,000.0H	50.4
F66	133.720A	2,402.2	4,500.0	53.4	114,180.2H	201,100.0H	56.8
F57	105.100A	1,183.4	4,400.0	26.9	166,017.1H	201,100.0H	82.6
MaxBM	87.343A	1.4	---	---	179,138.4H	---	---
F49	77.100A	-1,183.4	-4,900.0	24.2	172,919.2H	203,000.0H	85.2
F45	63.100A	-2,246.1	-4,900.0	45.8	149,165.0H	204,350.0H	73.0
F39	42.100A	-3,555.2	-4,550.0	78.1	85,306.8H	204,350.0H	41.7
F32	28.100A	-3,178.3	-4,450.0	71.4	34,713.2H	204,350.0H	17.0

No Cargo Arrival
Righting Arm Summary



Angle (deg)	0.00	5.00P	10.00P	15.00P	20.00P	25.00P	30.00P	40.00P	50.00P	60.00P
GZ (m)	-0.011	0.259	0.543	0.852	1.179	1.482	1.698	1.848	1.540	0.735

Notes

GZ Curve from KN Table
Tanks from Tables
Disp. of Hull = 30,966.7MT

No Cargo Arrival
Deadweight Details by Group (All Tanks in Loaded Groups)

Fuel Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-34-1 Ships FO	--	0.0	0.8336	0.0	192.4	1.235	38.986A	3.741S	0.0
6-34-2 Ships FO	--	0.0	0.8336	0.0	189.6	1.226	39.014A	3.702P	0.0
6-40-1 Ships FO	--	0.0	0.8336	0.0	291.9	1.003	55.098A	5.628S	0.0
6-40-2 Ships FO	--	0.0	0.8336	0.0	291.9	1.003	55.098A	5.628P	0.0
6-49-1 Ships FO	--	0.0	0.8336	0.0	301.5	0.988	85.998A	9.567S	0.0
6-49-01 Ship FO	--	0.0	0.8336	0.0	219.5	0.891	86.265A	0.000	0.0
6-49-2 Ships FO	--	0.0	0.8336	0.0	301.5	0.988	85.998A	9.567P	0.0
6-58-1 Ships FO	--	0.0	0.8336	0.0	209.2	1.003	114.765A	9.417S	0.0
6-58-0 Ships FO	--	0.0	0.8336	0.0	175.2	0.950	114.880A	0.000	0.0
6-58-2 Ships FO	--	0.0	0.8336	0.0	208.8	1.002	114.822A	9.412P	0.0
6-62-1 Ships FO	--	0.0	0.8336	0.0	233.2	1.428	127.149A	9.876S	0.0
6-62-01 Ship FO	--	0.0	0.8336	0.0	166.9	0.951	127.666A	0.038S	0.0
6-62-4 Ships FO	--	0.0	0.8336	0.0	233.1	1.429	127.182A	9.869P	0.0
6-66-1 Ships FO	--	0.0	0.8336	0.0	135.9	2.269	136.539A	9.203S	0.0
6-66-2 Ships FO	--	0.0	0.8336	0.0	125.7	1.812	136.589A	8.051P	0.0
6-72-0 Ships FO	--	0.0	0.8336	0.0	110.3	0.961	156.846A	0.000	0.0
3-75-3 FO Serv	75.9	228.0	0.8336	190.0	250.4	11.806	168.371A	12.873S	182.4
3-79-3 Ships FO	--	0.0	0.8336	0.0	155.7	11.863	179.229A	12.730S	0.0
4-79-6 FO Settl	50.0	112.1	0.8336	93.5	186.9	10.842	178.062A	12.963P	106.5
3-81.5-2 FO Serv	50.0	139.9	0.8336	116.6	233.3	11.461	187.921A	12.576P	203.6
3-82-1 FO Overfl	50.0	122.3	0.8336	102.0	204.0	11.468	188.620A	12.565S	177.6
Fuel Oil Totals	11.4	602.3		502.1	4,416.8	11.478	178.829A	2.090S	670.1

Lube Oil

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-1 LO Stor	10.0	12.6	0.9211	11.6	116.3	10.555	189.358A	1.953S	37.0
3-82.5-3 LO Stor	10.0	12.6	0.9211	11.6	116.3	10.555	189.358A	5.858S	37.0
3-73.5-2 LO Sett	50.0	13.3	0.9211	12.3	24.6	11.724	159.904A	13.233P	6.0
6-68-3 Sump 1	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376S	4.8
6-68-1 Sump 2	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836S	5.0
6-68-2 Sump 3	90.0	22.5	0.9211	20.7	23.0	2.385	145.659A	2.836P	5.0
6-68-4 Sump 4	90.0	21.3	0.9211	19.7	21.8	2.363	145.345A	7.376P	5.0
4-79-1 LO Drain	--	0.0	0.9211	0.0	112.9	7.649	176.077A	8.139S	0.0
Lube Oil Totals	25.3	126.2		116.2	459.6	4.999	155.801A	0.617P	99.8

Fresh Water

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-79-1 Ship PT	10.0	10.0	1.0000	10.0	100.5	10.555	176.895A	5.155S	59.0
3-79-0 Dist. WTR	10.0	11.9	1.0000	11.9	119.2	10.555	179.250A	0.000S	25.0
3-79-2 Cargo PT	--	0.0	1.0000	0.0	100.5	12.400	176.895A	5.155P	0.0
3-80.5-1 Ship PT	10.0	10.0	1.0000	10.0	100.5	10.555	181.605A	5.155S	59.0
3-80.5-2 Cargo PT	--	0.0	1.0000	0.0	100.5	12.400	181.605A	5.155P	0.0
Fresh Water Totals	6.1	32.0		32.0	521.2	10.555	179.250A	3.236S	143.0

Ballast

Name	%Full	Volume	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
6-M-0 F Pk SWB	50.0	334.3	1.0250	342.6	685.2	4.405	2.364A	0.000S	12.8
6-24-1 SWB	100.0	1,367.1	1.0250	1,401.3	1,401.3	9.440	23.345A	5.918S	0.0
6-24-2 SWB	100.0	1,367.1	1.0250	1,401.3	1,401.3	9.440	23.345A	5.918P	0.0
4-34-3 SWB	--	0.0	1.0250	0.0	347.9	10.409	37.641A	11.279S	0.0
4-35-2 SWB	50.0	145.2	1.0250	148.8	297.6	8.385	38.598A	10.811P	72.0
6-45-1 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864S	0.0
6-45-2 SWB	100.0	203.7	1.0250	208.8	208.8	1.075	70.338A	9.864P	0.0
6-54-1 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532S	0.0
6-54-01 SWB	100.0	204.8	1.0250	209.9	209.9	0.928	101.786A	0.000S	0.0
6-54-2 SWB	100.0	481.6	1.0250	493.6	493.6	2.219	101.560A	11.532P	0.0
4-83-1 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824S	0.0
4-83-2 SWB	--	0.0	1.0250	0.0	180.6	9.282	190.007A	6.824P	0.0
Ballast Totals	80.3	4,788.9		4,908.6	6,109.1	6.529	45.425A	0.328P	84.8

Misc.

Name	%Full	TOV	Dens	Weight	Capacity Wt	VCG	LCG	TCG	FSt
	%	m3	MT/m3	MT	MT	m-BL	m-FP	m-CL	m-MT
3-82.5-2 Av FO	10.0	13.0	0.8136	10.5	105.5	10.555	188.968A	3.881P	45.0
3-84-2 JP-5 Ser	95.0	21.2	0.8136	17.3	18.2	12.298	191.810A	6.925P	1.0
4-79-2 Av FO Of	--	0.0	0.8136	0.0	147.0	7.867	177.939A	8.843P	0.0
03-73-1 EDGF S	95.0	11.4	0.8336	9.5	10.0	30.330	156.878A	8.223S	3.0
6-68.5-0 FO Lea	25.0	0.9	0.8336	0.8	3.1	0.250	142.748A	0.000P	1.0
5-71-1A MOW/O	25.0	5.4	0.9211	5.0	19.9	3.481	151.524A	12.308S	5.0
6-62-2A COW/O	25.0	1.2	0.9211	1.1	4.5	0.250	123.515A	0.788P	1.0
6-69-0 Waste O.	25.0	3.7	0.9211	3.4	13.6	0.250	144.710A	0.000P	3.0
5-71-1B MOW/W	25.0	3.6	1.0000	3.6	14.2	3.299	149.990A	12.348S	3.6
6-62-2B COW/W	25.0	1.2	1.0000	1.2	4.8	0.250	121.945A	0.788P	1.0
6-70-0 FW Drain	25.0	9.7	1.0000	9.7	38.7	0.252	149.415A	0.000	16.0
3-77-2 Food Wst	25.0	2.0	1.0250	2.0	8.0	12.620	169.694A	10.345P	1.0
3-77-4 Gray Wtr	25.0	24.3	1.0250	24.9	99.7	10.876	171.066A	14.005P	38.8
6-68-0 MDG CIn	25.0	0.6	1.0250	0.6	2.6	1.125	140.807A	0.000S	1.0
3-75-6 VCHT Sg	25.0	1.3	1.0250	1.4	5.4	10.948	167.215A	12.763P	1.0
5-44-2 Fwd Foam	100.0	0.7	1.0000	0.7	0.7	15.449	50.898A	11.854P	0.0
1-65-1 Aft Foam	100.0	1.5	1.0000	1.5	1.5	19.916	131.950A	13.314S	0.0
Misc. Totals	18.1	101.6		93.1	497.3	10.705	167.198A	3.807P	121.4

Stores & Constant

Name	Weight	VCG	LCG	TCG
	MT	m-BL	m-FP	m-CL
Dry Prov Stores	1.0	24.290	123.510A	10.760S
Chill Storeroom	0.8	24.290	130.990A	10.870S
Dairy Storeroom	0.4	24.290	127.180A	10.760S
Freeze Storeroom	1.1	24.290	132.940A	4.710S
Fish Storeroom	0.7	24.290	139.710A	4.710S
Thaw Room	0.0	24.290	128.620A	4.710S
Dry Prov Annex	0.8	24.290	146.870A	5.600P
Medical Stores	1.2	27.180	134.880A	4.710S
General Stores	3.2	15.975	37.450A	0.090P
Aviation Stores	1.1	24.000	168.260A	7.000S
Helicopters	21.2	21.600	161.980A	0.000
Crew	29.0	32.840	128.010A	0.000
Stores & Constant Totals	60.5	27.058	136.426A	0.675S

APPENDIX J

Appendix J

Blank Worksheets

APPENDIX J

COND:

WORKSHEET 1 OF 6

SUMMARY								
ITEM	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
LIGHT SHIP	25,254.1	107.601	2,717,371	14.310	361,387	-0.020	-505	-
HELICOPTERS	21.2	161.980	3,434	21.600	458	0.000	0	-
CREW	29.0	128.010	3,712	32.840	952	0.000	0	-
FUEL OIL								
LUBE OIL								
CARGO OIL								
FRESH WATER								
SALT WATER BALLAST								
MISC. TANKS								
PROVISIONS								
STORES								
CARGO / MISC. WEIGHT								
TOTAL								

(1) LCF DRAFT	[M-KEEL]	(11) TRIM LEVER	[M]
		(9) - (10)	
(2) KM	[M]	(12) MT1	[M-MTON/CM]
(3) KG	[M]	(13) TRIM (+AFT)	[M]
(4) GM SOLID	[M]	(11) x DISP	
(2) - (3)		100 x (12)	
(5) VMFS Corr.	[M]	(14) LCF	[M-FP]
VMFS DISPL		(15) DRAFT AP	[M-KEEL]
		(1) + (13) * (199.55 - (14))	
(6) GM AVAILABLE	[M]	199.55	
(4) - (5)		(16) DRAFT FP	[M-KEEL]
		(15) - (13)	
(7) GM REQUIRED	[M]	(17) DRAFT MIDSHIPS	[M-KEEL]
(8) HEEL (+Port)	[DEG]	(15) + (16)	
57.3 x (TCG) (6)		2	
(9) LCG	[M-FP]	(18) DRAFT AFT MARKS	[M-KEEL]
		(15) - (13) x (1/199.55)	
(10) LCB	[M-FP]	(19) DRAFT FWD MARKS	[M-KEEL]
		(16) + (13) x (2.348/199.55)	
		(20) DRAFT STERN MARKS	[M-KEEL]
		(15) + (13) x (3.7/199.55)	
		(21) AIR DRAFT	[M-KEEL]
		60.26 - LESS DRAFT	

APPENDIX J

COND:

WORKSHEET 2 OF 6

FUEL OIL										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
SHIPS FUEL 1S	6-34-1			38.986		1.235		-3.741		
SHIPS FUEL 1P	6-34-2			39.014		1.226		3.702		
SHIPS FUEL 2S	6-40-1			55.098		1.003		-5.628		
SHIPS FUEL 2P	6-40-2			55.098		1.003		5.628		
SHIPS FUEL 3S	6-49-1			85.998		0.988		-9.567		
SHIPS FUEL 3C	6-49-01			86.265		0.891		0.000		
SHIPS FUEL 3P	6-49-2			85.998		0.988		9.567		
SHIPS FUEL 4S	6-58-1			114.765		1.003		-9.417		
SHIPS FUEL 4C	6-58-0			114.880		0.950		0.000		
SHIPS FUEL 4P	6-58-2			114.822		1.002		9.412		
SHIPS FUEL 5S*	6-62-1			127.149		1.428				
SHIPS FUEL 5C	6-62-01			127.666		0.951		-0.038		
SHIPS FUEL 5P*	6-62-4			127.182		1.429				
SHIPS FUEL 6S*	6-66-1			136.539		2.269				
SHIPS FUEL 6P*	6-66-2			136.589		1.812				
SHIPS FUEL 7	6-72-0			156.846		0.961		0.000		
FUEL SERV TANK S	3-75-3			168.348		12.198		-12.958		
SHIPS FUEL 9	3-79-3			179.229		11.863		-12.730		
FUEL SETT TANK	4-79-6			178.260		11.978		12.936		
FUEL SERV TANK P	3-81.5-2			187.952		12.398		12.669		
FUEL OVRFLW TANK	3-82-1			188.645		12.408		-12.663		
TOTAL FUEL OIL										
*Marked Tanks have Variable TCG. See Sheet 27								Minimum Required VMFS		3,876

LUBE OIL										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
LO STORAGE TK 1	3-82.5-1			189.358		12.298		-1.955		
LO STORAGE TK 2	3-82.5-3			189.358		12.298		-5.858		
LO SETTLING TK	3-73.5-2			159.772		12.261		13.233		
LO SUMP 1	6-68-3			145.456		2.406		-7.375		
LO SUMP 2	6-68-1			145.774		2.427		-2.837		
LO SUMP 3	6-68-2			145.774		2.427		2.837		
LO SUMP 4	6-68-4			145.456		2.406		7.375		
LO DRAIN TK	4-79-1			176.077		7.649		-8.139		
TOTAL LUBE OIL										
								Minimum Required VMFS		
								606		

CARGO OIL											
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]	
CARGO FUEL 1C	4-24-0			20.135		12.967		0.000			
CARGO FUEL 2C	4-30-0			28.260		12.627		0.000			
CARGO FUEL 3S	4-34-1			38.210		10.394		-6.102			
CARGO FUEL 3C	4-34-0			35.975		10.113		0.000			
CARGO FUEL 3P	4-34-2			38.210		10.394		6.102			
CF SLOP TANK	4-38.5-0			42.100		10.113		0.000			
TOTAL CARGO OIL											
							Minimum Required VMFS (DFM)				2,421
							Minimum Required VMFS (JP-5)				2,363

APPENDIX J

COND:

WORKSHEET 3 OF 6

FRESH WATER										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
SHIP POTW TK A	3-79-1			176.895		12.400		-5.155		
DISTILLED WTR TK	3-79-0			179.250		12.400		0.000		
CARGO POTW TK A	3-79-2			176.895		12.400		5.155		
SHIP POTW TK F	3-80.5-1			181.605		12.400		-5.155		
CARGO POTW TK F	3-80.5-2			181.605		12.400		5.155		
TOTAL FRESH WATER										
Minimum Required VMFS										143

SALT WATER BALLAST										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
FORE PEAK TANK	6-M-0			2.900		9.774		0.000		
SWB1S*	6-24-1			23.345		9.942				
SWB1P*	6-24-2			23.345		9.942				
SWB2S	4-34-3			37.641		10.409		-11.279		
SWB2P	4-35-2			38.515		10.389		11.504		
SWB3S	6-45-1			70.338		1.075		-9.864		
SWB3P	6-45-2			70.338		1.075		9.864		
SWB4S*	6-54-1			101.560		2.219				
SWB4C	6-54-01			101.786		0.928		0.000		
SWB4P*	6-54-2			101.560		2.219				
SWB5S	4-83-1			190.007		9.282		-6.824		
SWB5P	4-83-2			190.007		9.282		6.824		
TOTAL SALT WATER BALLAST										
*Marked Tanks have Variable TCG. See Sheet 27										

MISC. TANKS										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
AVIATION FUEL	3-82.5-2			188.968		12.298		3.881		
JP-5 SERVICE TK	3-84-2			191.810		12.298		6.925		
AVIATION FUEL OVRFLW TK	4-79-2			177.939		7.867		8.843		
EDG FUEL SERVICE TK	03-73-1			156.878		30.330		-8.223		
FUEL LEAKAGE TK	6-68.5-0			142.748		0.950		0.000		
MCHRY OLY WST (OIL)	5-71-1A			151.558		4.671		-12.918		
CARGO HLD OLY WST (OIL)	6-62-2A			123.515		0.940		0.788		
WST OIL TK	6-69-0			144.710		0.950		0.000		
MCHRY OLY WST (WATER)	5-71-1B			150.002		4.642		-12.990		
CARGO HLD OLY WST (WATER)	6-62-2B			121.945		1.000		0.788		
FW DRAIN TK	6-70-0			149.419		1.001		0.000		
FOOD WASTE TK	3-77-2			169.502		13.416		10.345		
GRAV WTR COLL TK	3-77-4			171.079		12.416		14.045		
MDG CLNG TK	6-68-0			140.807		1.500		0.000		
VCHT TK	3-75-6			167.215		11.777		12.763		
FWD FOAM TK	5-44-2			50.898		15.449		11.854		
AFT FOAM TK	1-65-1			131.950		19.916		-13.314		
TOTAL MISC. TANKS										
Minimum Required VMFS 136										

APPENDIX J

COND:

WORKSHEET 4 OF 6

		PROVISIONS						
Description		WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]
DRY PROVISIONS STORE	01-60-1		123.510		24.290		-10.760	
CHILL STOREROOM	01-64-3		130.990		24.290		-10.870	
DAIRY STOREROOM	01-63.5-1		127.180		24.290		-10.760	
FREEZE STOREROOM	01-64.5-1		132.940		24.290		-4.710	
FISH STOREROOM	01-67.5-1		139.710		24.290		-4.710	
THAW ROOM	01-64-1		128.620		24.290		-4.710	
DRY PROVISIONS ANNEX	01-69.5-2		146.870		24.290		5.600	
MEDICAL STORES	02-66-1		134.880		27.180		-4.710	
TOTAL PROVISIONS								

		STORES						
Description		WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]
GENERAL STORES (COSAL STORES)	2-34-0		37.450		15.975		0.090	
AVIATION STORES (AVIATION SPARES)	01-76-1		168.260		24.000		-7.000	
TOTAL STORES								

CARGO / MISC. WEIGHT								
HOLD OR DECK	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	
TOTAL CARGO / MISC. WEIGHT								

APPENDIX J

CARGO LOADING DETAIL										
Voyage:				Date:			Hold:			
		[1]	[2]	[3]	[4] = [2]+[3]	[5] = [1] x [4]	[6]	[7] = [1] x [6]	[8]	[9]=[1] x [8]
DESCRIPTION	HOLD/DECK	WT [MTON]	UNIT VCG [M-DECK]	DECK HEIGHT [M-BL]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
TOTAL										

CARGO LOADING DETAIL										
Voyage:				Date:			Hold:			
		[1]	[2]	[3]	[4] = [2]+[3]	[5] = [1] x [4]	[6]	[7] = [1] x [6]	[8]	[9]=[1] x [8]
DESCRIPTION	HOLD/DECK	WT [MTON]	UNIT VCG [M-DECK]	DECK HEIGHT [M-BL]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
TOTAL										

CARGO LOADING DETAIL										
Voyage:				Date:			Hold:			
		[1]	[2]	[3]	[4] = [2]+[3]	[5] = [1] x [4]	[6]	[7] = [1] x [6]	[8]	[9]=[1] x [8]
DESCRIPTION	HOLD/DECK	WT [MTON]	UNIT VCG [M-DECK]	DECK HEIGHT [M-BL]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
TOTAL										

APPENDIX J1

Appendix J1

Sample Hand Calculations

(B1 Mixed Cargo Departure)

APPENDIX J1

SUMMARY								
ITEM	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
LIGHT SHIP	25,254.1	107.601	2,717,371	14.310	361,387	-0.020	-505	-
HELICOPTERS	21.2	161.980	3,434	21.600	458	0.000	0	-
CREW	29.0	128.010	3,712	32.840	952	0.000	0	-
FUEL OIL	4,002.2	110.806	443,470	3.307	13,235	-0.029	-116	6,433
LUBE OIL	301.6	177.656	53,582	9.654	2,912	-2.861	-863	606
CARGO OIL	3,307.8	30.029	99,330	11.757	38,890	0.000	0	4,555
FRESH WATER	521.2	179.250	93,423	12.400	6,463	0.000	0	143
SALT WATER BALLAST	2,086.3	81.010	169,007	3.709	7,737	0.759	1,584	96
MISC. TANKS	157.4	182.951	28,796	13.499	2,125	5.124	807	136
PROVISIONS	60.9	133.683	8,141	24.855	1,514	-5.605	-341	-
STORES	43.2	70.758	3,057	18.018	778	-1.715	-74	-
CARGO / MISC. WEIGHT	6,799.7	99.162	674,271	10.743	73,048	-0.097	-663	-
TOTAL	42,584.6	100.919	4,297,595	11.964	509,499	-0.004	-172	11,969

(1) LCF DRAFT	9.399 [M-KEEL]	(11) TRIM LEVER	0.830 [M]
		(9) - (10)	
(2) KM	15.402 [M]	(12) MT1	732 [M-MTON/CM]
(3) KG	11.964 [M]	(13) TRIM (+AFT)	0.483 [M]
(4) GM SOLID	3.438 [M]	(11) x DISP	
(2) - (3)		100 x (12)	
(5) VMFS Corr.	0.281 [M]	(14) LCF	110.129 [M-FP]
VMFS DISPL		(15) DRAFT AP	9.615 [M-KEEL]
		(1) + (13) * (199.55 - (14))	
(6) GM AVAILABLE	3.157 [M]	199.55	
(4) - (5)		(16) DRAFT FP	9.132 [M-KEEL]
		(15) - (13)	
(7) GM REQUIRED	2.478 [M]	(17) DRAFT MIDSHIPS	9.374 [M-KEEL]
(8) HEEL (+Port)	-0.07 [DEG]	(15) + (16)	
57.3 x (TCG)		2	
(6)			
(9) LCG	100.919 [M-FP]	(18) DRAFT AFT MARKS	9.613 [M-KEEL]
		(15) - (13) x (1/199.55)	
(10) LCB	100.089 [M-FP]	(19) DRAFT FWD MARKS	9.138 [M-KEEL]
		(16) + (13) x (2.348/199.55)	
		(20) DRAFT STERN MARKS	9.624 [M-KEEL]
		(15) + (13) x (3.7/199.55)	
		(21) AIR DRAFT	51.128 [M-KEEL]
		60.26 - LESS DRAFT	

APPENDIX J1

FUEL OIL										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
SHIPS FUEL 1S	6-34-1	95	182.8	38.986	7,125	1.235	226	-3.741	-684	341
SHIPS FUEL 1P	6-34-2	95	180.1	39.014	7,026	1.226	221	3.702	667	344
SHIPS FUEL 2S	6-40-1	95	277.3	55.098	15,279	1.003	278	-5.628	-1,561	742
SHIPS FUEL 2P	6-40-2	95	277.3	55.098	15,279	1.003	278	5.628	1,561	742
SHIPS FUEL 3S	6-49-1	95	286.5	85.998	24,636	0.988	283	-9.567	-2,741	719
SHIPS FUEL 3C	6-49-01	95	208.6	86.265	17,991	0.891	186	0.000	0	381
SHIPS FUEL 3P	6-49-2	95	286.5	85.998	24,636	0.988	283	9.567	2,741	719
SHIPS FUEL 4S	6-58-1	95	198.7	114.765	22,807	1.003	199	-9.417	-1,871	496
SHIPS FUEL 4C	6-58-0	95	166.4	114.880	19,119	0.950	158	0.000	0	287
SHIPS FUEL 4P	6-58-2	95	198.4	114.822	22,775	1.002	199	9.412	1,867	494
SHIPS FUEL 5S*	6-62-1	95	221.5	127.149	28,164	1.428	316	-9.876	-2,188	24
SHIPS FUEL 5C	6-62-01	95	158.6	127.666	20,246	0.951	151	-0.038	-6	284
SHIPS FUEL 5P*	6-62-4	95	221.5	127.182	28,170	1.429	317	9.869	2,186	24
SHIPS FUEL 6S*	6-66-1	95	129.1	136.539	17,625	2.269	293	-9.203	-1,188	14
SHIPS FUEL 6P*	6-66-2	95	119.4	136.589	16,308	1.812	216	8.051	961	9
SHIPS FUEL 7	6-72-0	95	104.7	156.846	16,428	0.961	101	0.000	0	176
FUEL SERV TANK S	3-75-3	95	237.9	168.348	40,043	12.198	2,901	-12.958	-3,082	177
SHIPS FUEL 9	3-79-3	95	147.9	179.229	26,509	11.863	1,755	-12.730	-1,883	151
FUEL SETT TANK	4-79-6	95	177.6	178.260	31,657	11.978	2,127	12.936	2,297	150
FUEL SERV TANK P	3-81.5-2	95	221.6	187.952	41,648	12.398	2,747	12.669	2,807	162
FUEL OVRFLW TANK	3-82-1			188.645		12.408		-12.663		
TOTAL FUEL OIL			4002.2	110.806	443,470	3.307	13,235	-0.029	-116	6,433
*Marked Tanks have Variable TCG. See Sheet 27								Minimum Required VMFS		3,876

LUBE OIL											
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]	
LO STORAGE TK 1	3-82.5-1	95	110.5	189.358	20,916	12.298	1,358	-1.955	-216	32	
LO STORAGE TK 2	3-82.5-3	95	110.5	189.358	20,916	12.298	1,358	-5.858	-647	32	
LO SETTLING TK	3-73.5-2			159.772		12.261		13.233			
LO SUMP 1	6-68-3	90	19.7	145.456	2,859	2.406	47	-7.375	-145	5	
LO SUMP 2	6-68-1	90	20.7	145.774	3,016	2.427	50	-2.837	-59	5	
LO SUMP 3	6-68-2	90	20.7	145.774	3,016	2.427	50	2.837	59	5	
LO SUMP 4	6-68-4	90	19.7	145.456	2,859	2.406	47	7.375	145	5	
LO DRAIN TK	4-79-1			176.077		7.649		-8.139			
TOTAL LUBE OIL			301.6	177.656	53,582	9.654	2,912	-2.861	-863	84	
								Minimum Required VMFS			606

CARGO OIL										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
CARGO FUEL 1C	4-24-0	95	906.2	20.135	18,245	12.967	11,750	0.000	0	1,088
CARGO FUEL 2C	4-30-0	95	1010.5	28.260	28,557	12.627	12,760	0.000	0	2,277
CARGO FUEL 3S	4-34-1	95	555.1	38.210	21,210	10.394	5,770	-6.102	-3,387	557
CARGO FUEL 3C	4-34-0	95	281.0	35.975	10,108	10.113	2,841	0.000	0	76
CARGO FUEL 3P	4-34-2	95	555.1	38.210	21,210	10.394	5,770	6.102	3,387	557
CF SLOP TANK	4-38.5-0			42.100		10.113		0.000		
TOTAL CARGO OIL			3307.8	30.029	99,330	11.757	38,890	0.000	0	4,555
								Minimum Required VMFS (DFM)		2,421
								Minimum Required VMFS (JP-5)		2,363

APPENDIX J1

FRESH WATER										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
SHIP POTW TK A	3-79-1	100	100.5	176.895	17,776	12.400	1,246	-5.155	-518	0
DISTILLED WTR TK	3-79-0	100	119.2	179.250	21,372	12.400	1,478	0.000	0	0
CARGO POTW TK A	3-79-2	100	100.5	176.895	17,776	12.400	1,246	5.155	518	0
SHIP POTW TK F	3-80.5-1	100	100.5	181.605	18,249	12.400	1,246	-5.155	-518	0
CARGO POTW TK F	3-80.5-2	100	100.5	181.605	18,249	12.400	1,246	5.155	518	0
TOTAL FRESH WATER			521.2	179.250	93,423	12.400	6,463	0.000	0	0
Minimum Required VMFS										143

SALT WATER BALLAST										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
FORE PEAK TANK	6-M-0			2.900		9.774		0.000		
SWB1S*	6-24-1			23.345		9.942				
SWB1P*	6-24-2			23.345		9.942				
SWB2S	4-34-3	50	174.0	37.641	6,548	10.409	1,811	-10.579	-1,840	96
SWB2P	4-35-2	100	297.6	38.515	11,464	10.389	3,092	11.504	3,424	0
SWB3S	6-45-1	100	208.8	70.338	14,684	1.075	224	-9.864	-2,059	0
SWB3P	6-45-2	100	208.8	70.338	14,684	1.075	224	9.864	2,059	0
SWB4S*	6-54-1	100	493.6	101.560	50,131	2.219	1,095	-11.532	-5,692	0
SWB4C	6-54-01	100	209.9	101.786	21,365	0.928	195	0.000	0	0
SWB4P*	6-54-2	100	493.6	101.560	50,131	2.219	1,095	11.532	5,692	0
SWB5S	4-83-1			190.007		9.282		-6.824		
SWB5P	4-83-2			190.007		9.282		6.824		
TOTAL SALT WATER BALLAST			2086.3	81.010	169,007	3.709	7,737	0.759	1,584	96

*Marked Tanks have Variable TCG. See Sheet 27

MISC. TANKS										
TANK DESCRIPTION		% Full	WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]	VMFS [M-MTON]
AVIATION FUEL	3-82.5-2	95	100.2	188.968	18,938	12.298	1,232	3.881	389	45
JP-5 SERVICE TK	3-84-2	95	17.3	191.810	3,311	12.298	212	6.925	120	1
AVIATION FUEL OVRFLW TK	4-79-2			177.939		7.867		8.843		
EDG FUEL SERVICE TK	03-73-1	95	9.5	156.878	1,488	30.330	288	-8.223	-78	3
FUEL LEAKAGE TK	6-68.5-0			142.748		0.950		0.000		
MCHRY OLY WST (OIL)	5-71-1A			151.558		4.671		-12.918		
CARGO HLD OLY WST (OIL)	6-62-2A			123.515		0.940		0.788		
WST OIL TK	6-69-0			144.710		0.950		0.000		
MCHRY OLY WST (WATER)	5-71-1B			150.002		4.642		-12.990		
CARGO HLD OLY WST (WATER)	6-62-2B			121.945		1.000		0.788		
FW DRAIN TK	6-70-0			149.419		1.001		0.000		
FOOD WASTE TK	3-77-2	25	2.0	169.502	339	13.416	27	10.345	21	1
GRAV WTR COLL TK	3-77-4	25	24.9	171.079	4,262	12.416	309	14.045	350	40
MDG CLNG TK	6-68-0			140.807		1.500		0.000		
VCHT TK	3-75-6	25	1.4	167.215	227	11.777	16	12.763	17	1
FWD FOAM TK	5-44-2	100	0.7	50.898	34	15.449	10	11.854	8	0
AFT FOAM TK	1-65-1	100	1.5	131.950	197	19.916	30	-13.314	-20	0
TOTAL MISC. TANKS			157.4	182.951	28,796	13.499	2,125	5.124	807	91
Minimum Required VMFS										136

APPENDIX J1

		PROVISIONS						
Description		WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]
DRY PROVISIONS STORE	01-60-1	10.4	123.510	1,285	24.290	253	-10.760	-112
CHILL STOREROOM	01-64-3	7.8	130.990	1,022	24.290	189	-10.870	-85
DAIRY STOREROOM	01-63.5-1	4.3	127.180	547	24.290	104	-10.760	-46
FREEZE STOREROOM	01-64.5-1	11.3	132.940	1,502	24.290	274	-4.710	-53
FISH STOREROOM	01-67.5-1	7.2	139.710	1,006	24.290	175	-4.710	-34
THAW ROOM	01-64-1	0.0	128.620	0	24.290	0	-4.710	0
DRY PROVISIONS ANNEX	01-69.5-2	8.0	146.870	1,175	24.290	194	5.600	45
MEDICAL STORES	02-66-1	11.9	134.880	1,605	27.180	323	-4.710	-56
TOTAL PROVISIONS		60.9	133.683	8,141	24.855	1,514	-5.605	-341

		STORES						
Description		WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]
GENERAL STORES (COSAL STORES)	2-34-0	32.2	37.450	1,206	15.975	514	0.090	3
AVIATION STORES (AVIATION SPARES)	01-76-1	11.0	168.260	1,851	24.000	264	-7.000	-77
TOTAL STORES		43.2	70.758	3,057	18.018	778	-1.715	-74

		CARGO / MISC. WEIGHT						
HOLD OR DECK		WT [MTON]	LCG [M-FP]	LM [M-MTON]	VCG [M-BL]	VM [M-MTON]	TCG [M P+]	TM [M-MTON]
M/P CARGO HOLD 1		1341.88	61.691	82,781	10.007	13,429	0.000	0
M/P CARGO HOLD 2		3227.92	92.400	298,260	7.630	24,628	0.000	0
FREEZE/CHILL CARGO HOLD 3		593.88	121.200	71,979	10.639	6,318	0.008	5
BULK 2nd DECK AFT SPECIALTY		1106.19	166.974	184,705	15.960	17,655	-0.610	-674
BULK TRANSFER DECK PRE-STAGING		440.10	72.020	31,696	20.125	8,857	0.064	28
BULK 01 LEVEL SPECIALTY		89.70	54.076	4,851	24.100	2,162	-0.244	-22
TOTAL CARGO / MISC. WEIGHT		6799.7	99.162	674,271	10.743	73,048	-0.097	-663

APPENDIX J1

CARGO LOADING DETAIL										
Voyage: B1 Mixed Cargo Departure			Date:			Hold: CARGO HOLD 1				
		[1]	[2]	[3]	[4] = [2]+[3]	[5] = [1] x [4]	[6]	[7] = [1] x [6]	[8]	[9]=[1] x [8]
DESCRIPTION	HOLD/DECK	WT [MTON]	UNIT VCG [M-DECK]	DECK HEIGHT [M-BL]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
H1-TANK TOP	1 / Tanktop	279.43			3.525	985	62.381	17,431	0.000	0
H1-4TH DECK	1 / 4th Dk	197.36			7.700	1,520	61.792	12,195	0.000	0
H1-3RD DECK	1 / 3rd Dk	706.27			11.875	8,387	61.491	43,429	0.000	0
H1-2ND DECK	1 / 2nd Dk	158.82			15.975	2,537	61.237	9,726	0.003	0
TOTAL		1341.88			10.007	13,429	61.691	82,781	0.000	0

CARGO LOADING DETAIL										
Voyage: B1 Mixed Cargo Departure			Date:			Hold: CARGO HOLD 2				
		[1]	[2]	[3]	[4] = [2]+[3]	[5] = [1] x [4]	[6]	[7] = [1] x [6]	[8]	[9]=[1] x [8]
DESCRIPTION	HOLD/DECK	WT [MTON]	UNIT VCG [M-DECK]	DECK HEIGHT [M-BL]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
H2-TANK TOP	2 / Tanktop	1278.56			3.525	4,507	91.850	117,436	0.000	0
H2-4TH DECK	2 / 4th Dk	980.72			7.700	7,552	92.766	90,977	-0.001	-1
H2-3RD DECK	2 / 3rd Dk	708.52			11.875	8,414	92.767	65,727	-0.002	-1
H2-2ND DECK	2 / 2nd Dk	260.12			15.975	4,155	92.723	24,119	0.008	2
TOTAL		3227.92			7.630	24,628	92.400	298,260	0.000	0

CARGO LOADING DETAIL										
Voyage: B1 Mixed Cargo Departure			Date:			Hold: CARGO HOLD 3				
		[1]	[2]	[3]	[4] = [2]+[3]	[5] = [1] x [4]	[6]	[7] = [1] x [6]	[8]	[9]=[1] x [8]
DESCRIPTION	HOLD/DECK	WT [MTON]	UNIT VCG [M-DECK]	DECK HEIGHT [M-BL]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
H3-4TH DECK	3 / 4th Dk	299.63			7.700	2,307	121.147	36,299	-0.001	0
H3-3RD DECK	3 / 3rd Dk	168.14			11.875	1,997	121.161	20,372	0.000	0
H3-2ND DECK	3 / 2nd Dk	126.11			15.975	2,015	121.380	15,307	0.042	5
TOTAL		593.88			10.639	6,318	121.200	71,979	0.008	5

APPENDIX J1

CARGO LOADING DETAIL										
Voyage: B1 Mixed Cargo Departure			Date:			Hold: 2nd DECK AFT SPECIALTY				
		[1]	[2]	[3]	[4] = [2]+[3]	[5] = [1] x [4]	[6]	[7] = [1] x [6]	[8]	[9]=[1] x [8]
DESCRIPTION	HOLD/DECK	WT [MTON]	UNIT VCG [M-DECK]	DECK HEIGHT [M-BL]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
SPARE PARTS HOLD 4	4 / 2a	388.90			15.975	6,213	152.700	59,385	-1.694	-659
SPARE PARTS HOLD 5	5 / 2a	212.00			15.975	3,387	168.007	35,617	-0.341	-72
SPARE PARTS HOLD 6	6 / 2a	384.10			15.975	6,136	183.833	70,610	3.103	1,192
PIPE & BAR STOCK	- / 2a	45.00			15.750	709	142.515	6,413	-11.170	-503
PLATE & SHEET METAL	- / 2a	28.00			15.750	441	149.435	4,184	-11.170	-313
US MAIL	- / 2a	3.00			15.975	48	150.990	453	0.000	0
OXIDIZING AGENTS STRM	- / 2a	1.10			15.975	18	154.130	170	0.000	0
4.3L STOREROOM	- / 2a	1.20			15.975	19	170.330	204	1.250	2
PYROTECHNICS STOREROOM	- / 2a	18.00			15.975	288	172.299	3,101	-0.318	-6
CHILL CAT. 8 CARGO	- / 2a	8.77			15.975	140	177.687	1,558	-12.810	-112
CARGO FLAMMABLE LIQUID	- / 2a	16.12			15.975	258	186.625	3,008	-12.599	-203
TOTAL		1106.19			15.960	17,655	166.974	184,705	-0.610	-674

CARGO LOADING DETAIL										
Voyage: B1 Mixed Cargo Departure			Date:			Hold: TRANSFER DECK PRE-STAGING				
		[1]	[2]	[3]	[4] = [2]+[3]	[5] = [1] x [4]	[6]	[7] = [1] x [6]	[8]	[9]=[1] x [8]
DESCRIPTION	HOLD/DECK	WT [MTON]	UNIT VCG [M-DECK]	DECK HEIGHT [M-BL]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
PRE-STAGING FWD	TRNSFR	154.20			20.125	3,103	28.462	4,389	-1.746	-269
PRE-STAGING MID	TRNSFR	157.60			20.125	3,172	73.802	11,631	1.128	178
FREEZE/CHILL PRE-STAGING	TRNSFR	115.70			20.125	2,328	120.371	13,927	0.000	0
OUTSIZED CARGO	TRNSFR	12.60			20.125	254	138.822	1,749	9.510	120
HANDLING AREA 1	TRNSFR	0.00			20.125	0	71.425	0	0.001	0
HANDLING AREA 2	TRNSFR	0.00			20.125	0	134.407	0	-1.472	0
HANGAR	TRNSFR	0.00			20.125	0	160.611	0	2.339	0
UNREF STATIONS	TRNSFR	0.00			20.125	0	144.737	0	0.223	0
ELEVATORS	TRNSFR	0.00			20.125	0	97.197	0	-2.405	0
TOTAL		440.10			20.125	8,857	72.020	31,696	0.064	28

CARGO LOADING DETAIL										
Voyage: B1 Mixed Cargo Departure			Date:			Hold: 01 LEVEL SPECIALTY				
		[1]	[2]	[3]	[4] = [2]+[3]	[5] = [1] x [4]	[6]	[7] = [1] x [6]	[8]	[9]=[1] x [8]
DESCRIPTION	HOLD/DECK	WT [MTON]	UNIT VCG [M-DECK]	DECK HEIGHT [M-BL]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
AHE & MHE STOWAGE	01 LVL	13.60			24.100	328	23.795	324	-3.291	-45
HAZ MAT CONTAINER	01 LVL	0.00			24.100	0	25.633	0	0.004	0
WHITE PHOSPHORUS	01 LVL	22.00			24.100	530	54.338	1,195	7.057	155
MEDICAL SUPPLIES	01 LVL	11.00			24.100	265	51.714	569	-7.054	-78
EOD & SWO NO 1	01 LVL	14.50			24.100	349	56.956	826	-7.055	-102
EOD & SWO NO 2	01 LVL	14.50			24.100	349	71.183	1,032	7.056	102
PLYWOOD & LUMBER	01 LVL	3.00			24.100	72	63.511	191	7.057	21
FUZES, PRIMERS, & DETONATORS	01 LVL	11.00			24.100	265	64.163	706	-7.054	-78
THERMITE LOCKER	01 LVL	0.10			24.100	2	83.468	8	15.814	2
HANDLING SPACE	01 LVL	0.00			24.100	0	56.455	0	0.001	0
TOTAL		89.70			24.100	2,162	54.076	4,851	-0.244	-22

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TOTAL

APPENDIX L

Appendix L

Sample Cargo Loads

APPENDIX L

FULL LOAD CARGO DISTRIBUTION

	Totals:		WT [MTON]	VCG [M-BL]	LCG [M-FP]	TCG [M P+]			
			7831.70	10.965	95.525	-0.113			
	(1)	(2)	(3) = (1) - (2)	(4)	(5) = (4) x (3)	(6)	(7) = (6) x (3)	(8)	(9) = (8) x (3)
	TOTAL LOAD [MT]	PRE-STAGE DEDUCTION [MT]	WT [MTON]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
M/P CARGO HOLD 1			2512.70	8.811		61.796		0.000	
H1-Tank Top	679.2		679.20	3.525	2,394	62.381	42,369	0.000	0
H1-4th Deck	878.0		878.00	7.700	6,761	61.792	54,253	0.000	0
H1-3rd Deck	556.0		556.00	11.875	6,603	61.491	34,189	0.000	0
H1-2nd Deck	399.5		399.50	15.975	6,382	61.237	24,464	0.003	1
M/P CARGO HOLD 2			2669.30	8.567		92.489		0.000	
H2-Tank Top	788.5		788.50	3.525	2,779	91.850	72,424	0.000	0
H2-4th Deck	923.3		923.30	7.700	7,109	92.766	85,651	-0.001	-1
H2-3rd Deck	565.3		565.30	11.875	6,713	92.767	52,441	-0.003	-2
H2-2nd Deck	392.2		392.20	15.975	6,265	92.723	36,366	0.008	3
FREEZE/CHILL CARGO HOLD 3			922.40	11.361		121.211		0.010	
H3-4th Deck	341.6		341.60	7.700	2,630	121.147	41,384	-0.001	0
H3-3rd Deck	348.6		348.60	11.875	4,140	121.161	42,237	0.000	0
H3-2nd Deck	232.2		232.20	15.975	3,709	121.380	28,184	0.042	10
BULK 2nd DK AFT SPECIALTY			1149.00	15.961		167.577		-1.027	
Spare Parts, Hold 4	388.9		388.90	15.975	6,213	152.700	59,385	-1.694	-659
Spare Parts, Hold 5	212.0		212.00	15.975	3,387	168.007	35,617	-0.341	-72
Spare Parts, Hold 6	384.1		384.10	15.975	6,136	183.833	70,610	3.103	1,192
Pipe & Bar Stock	45.0		45.00	15.750	709	142.515	6,413	-11.170	-503
Plate & Sheet Metal	28.0		28.00	15.750	441	149.435	4,184	-11.170	-313
US Mail	3.0		3.00	15.975	48	150.990	453	0.000	0
Oxidizing Agents	1.1		1.10	15.975	18	154.130	170	0.000	0
4.3L Locker	3.8		3.80	15.975	61	170.330	647	1.250	5
Pyrotechnics	18.0		18.00	15.975	288	172.299	3,101	-0.318	-6
Chill Cat. 8 Cargo	20.6		20.60	15.975	329	177.687	3,660	-12.810	-264
Cargo Flam. Liquid	44.5		44.50	15.975	711	186.625	8,305	-12.599	-561
BULK TRANSFER DK PRE-STAGING			474.10	20.125		76.811		0.742	
Cargo Pre-Stage FWD	154.2		154.20	20.125	3,103	28.462	4,389	-1.746	-269
Cargo Pre-Stage Aft	157.6		157.60	20.125	3,172	73.802	11,631	1.128	178
Freeze/Chill Pre-Stage	115.7		115.70	20.125	2,328	120.370	13,927	0.000	0
Outsized Cargo	46.6		46.60	20.125	938	138.822	6,469	9.510	443
Handling Area 1	0.0		0.00	20.125	0	71.425	0	0.001	0
Handling Area 2	0.0		0.00	20.125	0	134.408	0	-1.472	0
Hangar	0.0		0.00	20.125	0	160.661	0	2.339	0
UNREP Stations	0.0		0.00	20.125	0	144.737	0	1.250	0
Elevators	0.0		0.00	20.125	0	97.197	0	-0.318	0
BULK 01 LEVEL SPECIALTY			104.20	24.100		49.862		-0.668	
AHE & MHE Stowage	28.1		28.10	24.100	677	23.795	669	-3.291	-92
Haz Matl	0.0		0.00	24.100	0	25.633	0	0.004	0
White Phos	22.0		22.00	24.100	530	54.338	1,195	7.057	155
Medical Supplies	11.0		11.00	24.100	265	51.714	569	-7.054	-78
EOD & Special Warfare Ord #1	14.5		14.50	24.100	349	56.956	826	-7.055	-102
EOD & Special Warfare Ord #2	14.5		14.50	24.100	349	71.183	1,032	7.056	102
Plywood & Lumber	3.0		3.00	24.100	72	63.511	191	7.057	21
Fuzes, Primers, & Det	11.0		11.00	24.100	265	64.163	706	-7.054	-78
Thermite Locker	0.1		0.10	24.100	2	83.468	8	15.814	2
Handling Space	0.0		0.00	24.100	0	56.455	0	0.001	0

APPENDIX L

B1 - MIXED CARGO DISTRIBUTION

	Totals:		WT [MTON]	VCG [M-BL]	LCG [M-FP]	TCG [M P+]			
			6799.67	10.743	99.162	-0.098			
	(1)	(2)	(3) = (1) - (2)	(4)	(5) = (4) x (3)	(6)	(7) = (6) x (3)	(8)	(9) = (8) x (3)
	TOTAL LOAD [MT]	PRE-STAGE DEDUCTION [MT]	WT [MTON]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
M/P Cargo Hold 1			1341.88	10.007		61.691		0.000	
H1-Tank Top	326.5	47.07	279.43	3.525	985	62.381	17,431	0.000	0
H1-4th Deck	258.2	60.84	197.36	7.700	1,520	61.792	12,195	0.000	0
H1-3rd Deck	744.8	38.53	706.27	11.875	8,387	61.491	43,429	0.000	0
H1-2nd Deck	186.5	27.68	158.82	15.975	2,537	61.237	9,726	0.003	0
M/P Cargo Hold 2			3227.92	7.630		92.400		0.000	
H2-Tank Top	1333.2	54.64	1278.56	3.525	4,507	91.850	117,436	0.000	0
H2-4th Deck	1044.7	63.98	980.72	7.700	7,552	92.766	90,977	-0.001	-1
H2-3rd Deck	747.7	39.18	708.52	11.875	8,414	92.767	65,727	-0.003	-2
H2-2nd Deck	287.3	27.18	260.12	15.975	4,155	92.723	24,119	0.008	2
Freeze/Chill Cargo Hold 3			593.88	10.639		121.200		0.008	
H3-4th Deck	323.3	23.67	299.63	7.700	2,307	121.147	36,299	-0.001	0
H3-3rd Deck	192.3	24.16	168.14	11.875	1,997	121.161	20,372	0.000	0
H3-2nd Deck	142.2	16.09	126.11	15.975	2,015	121.380	15,307	0.042	5
Bulk 2nd DK AFT Specialty			1106.19	15.960		166.974		-0.610	
Spare Parts, Hold 4	388.9		388.90	15.975	6,213	152.700	59,385	-1.694	-659
Spare Parts, Hold 5	212.0		212.00	15.975	3,387	168.007	35,617	-0.341	-72
Spare Parts, Hold 6	384.1		384.10	15.975	6,136	183.833	70,610	3.103	1,192
Pipe & Bar Stock	45.0		45.00	15.750	709	142.515	6,413	-11.170	-503
Plate & Sheet Metal	28.0		28.00	15.750	441	149.435	4,184	-11.170	-313
US Mail	3.0		3.00	15.975	48	150.990	453	0.000	0
Oxidizing Agents	1.1		1.10	15.975	18	154.130	170	0.000	0
4.3L Locker	1.2		1.20	15.975	19	170.330	204	1.250	2
Pyrotechnics	18.0		18.00	15.975	288	172.299	3,101	-0.318	-6
Chill Cat. 8 Cargo	10.2	1.43	8.77	15.975	140	177.687	1,558	-12.810	-112
Cargo Flam. Liquid	19.2	3.08	16.12	15.975	258	186.625	3,008	-12.599	-203
Bulk Transfer DK Pre-Staging			440.10	20.125		72.020		0.064	
Cargo Pre-Stage FWD	154.2		154.20	20.125	3,103	28.462	4,389	-1.746	-269
Cargo Pre-Stage Aft	157.6		157.60	20.125	3,172	73.802	11,631	1.128	178
Freeze/Chill Pre-Stage	115.7		115.70	20.125	2,328	120.370	13,927	0.000	0
Outsized Cargo	12.6		12.60	20.125	254	138.822	1,749	9.510	120
Handling Area 1	0.0		0.00	20.125	0	71.425	0	0.001	0
Handling Area 2	0.0		0.00	20.125	0	134.408	0	-1.472	0
Hangar	0.0		0.00	20.125	0	160.661	0	2.339	0
UNREP Stations	0.0		0.00	20.125	0	144.737	0	1.250	0
Elevators	0.0		0.00	20.125	0	97.197	0	-0.318	0
Bulk 01 Level Specialty			89.70	24.100		54.076		-0.244	
AHE & MHE Stowage	13.6		13.60	24.100	328	23.795	324	-3.291	-45
Haz Matl	0.0		0.00	24.100	0	25.633	0	0.004	0
White Phos	22.0		22.00	24.100	530	54.338	1,195	7.057	155
Medical Supplies	11.0		11.00	24.100	265	51.714	569	-7.054	-78
EOD & Special Warfare Ord #1	14.5		14.50	24.100	349	56.956	826	-7.055	-102
EOD & Special Warfare Ord #2	14.5		14.50	24.100	349	71.183	1,032	7.056	102
Plywood & Lumber	3.0		3.00	24.100	72	63.511	191	7.057	21
Fuzes, Primers, & Det	11.0		11.00	24.100	265	64.163	706	-7.054	-78
Thermite Locker	0.1		0.10	24.100	2	83.468	8	15.814	2
Handling Space	0.0		0.00	24.100	0	56.455	0	0.001	0

APPENDIX L

B2 - STOERS CARGO DISTRIBUTION

	Totals:		WT [MTON]	VCG [M-BL]	LCG [M-FP]	TCG [M P+]			
			4969.87	12.500	103.299	-0.142			
	(1)	(2)	(3) = (1) - (2)	(4)	(5) = (4) x (3)	(6)	(7) = (6) x (3)	(8)	(9) = (8) x (3)
	TOTAL LOAD [MT]	PRE-STAGE DEDUCTION [MT]	WT [MTON]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
M/P Cargo Hold 1			1324.88	10.502		61.644		0.001	
H1-Tank Top	244.1	47.07	197.03	3.525	695	62.381	12,291	0.000	0
H1-4th Deck	448.2	60.84	387.36	7.700	2,983	61.792	23,936	0.000	0
H1-3rd Deck	426.9	38.53	388.37	11.875	4,612	61.491	23,881	0.000	0
H1-2nd Deck	379.8	27.68	352.12	15.975	5,625	61.237	21,563	0.003	1
M/P Cargo Hold 2			1293.52	9.449		92.534		0.000	
H2-Tank Top	371.0	54.64	316.36	3.525	1,115	91.850	29,058	0.000	0
H2-4th Deck	415.5	63.98	351.52	7.700	2,707	92.766	32,609	-0.001	0
H2-3rd Deck	428.0	39.18	388.82	11.875	4,617	92.767	36,070	-0.003	-1
H2-2nd Deck	264.0	27.18	236.82	15.975	3,783	92.723	21,959	0.008	2
Freeze/Chill Cargo Hold 3			761.38	11.121		121.203		0.009	
H3-4th Deck	323.3	23.67	299.63	7.700	2,307	121.147	36,299	-0.001	0
H3-3rd Deck	320.8	24.16	296.64	11.875	3,523	121.161	35,941	0.000	0
H3-2nd Deck	181.2	16.09	165.11	15.975	2,638	121.380	20,041	0.042	7
Bulk 2nd DK AFT Specialty			1101.69	15.960		167.089		-0.762	
Spare Parts, Hold 4	388.9		388.90	15.975	6,213	152.700	59,385	-1.694	-659
Spare Parts, Hold 5	212.0		212.00	15.975	3,387	168.007	35,617	-0.341	-72
Spare Parts, Hold 6	384.1		384.10	15.975	6,136	183.833	70,610	3.103	1,192
Pipe & Bar Stock	45.0		45.00	15.750	709	142.515	6,413	-11.170	-503
Plate & Sheet Metal	28.0		28.00	15.750	441	149.435	4,184	-11.170	-313
US Mail	3.0		3.00	15.975	48	150.990	453	0.000	0
Oxidizing Agents	1.1		1.10	15.975	18	154.130	170	0.000	0
4.3L Locker	1.2		1.20	15.975	19	170.330	204	1.250	2
Pyrotechnics	0.0		0.00	15.975	0	172.299	0	-0.318	0
Chill Cat. 8 Cargo	15.0	1.43	13.57	15.975	217	177.687	2,411	-12.810	-174
Cargo Flam. Liquid	27.9	3.08	24.82	15.975	396	186.625	4,632	-12.599	-313
Bulk Transfer DK Pre-Staging			460.80	20.125		75.021		0.489	
Cargo Pre-Stage FWD	154.2		154.20	20.125	3,103	28.462	4,389	-1.746	-269
Cargo Pre-Stage Aft	157.6		157.60	20.125	3,172	73.802	11,631	1.128	178
Freeze/Chill Pre-Stage	115.7		115.70	20.125	2,328	120.370	13,927	0.000	0
Outsized Cargo	33.3		33.30	20.125	670	138.822	4,623	9.510	317
Handling Area 1	0.0		0.00	20.125	0	71.425	0	0.001	0
Handling Area 2	0.0		0.00	20.125	0	134.408	0	-1.472	0
Hangar	0.0		0.00	20.125	0	160.661	0	2.339	0
UNREP Stations	0.0		0.00	20.125	0	144.737	0	1.250	0
Elevators	0.0		0.00	20.125	0	97.197	0	-0.318	0
Bulk 01 Level Specialty			27.60	24.100		39.239		-3.666	
AHE & MHE Stowage	13.6		13.60	24.100	328	23.795	324	-3.291	-45
Haz Matl	0.0		0.00	24.100	0	25.633	0	0.004	0
White Phos	0.0		0.00	24.100	0	54.338	0	7.057	0
Medical Supplies	11.0		11.00	24.100	265	51.714	569	-7.054	-78
EOD & Special Warfare Ord #1	0.0		0.00	24.100	0	56.956	0	-7.055	0
EOD & Special Warfare Ord #2	0.0		0.00	24.100	0	71.183	0	7.056	0
Plywood & Lumber	3.0		3.00	24.100	72	63.511	191	7.057	21
Fuzes, Primers, & Det	0.0		0.00	24.100	0	64.163	0	-7.054	0
Thermite Locker	0.0		0.00	24.100	0	83.468	0	15.814	0
Handling Space	0.0		0.00	24.100	0	56.455	0	0.001	0

APPENDIX L

B1 - INTERMEDIATE MIXED CARGO DISTRIBUTION

	Totals:		WT [MTON]	VCG [M-BL]	LCG [M-FP]	TCG [M P+]			
			3402.69	11.430	98.194	-0.103			
	(1)	(2)	(3) = (1) - (2)	(4)	(5) = (4) x (3)	(6)	(7) = (6) x (3)	(8)	(9) = (8) x (3)
	TOTAL LOAD [MT]	PRE-STAGE DEDUCTION [MT]	WT [MTON]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
M/P Cargo Hold 1			585.08	10.183		61.675		0.000	
H1-Tank Top	163.6	47.07	116.53	3.525	411	62.381	7,269	0.000	0
H1-4th Deck	129.5	60.84	68.66	7.700	529	61.792	4,243	0.000	0
H1-3rd Deck	372.7	38.53	334.17	11.875	3,968	61.491	20,548	0.000	0
H1-2nd Deck	93.4	27.68	65.72	15.975	1,050	61.237	4,024	0.003	0
M/P Cargo Hold 2			1522.72	7.573		92.395		0.000	
H2-Tank Top	667.0	54.64	612.36	3.525	2,159	91.850	56,245	0.000	0
H2-4th Deck	522.8	63.98	458.82	7.700	3,533	92.766	42,563	-0.001	0
H2-3rd Deck	374.1	39.18	334.92	11.875	3,977	92.767	31,070	-0.003	-1
H2-2nd Deck	143.8	27.18	116.62	15.975	1,863	92.723	10,813	0.008	1
Freeze/Chill Cargo Hold 3			265.30	10.553		121.199		0.008	
H3-4th Deck	161.8	23.67	138.13	7.700	1,064	121.147	16,734	-0.001	0
H3-3rd Deck	95.9	23.84	72.06	11.875	856	121.161	8,731	0.000	0
H3-2nd Deck	71.2	16.09	55.11	15.975	880	121.380	6,689	0.042	2
Bulk 2nd DK AFT Specialty			550.89	15.960		166.903		-0.561	
Spare Parts, Hold 4	194.5		194.50	15.975	3,107	152.700	29,700	-1.694	-329
Spare Parts, Hold 5	106.0		106.00	15.975	1,693	168.007	17,809	-0.341	-36
Spare Parts, Hold 6	192.0		192.00	15.975	3,067	183.833	35,296	3.103	596
Pipe & Bar Stock	22.5		22.50	15.750	354	142.515	3,207	-11.170	-251
Plate & Sheet Metal	14.0		14.00	15.750	221	149.435	2,092	-11.170	-156
US Mail	1.5		1.50	15.975	24	150.990	226	0.000	0
Oxidizing Agents	0.6		0.60	15.975	10	154.130	92	0.000	0
4.3L Locker	0.6		0.60	15.975	10	170.330	102	1.250	1
Pyrotechnics	9.0		9.00	15.975	144	172.299	1,551	-0.318	-3
Chill Cat. 8 Cargo	5.0	1.43	3.57	15.975	57	177.687	634	-12.810	-46
Cargo Flam. Liquid	9.7	3.08	6.62	15.975	106	186.625	1,235	-12.599	-83
Bulk Transfer DK Pre-Staging			433.80	20.125		71.050		-0.073	
Cargo Pre-Stage FWD	154.2		154.20	20.125	3,103	28.462	4,389	-1.746	-269
Cargo Pre-Stage Aft	157.6		157.60	20.125	3,172	73.802	11,631	1.128	178
Freeze/Chill Pre-Stage	115.7		115.70	20.125	2,328	120.370	13,927	0.000	0
Outsized Cargo	6.3		6.30	20.125	127	138.822	875	9.510	60
Handling Area 1	0.0		0.00	20.125	0	71.425	0	0.001	0
Handling Area 2	0.0		0.00	20.125	0	134.408	0	-1.472	0
Hangar	0.0		0.00	20.125	0	160.661	0	2.339	0
UNREP Stations	0.0		0.00	20.125	0	144.737	0	1.250	0
Elevators	0.0		0.00	20.125	0	97.197	0	-0.318	0
Bulk 01 Level Specialty			44.90	24.100		54.065		-0.262	
AHE & MHE Stowage	6.8		6.80	24.100	164	23.795	162	-3.291	-22
Haz Matl	0.0		0.00	24.100	0	25.633	0	0.004	0
White Phos	11.0		11.00	24.100	265	54.338	598	7.057	78
Medical Supplies	5.5		5.50	24.100	133	51.714	284	-7.054	-39
EOD & Special Warfare Ord #1	7.3		7.30	24.100	176	56.956	416	-7.055	-52
EOD & Special Warfare Ord #2	7.3		7.30	24.100	176	71.183	520	7.056	52
Plywood & Lumber	1.5		1.50	24.100	36	63.511	95	7.057	11
Fuzes, Primers, & Det	5.5		5.50	24.100	133	64.163	353	-7.054	-39
Thermite Locker	0.0		0.00	24.100	0	83.468	0	15.814	0
Handling Space	0.0		0.00	24.100	0	56.455	0	0.001	0

APPENDIX L

B2 - INTERMEDIATE STOERS CARGO DISTRIBUTION

	Totals:		WT [MTON]	VCG [M-BL]	LCG [M-FP]	TCG [M P+]			
			2488.07	13.439	101.976	-0.150			
	(1)	(2)	(3) = (1) - (2)	(4)	(5) = (4) x (3)	(6)	(7) = (6) x (3)	(8)	(9) = (8) x (3)
	TOTAL LOAD [MT]	PRE-STAGE DEDUCTION [MT]	WT [MTON]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
M/P Cargo Hold 1			576.58	10.754		61.621		0.001	
H1-Tank Top	122.4	47.07	75.33	3.525	266	62.381	4,699	0.000	0
H1-4th Deck	224.5	60.84	163.66	7.700	1,260	61.792	10,113	0.000	0
H1-3rd Deck	213.7	38.53	175.17	11.875	2,080	61.491	10,771	0.000	0
H1-2nd Deck	190.1	27.68	162.42	15.975	2,595	61.237	9,946	0.003	0
M/P Cargo Hold 2			555.62	9.594		92.542		0.000	
H2-Tank Top	185.9	54.64	131.26	3.525	463	91.850	12,056	0.000	0
H2-4th Deck	208.2	63.98	144.22	7.700	1,110	92.766	13,379	-0.001	0
H2-3rd Deck	214.3	39.18	175.12	11.875	2,080	92.767	16,245	-0.003	-1
H2-2nd Deck	132.2	27.18	105.02	15.975	1,678	92.723	9,738	0.008	1
Freeze/Chill Cargo Hold 3			349.08	11.100		121.202		0.009	
H3-4th Deck	161.7	23.67	138.03	7.700	1,063	121.147	16,722	-0.001	0
H3-3rd Deck	160.6	24.16	136.44	11.875	1,620	121.161	16,531	0.000	0
H3-2nd Deck	90.7	16.09	74.61	15.975	1,192	121.380	9,056	0.042	3
Bulk 2nd DK AFT Specialty			548.79	15.960		167.022		-0.717	
Spare Parts, Hold 4	194.5		194.50	15.975	3,107	152.700	29,700	-1.694	-329
Spare Parts, Hold 5	106.0		106.00	15.975	1,693	168.007	17,809	-0.341	-36
Spare Parts, Hold 6	192.0		192.00	15.975	3,067	183.833	35,296	3.103	596
Pipe & Bar Stock	22.5		22.50	15.750	354	142.515	3,207	-11.170	-251
Plate & Sheet Metal	14.0		14.00	15.750	221	149.435	2,092	-11.170	-156
US Mail	1.5		1.50	15.975	24	150.990	226	0.000	0
Oxidizing Agents	0.6		0.60	15.975	10	154.130	92	0.000	0
4.3L Locker	0.6		0.60	15.975	10	170.330	102	1.250	1
Pyrotechnics	0.0		0.00	15.975	0	172.299	0	-0.318	0
Chill Cat. 8 Cargo	7.5	1.43	6.07	15.975	97	177.687	1,079	-12.810	-78
Cargo Flam. Liquid	14.1	3.08	11.02	15.975	176	186.625	2,057	-12.599	-139
Bulk Transfer DK Pre-Staging			444.20	20.125		72.637		0.152	
Cargo Pre-Stage FWD	154.2		154.20	20.125	3,103	28.462	4,389	-1.746	-269
Cargo Pre-Stage Aft	157.6		157.60	20.125	3,172	73.802	11,631	1.128	178
Freeze/Chill Pre-Stage	115.7		115.70	20.125	2,328	120.370	13,927	0.000	0
Outsized Cargo	16.7		16.70	20.125	336	138.822	2,318	9.510	159
Handling Area 1	0.0		0.00	20.125	0	71.425	0	0.001	0
Handling Area 2	0.0		0.00	20.125	0	134.408	0	-1.472	0
Hangar	0.0		0.00	20.125	0	160.661	0	2.339	0
UNREP Stations	0.0		0.00	20.125	0	144.737	0	1.250	0
Elevators	0.0		0.00	20.125	0	97.197	0	-0.318	0
Bulk 01 Level Specialty			13.80	24.100		39.239		-3.666	
AHE & MHE Stowage	6.8		6.80	24.100	164	23.795	162	-3.291	-22
Haz Matl	0.0		0.00	24.100	0	25.633	0	0.004	0
White Phos	0.0		0.00	24.100	0	54.338	0	7.057	0
Medical Supplies	5.5		5.50	24.100	133	51.714	284	-7.054	-39
EOD & Special Warfare Ord #1	0.0		0.00	24.100	0	56.956	0	-7.055	0
EOD & Special Warfare Ord #2	0.0		0.00	24.100	0	71.183	0	7.056	0
Plywood & Lumber	1.5		1.50	24.100	36	63.511	95	7.057	11
Fuzes, Primers, & Det	0.0		0.00	24.100	0	64.163	0	-7.054	0
Thermite Locker	0.0		0.00	24.100	0	83.468	0	15.814	0
Handling Space	0.0		0.00	24.100	0	56.455	0	0.001	0

APPENDIX L

END OF DEPLOYMENT CARGO DISTRIBUTION

	Totals:		WT [MTON]	VCG [M-BL]	LCG [M-FP]	TCG [M P+]			
			545.50	20.985	60.443	-0.167			
	(1)	(2)	(3) = (1) - (2)	(4)	(5) = (4) x (3)	(6)	(7) = (6) x (3)	(8)	(9) = (8) x (3)
	TOTAL LOAD [MT]	PRE-STAGE DEDUCTION [MT]	WT [MTON]	VCG [M-BL]	VM [M-MTON]	LCG [M-FP]	LM [M-MTON]	TCG [M P+]	TM [M-MTON]
M/P Cargo Hold 1			0.00	0.000		0.000		0.000	
H1-Tank Top	0.0		0.00	3.525	0	62.381	0	0.000	0
H1-4th Deck	0.0		0.00	7.700	0	61.792	0	0.000	0
H1-3rd Deck	0.0		0.00	11.875	0	61.491	0	0.000	0
H1-2nd Deck	0.0		0.00	15.975	0	61.237	0	0.003	0
M/P Cargo Hold 2			0.00	0.000		0.000		0.000	
H2-Tank Top	0.0		0.00	3.525	0	91.850	0	0.000	0
H2-4th Deck	0.0		0.00	7.700	0	92.766	0	-0.001	0
H2-3rd Deck	0.0		0.00	11.875	0	92.767	0	-0.003	0
H2-2nd Deck	0.0		0.00	15.975	0	92.723	0	0.008	0
Freeze/Chill Cargo Hold 3			0.00	0.000		0.000		0.000	
H3-4th Deck	0.0		0.00	7.700	0	121.147	0	-0.001	0
H3-3rd Deck	0.0		0.00	11.875	0	121.161	0	0.000	0
H3-2nd Deck	0.0		0.00	15.975	0	121.380	0	0.042	0
Bulk 2nd DK AFT Specialty			0.00	0.000		0.000		0.000	
Spare Parts, Hold 4	0.0		0.00	15.975	0	152.700	0	-1.694	0
Spare Parts, Hold 5	0.0		0.00	15.975	0	168.007	0	-0.341	0
Spare Parts, Hold 6	0.0		0.00	15.975	0	183.833	0	3.103	0
Pipe & Bar Stock	0.0		0.00	15.750	0	142.515	0	-11.170	0
Plate & Sheet Metal	0.0		0.00	15.750	0	149.435	0	-11.170	0
US Mail	0.0		0.00	15.975	0	150.990	0	0.000	0
Oxidizing Agents	0.0		0.00	15.975	0	154.130	0	0.000	0
4.3L Locker	0.0		0.00	15.975	0	170.330	0	1.250	0
Pyrotechnics	0.0		0.00	15.975	0	172.299	0	-0.318	0
Chill Cat. 8 Cargo	0.0		0.00	15.975	0	177.687	0	-12.810	0
Cargo Flam. Liquid	0.0		0.00	15.975	0	186.625	0	-12.599	0
Bulk Transfer DK Pre-Staging			427.50	20.125		70.051		-0.214	
Cargo Pre-Stage FWD	154.2		154.20	20.125	3,103	28.462	4,389	-1.746	-269
Cargo Pre-Stage Aft	157.6		157.60	20.125	3,172	73.802	11,631	1.128	178
Freeze/Chill Pre-Stage	115.7		115.70	20.125	2,328	120.370	13,927	0.000	0
Outsized Cargo	0.0		0.00	20.125	0	138.822	0	9.510	0
Handling Area 1	0.0		0.00	20.125	0	71.425	0	0.001	0
Handling Area 2	0.0		0.00	20.125	0	134.408	0	-1.472	0
Hangar	0.0		0.00	20.125	0	160.661	0	2.339	0
UNREP Stations	0.0		0.00	20.125	0	144.737	0	1.250	0
Elevators	0.0		0.00	20.125	0	97.197	0	-0.318	0
Bulk 01 Level Specialty			118.00	24.100		25.633		0.004	
AHE & MHE Stowage	0.0		0.00	24.100	0	23.795	0	-3.291	0
Haz Matl	118.0		118.00	24.100	2,844	25.633	3,025	0.004	0
White Phos	0.0		0.00	24.100	0	54.338	0	7.057	0
Medical Supplies	0.0		0.00	24.100	0	51.714	0	-7.054	0
EOD & Special Warfare Ord #1	0.0		0.00	24.100	0	56.956	0	-7.055	0
EOD & Special Warfare Ord #2	0.0		0.00	24.100	0	71.183	0	7.056	0
Plywood & Lumber	0.0		0.00	24.100	0	63.511	0	7.057	0
Fuzes, Primers, & Det	0.0		0.00	24.100	0	64.163	0	-7.054	0
Thermite Locker	0.0		0.00	24.100	0	83.468	0	15.814	0
Handling Space	0.0		0.00	24.100	0	56.455	0	0.001	0



Disk Instructions

PROGRAM OVERVIEW:

The CargoMax program is a computerized system for planning and evaluating ship loading. It quickly and precisely calculates ship stability and stress characteristics based on any loading condition specified by the user.

The program is developed from technical information that reflects the physical characteristics of the ship. This information includes hydrostatic data, tank data, allowable shear forces and bending moments, available hull girder section modulus, and lightship weight data. The use of this information allows customization of input screens that support quick and efficient entry of ship loading data.

The program allows storage of loading conditions on a disk. These stored conditions may be recalled at any time for modification and reevaluation.

CargoMax is based on a geometric model of the ship and the approved Trim and Stability Booklet. It is important that the vessel operator review the information provided in the Trim and Stability Booklet carefully and confirm that the software reflects the vessel's present condition. Results for each sample condition may not agree exactly with the numbers provided in the Trim and Stability Booklet because CargoMax calculates vertical moments "as filled" VCG's, so the hand calculated results with assumed 100% VCG's will in most cases be more conservative than CargoMax. **THE TRIM AND STABILITY BOOKLET, HOWEVER SHOULD ALWAYS TAKE PRECEDENCE OVER CARGOMAX WHEN UNEXPLAINED DIFFERENCES OCCUR.** These Differences should be reported immediately to the MSC Headquarters' Naval Architecture Branch (MSC Code N721).

Remember, **CARGOMAX IS NOT A REPLACEMENT FOR THE TRIM AND STABILITY BOOKLET.** The user should be familiar with the Trim and Stability Booklet and refer to it often.

SYSTEM REQUIREMENTS:

CargoMax requires the following minimum system:

1. 3D Graphics Card with 2 GB VRAM
2. Microsoft Windows XP or later (Windows 8, Windows 7, Windows Vista, Windows Server 2012, Windows Server 2008 R2, Windows Server 2008, Windows Server 2003)
3. 2 GB RAM
4. One CD-ROM drive and one hard drive with approximately 2 GB of free space.
5. SXGA display.

It is recommended that the system have the following:

1. 1280x1024 SXGA 19" Monitor.
2. Pentium-class or higher processor.
3. Laser Printer.
4. Microsoft Windows 7 or later.
5. UPS (Un-interruptible power supply).



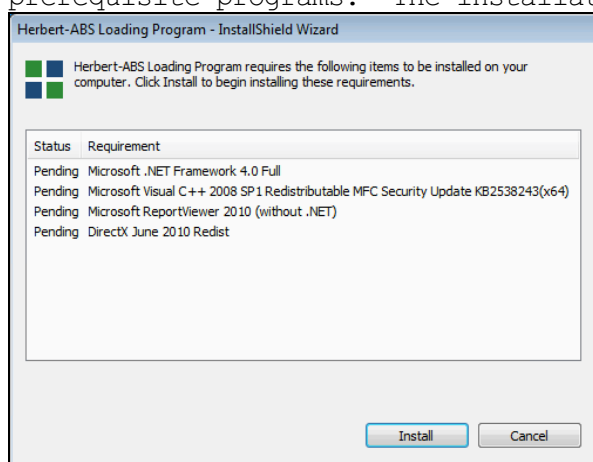
CARGOMAX INSTALLATION:

During installation, CargoMax performs the following:

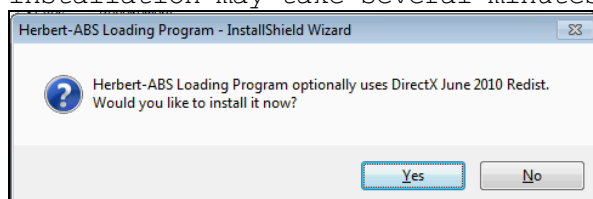
1. Creates a Herbert-ABS folder in the Start Menu (not applicable to Windows 8).
2. Creates a directory for the CargoMax program files in the Program Data folder.
3. Creates user data folders in the AppData\Roaming folder and the AppData\Local folder.
4. Creates an installation log file in the Temp directory.
5. Provides an uninstall capability.

Installing CargoMax for Windows:

1. Start Windows.
2. Close all other programs.
3. Insert the CargoMax CD in the CD-ROM drive.
4. Run the file "CargoMax 2.1.xxxx Setup.exe" from the CD.
5. The InstallShield Wizard will look for any required prerequisite programs that have not been previously installed. Click 'Install' to install the prerequisite programs. The installation may take several minutes.

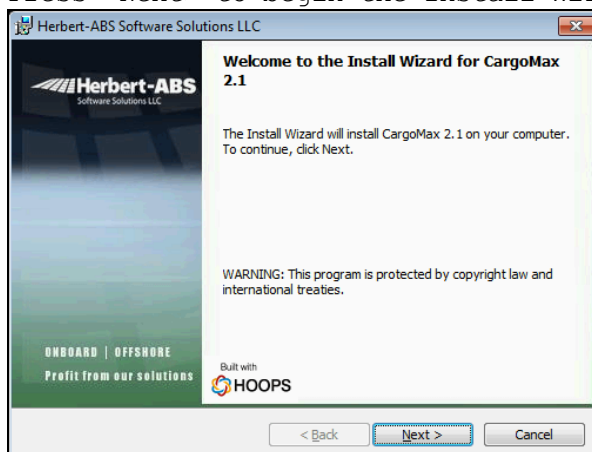


6. DirectX may be optionally installed. It is recommended to install DirectX as it is the most reliable option for displaying CargoMax's 3-D graphics. Press 'Yes' to install Direct X, or 'No' to skip it. The installation may take several minutes.





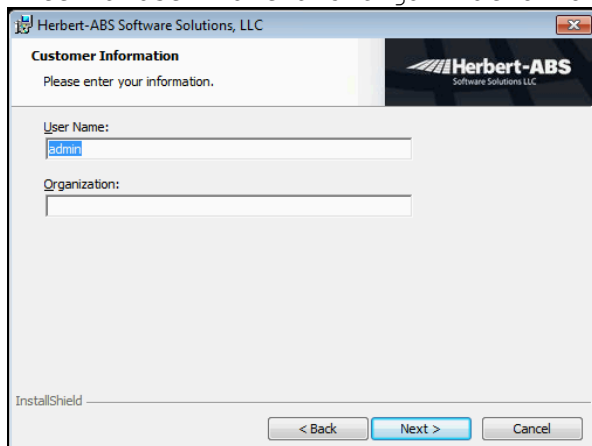
7. Press 'Next>' to begin the Install Wizard.



8. Accept the license agreement by selecting the button and then press 'Next>'.

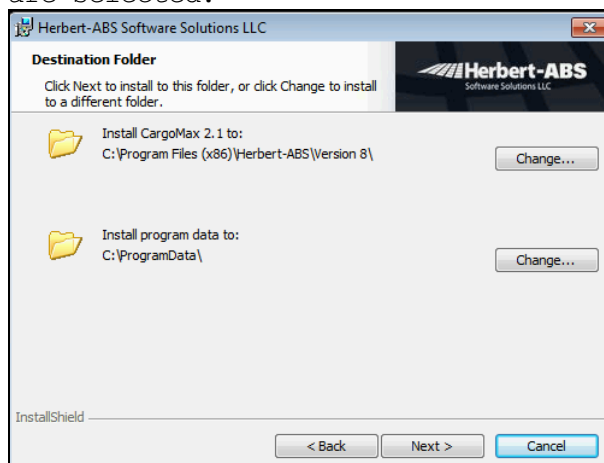


9. Enter a User Name and Organization or use the default and press 'Next>'.

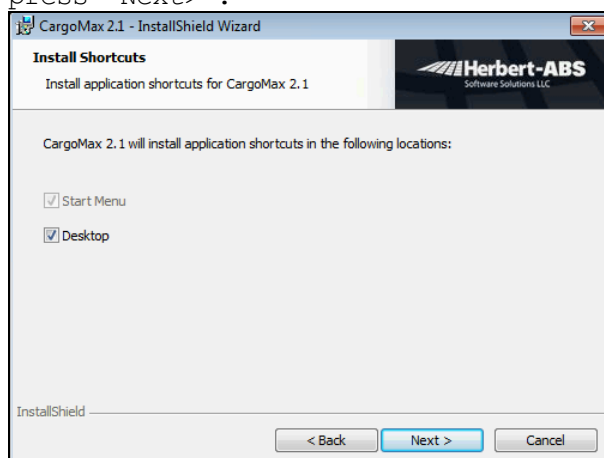




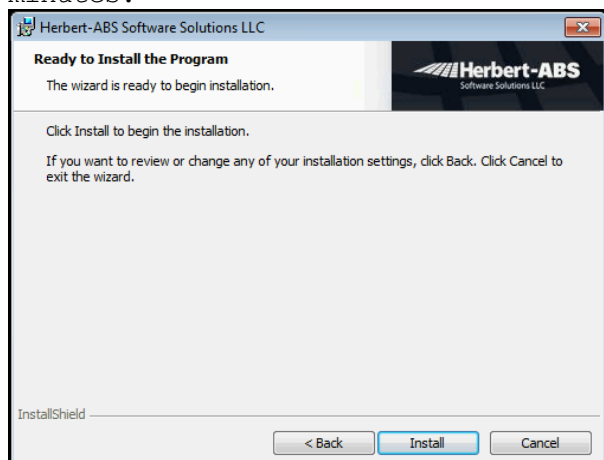
10. The default destination folders are recommended, but can be changed by selecting 'Change...'. Press 'Next>' once the desired destination folders are selected.



11. To add a Shortcut for CargoMax on the Desktop, select the check box and press 'Next>'.

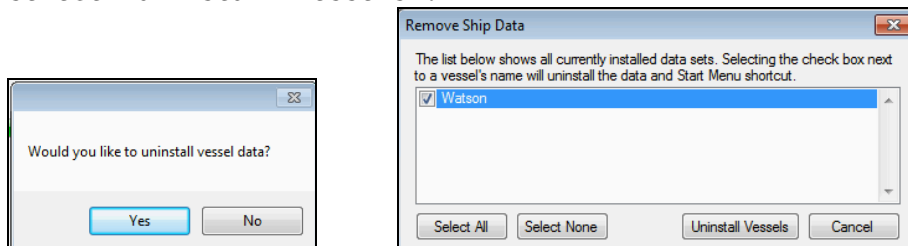


12. Press 'Install' to install CargoMax. The installation may take several minutes.





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13. If CargoMax has been previously installed on the computer, it will be uninstalled. To uninstall any vessel data, select 'Yes'. In the 'Remove Ship Data' dialog box, select the ship data you would like removed, and select 'Uninstall Vessels'.



14. Press 'Finish' to finish the CargoMax installation.

