

C3-ST-14a

U.S.N.S. "COMET"

*BATH 239*

|                |               |            |                                 |
|----------------|---------------|------------|---------------------------------|
| 42             | 601           | T-AK 269   | SUN SHIPBUILDING & DRY DOCK CO. |
| M. A. HULL NO. | YARD HULL NO. | IDENT. NO. | BUILDING YARDS                  |

**MARITIME ADMINISTRATION**

**DESIGN C3-ST-14<sub>d</sub>**

VEHICLE CARGO SHIP

(ROLL ON-ROLL OFF)

M. A. DWG. NO. *42-529-1-3* & { *42-529-1-4*  
*42-529-1-5*

M. A. APPROVAL \_\_\_\_\_

**SUN SHIPBUILDING & DRY DOCK CO.**

CHESTER, PENNA.

HULL TECHNICAL DEPT

DRAWN BY *J.R. & K.O.*  
 CHECKED BY *K.O.*  
 IN CHARGE *K.O.*  
 SCALE *LOADING DIAGRAMS 1/64* = ONE FOOT  
 DATE *JAN. 14, 1959*

APPROVED

*J. Karlsson*

*Frank R. Pavlik*

NAVAL ARCHITECT

**LOADING DIAGRAMS**  
**CROSS CURVES OF STABILITY**  
**DAMAGE STABILITY DIAGRAM**

| SUN SHIP DRAWING NO.           | BUREAU OF SHIPS NUMBER |              |                    | REV.     |
|--------------------------------|------------------------|--------------|--------------------|----------|
| <b>601-700E-0B<sub>1</sub></b> | <b>T-AK 269</b>        | <b>56001</b> | <b>H 1,592,022</b> | <b>0</b> |
| <b>601-700E-0B<sub>2</sub></b> | <b>T-AK 269</b>        | <b>52901</b> | <b>H 1,592,023</b> | <b>0</b> |
| <b>601-700E-0B<sub>3</sub></b> | <b>T-AK 269</b>        | <b>52901</b> | <b>H 1,592,024</b> | <b>0</b> |

TOTAL OF 23 SHEETS

# REVISIONS

| REV.                           | ZONE | ITEM | DESCRIPTION | BY | CONTR. |       | M A  |       |  |
|--------------------------------|------|------|-------------|----|--------|-------|------|-------|--|
|                                |      |      |             |    | DATE   | APPD. | DATE | APPD. |  |
| Empty table body for revisions |      |      |             |    |        |       |      |       |  |

## PLAN PRINTS

| PT. NO. | DEPT. | NO. PTS. | PT. NO. | DEPT. | NO. PTS. | PT. NO. | DEPT. | NO. PTS. | PT. NO. | DEPT. | NO. PTS. | PT. NO. | DEPT. | NO. PTS. |
|---------|-------|----------|---------|-------|----------|---------|-------|----------|---------|-------|----------|---------|-------|----------|
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |
|         |       |          |         |       |          |         |       |          |         |       |          |         |       |          |

## PRINT ISSUES

| DATE           | 12/14/57 | 1/15/58 |  |  |  |  |  |  |  |  |  |  |  |
|----------------|----------|---------|--|--|--|--|--|--|--|--|--|--|--|
| ALT. NO.       | 0        | 0       |  |  |  |  |  |  |  |  |  |  |  |
| MAR. ADMIN.    | 1        | 5       |  |  |  |  |  |  |  |  |  |  |  |
| BUSHIPS        |          |         |  |  |  |  |  |  |  |  |  |  |  |
| A. B. S.       |          |         |  |  |  |  |  |  |  |  |  |  |  |
| U. S. C. G.    |          | 2       |  |  |  |  |  |  |  |  |  |  |  |
| U. S. P. H. S. |          |         |  |  |  |  |  |  |  |  |  |  |  |
| MARAD (SUN)    |          |         |  |  |  |  |  |  |  |  |  |  |  |

## SUBMITTALS

| SUBMITTED TO   | SUBMIT.  | RESUBMIT | APPROVED |
|----------------|----------|----------|----------|
| MAR. ADMIN.    | 12-12-57 | 1-15-58  |          |
| BUSHIPS        |          |          |          |
| A. B. S.       |          |          |          |
| U. S. C. G.    | 1-15-58  |          |          |
| U. S. P. H. S. |          |          |          |
|                |          |          |          |
|                |          |          |          |

# SUMMARY OF CAPACITIES & CENTERS

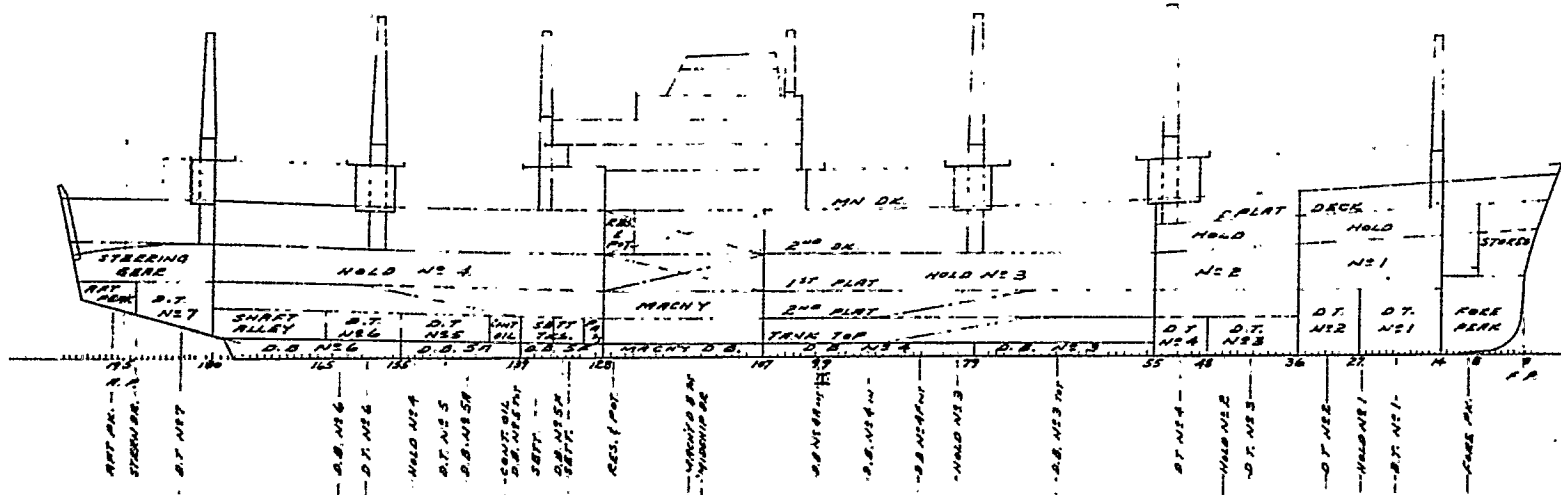
| CARGO SPACE                            |  | BETWN. FRAMES      | BALE CARGO CU. FT. | YCG ABOVE B.L. FT. | LCG AFT P.P. FT. | DESIGNED BULK HEAD VOLUME PER 145/180 FT. | CLEAR DECK AREA SQ. FT. | CLEAR DECK HEIGHT FT. & INS. | MEAN HGT. OF DECK AFT B.L. FT. | LCG AFT P.P. FT. |
|--|--|--------------------|--------------------|--------------------|------------------|---|-------------------------|------------------------------|--------------------------------|------------------|
| NO 1 MAIN DECK                         |  | 14-36              | -                  | -                  | -                | -   | 360                     | 2648                         | -                              | -                |
| PLAT. DECK                             |  | 14-36              | 19218              | 52.33              | 53.6             | 380                                       | 2283                    | 6'-11"                       | 56.50                          | 53.5             |
| 2ND DECK                               |  | 14-36              | 17240              | 43.15              | 53.3             | 430                                       | 1727                    | 7'-7 1/4"                    | 48.20                          | 54.0             |
| 1ST PLAT.                              |  | 14-36              | 19212              | 30.55              | 54.2             | 1452370                                   | 1017                    | 15'-2 1/2"                   | 38.78                          | 54.2             |
| TOTAL NO 1                             |  | 14-36              | 55750              | 41.95              | 53.7             | -   | 7672                    | -                            | 22.25                          | 57.2             |
| NO 2 MAIN DECK                         |  | 36-55              | -                  | -                  | -                | -   | 360                     | 3000                         | 13'-6 1/2"                     | 46.50            |
| PLAT. DECK                             |  | 36-55              | 25628              | 49.63              | 98.5             | 390                                       | 3138                    | 6'-11"                       | 53.97                          | 96.6             |
| 2ND DECK                               |  | 36-55              | 25085              | 40.33              | 99.2             | 430                                       | 2773                    | 7'-7 1/4"                    | 45.44                          | 98.9             |
| 1ST PLAT.                              |  | 36-55              | 31167              | 28.80              | 99.2             | 620                                       | 2282                    | 10'-6"                       | 35.95                          | 99.3             |
| 2ND PLAT.                              |  | 36-55              | 14823              | 17.29              | 100.9            | 173700                                    | 2059                    | 6'-11 1/2"                   | 22.25                          | 100.4            |
| TOTAL NO 2                             |  | 36-55              | 98703              | 35.18              | 99.3             | -   | 13252                   | -                            | 13.25                          | 100.7            |
| NO 3 MAIN DECK                         |  | 55-107             | -                  | -                  | -                | -   | 360                     | 8865                         | 13'-6 1/2"                     | 36.39            |
| 2ND DECK                               |  | 55-107             | 147246             | 42.65              | 183.8            | 770700                                    | 9288                    | 12'-8 1/4"                   | 50.51                          | 185.2            |
| 1ST PLAT.                              |  | 55-107             | 96399              | 27.72              | 188.9            | 560                                       | 8737                    | 10'-5 1/2"                   | 34.50                          | 189.4            |
| 2ND PLAT.                              |  | 55-107             | 64344              | 17.06              | 189.8            | 400                                       | 7463                    | 6'-11 1/2"                   | 22.25                          | 189.4            |
| TANK TOP                               |  | 55-107             | 59256              | 8.54               | 191.0            | 292470                                    | 7452                    | 6'-11 1/2"                   | 13.25                          | 190.3            |
| TOTAL NO 3                             |  | 55-107             | 367245             | 28.74              | 187.4            | -   | 41805                   | -                            | 4.83                           | 192.6            |
| NO 4 MAIN DECK                         |  | 128-180            | -                  | -                  | -                | -   | 360                     | 8489                         | 13'-6 1/2"                     | 26.25            |
| 2ND DECK                               |  | 128-180            | 135720             | 43.46              | 369.9            | 660                                       | 9360                    | 12'-8 1/4"                   | 50.43                          | 373.8            |
| 1ST PLAT.                              |  | 128-180            | 89285              | 29.29              | 368.0            | 560                                       | 8246                    | 10'-2 1/4"                   | 35.80                          | 368.5            |
| 2ND PLAT.                              |  | 128-180            | 56214              | 18.67              | 362.1            | 1888                                      | 6755                    | 6'-11 1/2"                   | 24.12                          | 365.9            |
| TOTAL NO 4                             |  | 128-180            | 281219             | 34.01              | 367.7            | -   | 32850                   | -                            | 15.12                          | 360.4            |
| TOTAL EXCLUDING DRIVEWAYS              |  |                    | 802917             | 32.29              | 230.4            | -   | 95579                   | -                            | 32.40                          | 367.6            |
| STEER DRIVEWAY & MIDSHIP DRIVEWAY STR. |  | 180-TRANS. 102-128 | 11869              | 45.18              | 461.0            | 560                                       | 846                     | 12'-6"                       | 38.15                          | 459.5            |
| GRAND TOTAL CARGO SPACES               |  |                    | 829602             | 32.90              | 234.5            | -   | 97550                   | -                            | 49.50                          | 271.5            |
| GRAND TOTAL CARGO SPACES               |  |                    | 829602             | 32.90              | 234.5            | -   | 97550                   | -                            | 31.58                          | 229.6            |

| TANKS                | BETWN. FRAMES | CAPACITY 100% | CAPACITY 98% | L. TONS FUEL OIL 6.74/17 78% | L. TONS S.W. 35.24/17 100% | L. TONS S.W. 36.24/17 100% | VCG AFT P.P. FT. | LCG AFT P.P. FT. | MAX. FREE SURFACE SURFACE 5 FEET 12/100 FT. |         |
|----------------------|---------------|---------------|--------------|------------------------------|----------------------------|----------------------------|------------------|------------------|---|---------|
| FUEL OIL:            |               | BLS.          | BLS.         |                              |                            |                            |                  |                  |   |         |
| SETTLER AWD.         |               | 130-134       | 373.7        | 366                          | 54.7                       | -                          | -                | -                | 40/37.62                                    |         |
| SETTLER AFT          |               | 134-139       | 377.8        | 370                          | 55.3                       | -                          | 9.50             | 316.3            | 289   |         |
| CONTAM. A.O.         |               | 139-143       | 365.4        | 348                          | 52.0                       | -                          | 9.55             | 327.1            | 289   |         |
| TOTAL FUEL OIL TNS.  |               |               | 1106.9       | 1084                         | 162.0                      | -                          | 9.77             | 337.5            | 268   |         |
| DEEP TANKS:          |               | CU. FT.       | BLS.         |                              |                            |                            |                  |                  |   |         |
| NO 1 CNTR.           |               | 14-27         | 9093         | -                            | -                          | 260.1                      | 252.9            | 12.29            | 42.9  | 40/35.0 |
| 2 CNTR.              |               | 27-36         | 11565        | -                            | -                          | 330.5                      | 321.3            | 12.21            | 65.5  | 478     |
| 3 CNTR.              |               | 36-48         | 13704        | -                            | -                          | 391.5                      | 380.6            | 7.25             | 91.0  | 1627    |
| 4 P+S                |               | 48-55         | 10188        | 1778                         | 265.4                      | 291.2                      | 288.1            | 7.20             | 114.0                                       | 5367    |
| 5 CNTR.              |               | 143-155       | 6150         | 1073                         | 160.2                      | 175.7                      | 170.8            | 10.25            | 357.5                                       | 1629    |
| 6 CNTR.              |               | 155-165       | 4952         | 690                          | 102.9                      | 112.9                      | 109.8            | 10.85            | 383.5                                       | 868     |
| 7 P+S                |               | 180-193       | 8922         | -                            | -                          | 254.8                      | 247.7            | 20.57            | 446.2                                       | 333     |
| TOTAL DEEP TANKS     |               |               | 63574        | 3541                         | 628.5                      | 1816.7                     | 1766.2           | 11.25            | 177.0                                       | 932     |
| DOUBLE BOTTOMS:      |               | CU. FT.       | BLS.         |                              |                            |                            |                  |                  |   |         |
| NO 3 INDR. P+S       |               | 55-79         | 8184         | 1428                         | 213.0                      | 233.6                      | 227.1            | 2.45             | 152.9                                       | 40/35.0 |
| 3 OUTDR. P+S         |               | 55-79         | 6226         | 1087                         | 162.2                      | 178.0                      | 173.1            | 2.80             | 156.9                                       | 946     |
| SUB-TOT. NO 3        |               | 55-79         | 14410        | 2515                         | 375.2                      | 411.6                      | 400.2            | 2.60             | 154.6                                       | 1221    |
| NO 4 INDR. P+S       |               | 79-107        | 9758         | 1703                         | 254.4                      | 279.0                      | 271.2            | 2.47             | 217.2                                       | 2167    |
| 4 OUTDR. P+S         |               | 79-93         | 5734         | 1001                         | 149.4                      | 163.8                      | 159.2            | 2.74             | 200.5                                       | 1149    |
| 4A OUTDR. P+S        |               | 93-107        | 6170         | 1077                         | 160.6                      | 176.0                      | 171.1            | 2.72             | 234.6                                       | 1679    |
| SUB-TOT. NO 4        |               | 79-107        | 21662        | 3781                         | 564.4                      | 618.8                      | 601.5            | 2.61             | 217.7                                       | 2030    |
| MACHY INDR. P+S      |               | 107-128       | 6863         | 1178                         | 178.8                      | 196.2                      | 190.7            | 2.49             | 277.1                                       | 4858    |
| OUTDR. P+S           |               | 107-128       | 7092         | 1238                         | 184.6                      | 202.4                      | 196.8            | 2.81             | 274.7                                       | 897     |
| SUB-TOT. MACHY       |               | 107-128       | 13955        | 2416                         | 363.4                      | 398.6                      | 387.5            | 2.65             | 275.9                                       | 2014    |
| NO 5 CNTR.           |               | 128-139       | 4020         | 702                          | 104.7                      | 114.8                      | 111.6            | 2.58             | 318.8                                       | 2911    |
| 5A OUTDR. P+S        |               | 128-139       | 2521         | 440                          | 65.8                       | 72.0                       | 70.0             | 3.54             | 318.1                                       | 1792    |
| 5A P+S               |               | 139-155       | 6520         | 1138                         | 167.8                      | 186.2                      | 181.0            | 3.27             | 350.6                                       | 499     |
| SUB-TOT. NO 5        |               | 128-155       | 13061        | 2280                         | 340.3                      | 373.0                      | 362.6            | 3.11             | 334.5                                       | 2510    |
| NO 6 CNTR.           |               | 155-180       | 3171         | 553                          | 82.6                       | 90.5                       | 88.0             | 4.08             | 392.4                                       | 4801    |
| TOTAL DOUBLE BOTTOMS |               |               | 66259        | 11565                        | 1725.9                     | 1892.5                     | 1839.8           | 2.79             | 247.6                                       | 1412    |
| PEAK TANKS:          |               | CU. FT.       |              |                              |                            |                            |                  |                  |   |         |
| FOREPEAK             |               | 0-14          | 3480         | -                            | -                          | 99.4                       | 96.6             | 15.00            | 18.2  | 40/35.0 |
| AFT PEAK             |               | 193-TRANS.    | 2128         | -                            | -                          | 60.8                       | 59.1             | 22.69            | 469.2                                       | 32      |
| TOTAL PEAK TNS.      |               |               | 5608         | -                            | -                          | 160.2                      | 155.7            | 17.92            | 189.3                                       | 848     |
| HEAD & POT. WATER    |               | CU. FT.       |              |                              |                            |                            |                  |                  |   |         |
| RES. HEAD SURTAPS    |               | 125-128       | 2307         | -                            | -                          | -                          | 64.0             | 40.44            | 301.8                                       | 40/35.0 |
| AFT W. INDR. P+S     |               | 125-128       | 1131         | -                            | -                          | -                          | 31.4             | 42.00            | 301.8                                       | 102     |



# TRIM TABLE



| INITIAL EVEN KEEL DRAFT | 22'-0" |      | 27'-0" |      |      |
|-------------------------|--------|------|--------|------|------|
|                         | FWD    | AFT  | FWD    | AFT  |      |
| +8.7                    | -6.7   | +7.1 | -5.5   | +6.2 | -4.7 |
| +8.4                    | -6.3   | +6.9 | -5.2   | +6.0 | -4.5 |
| +8.1                    | -5.9   | +6.6 | -4.8   | +5.8 | -4.2 |
| +7.8                    | -5.6   | +6.3 | -4.5   | +5.5 | -3.9 |
| +7.4                    | -5.2   | +6.1 | -4.2   | +5.3 | -3.6 |
| +7.1                    | -4.7   | +5.8 | -3.8   | +5.0 | -3.2 |
| +6.7                    | -4.3   | +5.5 | -3.4   | +4.8 | -2.9 |
| +6.3                    | -3.8   | +5.1 | -3.0   | +4.5 | -2.5 |
| +5.9                    | -3.4   | +4.8 | -2.6   | +4.2 | -2.2 |
| +5.5                    | -2.9   | +4.5 | -2.2   | +3.9 | -1.8 |
| +5.1                    | -2.5   | +4.2 | -1.8   | +3.7 | -1.4 |
| +4.7                    | -2.0   | +3.9 | -1.4   | +3.4 | -1.1 |
| +4.3                    | -1.5   | +3.5 | -1.0   | +3.1 | -0.7 |
| +3.9                    | -1.1   | +3.2 | -0.6   | +2.8 | -0.4 |
| +3.5                    | -0.6   | +2.9 | -0.2   | +2.5 | +0.0 |
| +3.2                    | -0.2   | +2.6 | +0.2   | +2.3 | +0.4 |
| +2.8                    | +0.3   | +2.3 | +0.6   | +2.0 | +0.7 |
| +2.4                    | +0.7   | +1.9 | +1.0   | +1.7 | +1.1 |
| +2.0                    | +1.2   | +1.6 | +1.4   | +1.4 | +1.4 |
| +1.6                    | +1.7   | +1.3 | +1.8   | +1.2 | +1.8 |
| +1.2                    | +2.1   | +1.0 | +2.2   | +0.9 | +2.2 |
| +0.8                    | +2.6   | +0.7 | +2.6   | +0.6 | +2.5 |
| +0.4                    | +3.0   | +0.4 | +3.0   | +0.3 | +2.9 |
| 0.0                     | +3.5   | +0.0 | +3.4   | +0.1 | +3.2 |
| -0.4                    | +3.9   | -0.3 | +3.8   | -0.2 | +3.6 |
| -0.7                    | +4.4   | -0.6 | +4.2   | -0.5 | +4.0 |
| -1.1                    | +4.9   | -0.9 | +4.6   | -0.8 | +4.3 |
| -1.5                    | +5.3   | -1.2 | +5.0   | -1.1 | +4.7 |
| -1.9                    | +5.8   | -1.6 | +5.4   | -1.3 | +5.0 |
| -2.3                    | +6.2   | -1.9 | +5.8   | -1.6 | +5.4 |
| -2.7                    | +6.7   | -2.2 | +6.2   | -1.9 | +5.7 |
| -3.1                    | +7.1   | -2.5 | +6.6   | -2.2 | +6.1 |
| -3.5                    | +7.6   | -2.6 | +7.0   | -2.4 | +6.5 |
| -3.9                    | +8.0   | -3.2 | +7.4   | -2.7 | +6.8 |
| -4.2                    | +8.4   | -3.4 | +7.7   | -3.0 | +7.1 |
| -4.6                    | +8.9   | -3.7 | +8.1   | -3.2 | +7.5 |
| -4.9                    | +9.2   | -4.0 | +8.4   | -3.4 | +7.8 |
| -5.2                    | +9.6   | -4.3 | +8.8   | -3.7 | +8.1 |
| -5.5                    | +10.0  | -4.6 | +9.1   | -3.9 | +8.3 |
| -5.8                    | +10.3  | -4.8 | +9.4   | -4.1 | +8.6 |
| -6.1                    | +10.7  | -5.0 | +9.7   | -4.3 | +8.9 |

**TABLE OF VARIATIONS (IN INCHES & MKS.) OF FWD. & AFT DRAFT FOR EACH 100 T. LOADED @ ANY LONG. LOCATION.**

**EXAMPLE: FIND NEW DRAFTS AFTER LOADING 200 T. IN D.T. N27**

ORIGINAL DRAFT: FWD = 22'-3" AFT = 23'-0"

VARIATION (FROM 22'-0" TABLE) = (+) 9" = +12.6"

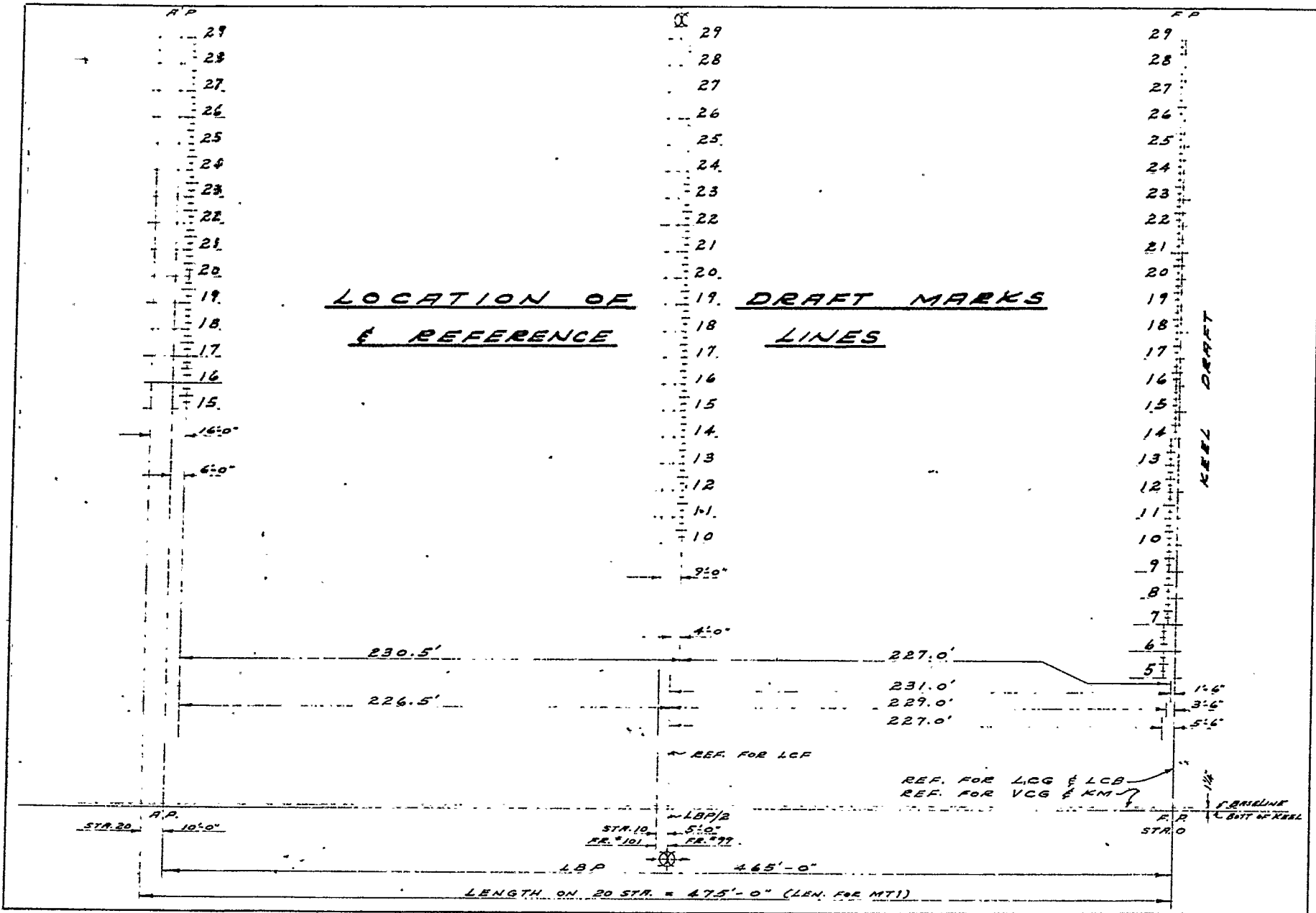
NEW DRAFT FWD = 21'-6" AFT = 24'-0.6"

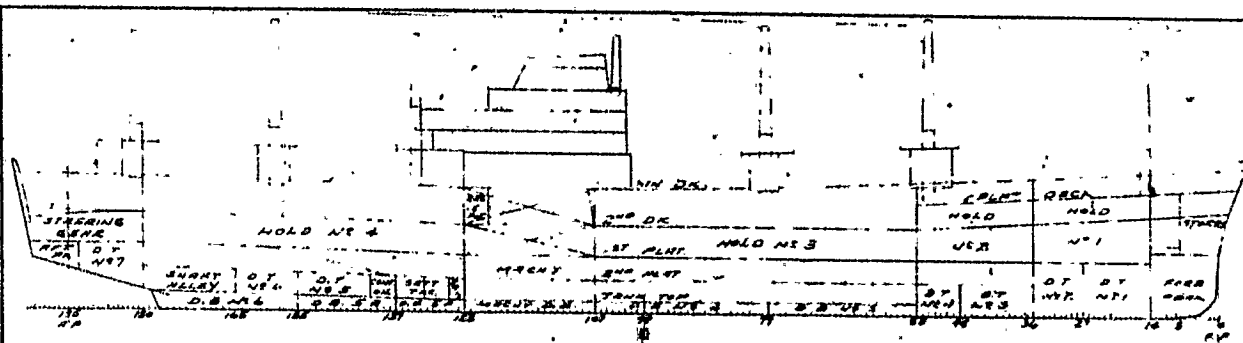
- NOTES:**
- THE VALUES HAVE BEEN COMPUTED FOR EVERY 5<sup>TH</sup> FRAME, AND AT DRAFTS FIVE FEET APART, TO FACILITATE INTERPOLATION; BUT IN PRACTICE IT WILL BE SUFFICIENTLY ACCURATE TO REFER TO THE NEAREST TABLE VALUE.
  - WHEN DISCHARGING USE THE TABLE AS FOR LOADING, BUT CHANGE THE PLUS & MINUS SIGNS.

## HYDROSTATIC PROPERTIES

| MEAN<br>KEEL<br>DRAFT<br>FT. & INS. | TOTAL<br>DISPL.<br>IN<br>FRESH WATER<br>L. TONS | TOTAL<br>DISPL.<br>IN<br>SALT WATER<br>L. TONS | TRANS.<br>METACNTR.<br>ABV.<br>B. L.<br>FEET | LCB (T <sub>90</sub> )<br>AFT<br>OF<br>B. P.<br>FEET | MOMENT<br>TO<br>TRIM<br>ONE INCH<br>FT.-TONS | LCF<br>AFT<br>OF<br>AMIDSHIPS<br>FEET | TPI<br>TOTAL<br>IN<br>SALT WATER<br>L. TONS | MEAN<br>KEEL<br>DRAFT<br>FT. & INS. |
|-------------------------------------|---|--|--|--|--|---------------------------------------|---|-------------------------------------|
| 29                                  | 20 000  | 20 000   | 33.80  |  | 2 000  |                                       | 71.00                                       | 29                                  |
| 28                                  | 19 000  | 19 000   | 33.76  | 245.00   |  | 28.00                                 | 70.00                                       | 28                                  |
| 27                                  | 18 000  | 18 000   | 33.80  | 244.10   | 1 900  |                                       | 69.00                                       | 27                                  |
| 26                                  | 17 000  | 17 000   | 33.90  | 243.00   |  | 27.00                                 | 68.00                                       | 26                                  |
| 25                                  | 16 000  | 16 000   | 34.00  | 242.00   | 1 800  | 26.00                                 | 67.00                                       | 25                                  |
| 24                                  | 15 000  | 15 000   |  | 241.00   |  | 25.00                                 | 66.00                                       | 24                                  |
| 23                                  | 14 000  | 14 000   |  | 240.00   | 1 700  | 24.00                                 | 65.00                                       | 23                                  |
| 22                                  | 13 000  | 13 000   | 35.00  | 239.00   |  | 23.00                                 | 64.00                                       | 22                                  |
| 21                                  | 12 000  | 12 000   |  | 238.00   | 1 600  | 22.00                                 | 63.00                                       | 21                                  |
| 20                                  | 11 000  | 11 000   | 36.00  | 237.00   |  | 21.00                                 | 62.00                                       | 20                                  |
| 19                                  | 10 000  | 10 000   | 37.00  | 236.00   | 1 500  | 20.00                                 | 61.00                                       | 19                                  |
| 18                                  | 9 000   | 9 000  | 38.00  | 235.00   |  | 19.00                                 | 60.00                                       | 18                                  |
| 17                                  | 8 000   | 8 000  | 39.00  | 234.00   | 1 400  | 18.00                                 | 59.00                                       | 17                                  |
| 16                                  | 7 000   | 7 000  | 40.00  | 233.00   |  | 17.00                                 | 58.00                                       | 16                                  |
| 15                                  | 6 000   | 6 000  | 41.00  | 232.00   | 1 300  | 16.00                                 | 57.00                                       | 15                                  |
| 14                                  | 5 000   | 5 000  | 42.00  | 231.00   |  | 15.00                                 | 56.00                                       | 14                                  |
| 13                                  |   |  | 43.00  | 230.00   |  | 14.00                                 | 55.00                                       | 13                                  |
| 12                                  |   |  | 44.00  | 229.00   | 1 200  | 13.00                                 | 54.00                                       | 12                                  |
| 11                                  |   |  | 45.00  | 228.00   |  | 12.00                                 | 53.00                                       | 11                                  |
| 10                                  |   |  | 46.00  | 227.00   |  | 11.00                                 | 52.00                                       | 10                                  |
|                                     |   |  | 47.00  | 226.00   | 1 100  | 10.00                                 | 51.00                                       |                                     |
|                                     |   |  | 48.00  | 225.00   |  | 9.00                                  | 50.00                                       |                                     |
|                                     |   |  | 49.00  | 224.00   |  | 8.00                                  | 49.00                                       |                                     |
|                                     |   |  | 50.00  | 223.00   |  | 7.00                                  | 48.00                                       |                                     |
|                                     |   |  | 51.00  | 222.00   |  | 6.00                                  | 47.00                                       |                                     |
|                                     |   |  | 52.00  | 221.00   |  | 5.00                                  | 46.00                                       |                                     |
|                                     |   |  |  |  |  | 4.00                                  | 45.00                                       |                                     |
|                                     |   |  |  |  |  | 3.00                                  | 44.00                                       |                                     |



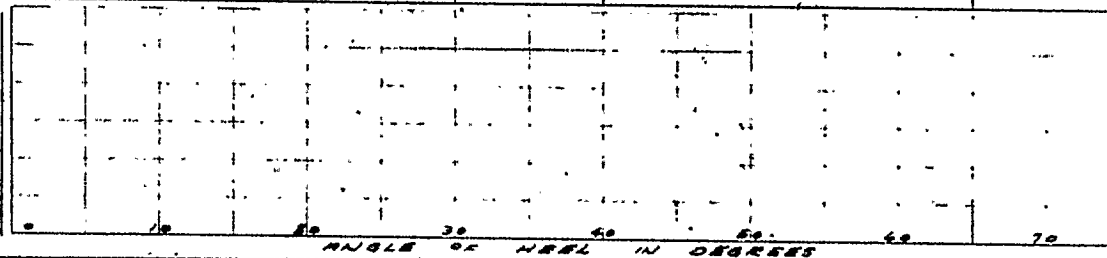


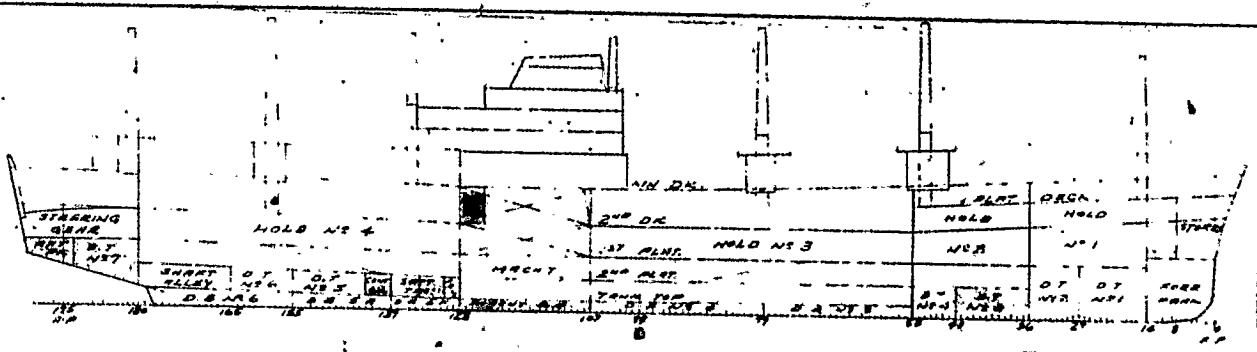


**CONDITION NO I LIGHT SHIP.**

| ITEM                                   | WT TONS     | VCG          | LCG          | F.S. EFF. | REMARKS |
|--|-------------|--------------|--------------|-----------|---------|
| <b>LIGHT SHIP</b>                      | <b>8175</b> | <b>35.06</b> | <b>255.2</b> |           |         |
| CREW & EFFECTS                         |             |              |              |           |         |
| STOKES, PROVISIONS & LUBE OIL          |             |              |              |           |         |
| <b>TANKS</b>                           |             |              |              |           |         |
| FOREPEAK TANK                          |             |              |              |           |         |
| DEEP TANK NO 1                         |             |              |              |           |         |
| NO 2                                   |             |              |              |           |         |
| NO 3                                   |             |              |              |           |         |
| NO 4                                   |             |              |              |           |         |
| F O. SETTling TANKS (180-184")         |             |              |              |           |         |
| F O. (186-189)                         |             |              |              |           |         |
| CONTAMINATED FUEL OIL                  |             |              |              |           |         |
| DEEP TANK NO 5                         |             |              |              |           |         |
| NO 6                                   |             |              |              |           |         |
| TANKS NO 7                             |             |              |              |           |         |
| ART PEAK TANK                          |             |              |              |           |         |
| DOUBLE BOTTOMS NO 8                    |             |              |              |           |         |
| NO 9                                   |             |              |              |           |         |
| NO 10                                  |             |              |              |           |         |
| NO 11                                  |             |              |              |           |         |
| NO 12                                  |             |              |              |           |         |
| NO 13                                  |             |              |              |           |         |
| NO 14                                  |             |              |              |           |         |
| NO 15                                  |             |              |              |           |         |
| NO 16                                  |             |              |              |           |         |
| NO 17                                  |             |              |              |           |         |
| NO 18                                  |             |              |              |           |         |
| NO 19                                  |             |              |              |           |         |
| NO 20                                  |             |              |              |           |         |
| NO 21                                  |             |              |              |           |         |
| NO 22                                  |             |              |              |           |         |
| NO 23                                  |             |              |              |           |         |
| NO 24                                  |             |              |              |           |         |
| NO 25                                  |             |              |              |           |         |
| NO 26                                  |             |              |              |           |         |
| NO 27                                  |             |              |              |           |         |
| NO 28                                  |             |              |              |           |         |
| NO 29                                  |             |              |              |           |         |
| NO 30                                  |             |              |              |           |         |
| NO 31                                  |             |              |              |           |         |
| NO 32                                  |             |              |              |           |         |
| NO 33                                  |             |              |              |           |         |
| NO 34                                  |             |              |              |           |         |
| NO 35                                  |             |              |              |           |         |
| NO 36                                  |             |              |              |           |         |
| NO 37                                  |             |              |              |           |         |
| NO 38                                  |             |              |              |           |         |
| NO 39                                  |             |              |              |           |         |
| NO 40                                  |             |              |              |           |         |
| NO 41                                  |             |              |              |           |         |
| NO 42                                  |             |              |              |           |         |
| NO 43                                  |             |              |              |           |         |
| NO 44                                  |             |              |              |           |         |
| NO 45                                  |             |              |              |           |         |
| NO 46                                  |             |              |              |           |         |
| NO 47                                  |             |              |              |           |         |
| NO 48                                  |             |              |              |           |         |
| NO 49                                  |             |              |              |           |         |
| NO 50                                  |             |              |              |           |         |
| NO 51                                  |             |              |              |           |         |
| NO 52                                  |             |              |              |           |         |
| NO 53                                  |             |              |              |           |         |
| NO 54                                  |             |              |              |           |         |
| NO 55                                  |             |              |              |           |         |
| NO 56                                  |             |              |              |           |         |
| NO 57                                  |             |              |              |           |         |
| NO 58                                  |             |              |              |           |         |
| NO 59                                  |             |              |              |           |         |
| NO 60                                  |             |              |              |           |         |
| NO 61                                  |             |              |              |           |         |
| NO 62                                  |             |              |              |           |         |
| NO 63                                  |             |              |              |           |         |
| NO 64                                  |             |              |              |           |         |
| NO 65                                  |             |              |              |           |         |
| NO 66                                  |             |              |              |           |         |
| NO 67                                  |             |              |              |           |         |
| NO 68                                  |             |              |              |           |         |
| NO 69                                  |             |              |              |           |         |
| NO 70                                  |             |              |              |           |         |
| NO 71                                  |             |              |              |           |         |
| NO 72                                  |             |              |              |           |         |
| NO 73                                  |             |              |              |           |         |
| NO 74                                  |             |              |              |           |         |
| NO 75                                  |             |              |              |           |         |
| NO 76                                  |             |              |              |           |         |
| NO 77                                  |             |              |              |           |         |
| NO 78                                  |             |              |              |           |         |
| NO 79                                  |             |              |              |           |         |
| NO 80                                  |             |              |              |           |         |
| NO 81                                  |             |              |              |           |         |
| NO 82                                  |             |              |              |           |         |
| NO 83                                  |             |              |              |           |         |
| NO 84                                  |             |              |              |           |         |
| NO 85                                  |             |              |              |           |         |
| NO 86                                  |             |              |              |           |         |
| NO 87                                  |             |              |              |           |         |
| NO 88                                  |             |              |              |           |         |
| NO 89                                  |             |              |              |           |         |
| NO 90                                  |             |              |              |           |         |
| NO 91                                  |             |              |              |           |         |
| NO 92                                  |             |              |              |           |         |
| NO 93                                  |             |              |              |           |         |
| NO 94                                  |             |              |              |           |         |
| NO 95                                  |             |              |              |           |         |
| NO 96                                  |             |              |              |           |         |
| NO 97                                  |             |              |              |           |         |
| NO 98                                  |             |              |              |           |         |
| NO 99                                  |             |              |              |           |         |
| NO 100                                 |             |              |              |           |         |
| STERN DRIVEWAY & MIDSHIP DRIVEWAY STBD |             |              |              |           |         |
| <b>TOTAL DISPLACEMENT</b>              | <b>8175</b> | <b>35.06</b> | <b>255.2</b> |           |         |

| DEADWEIGHT                      | STABILITY | TRIM    |
|---------------------------------|-----------|---------|
| TOTAL DEADWEIGHT                | 0         |         |
| CARGO - GENERAL                 | 0         |         |
| CARGO - VEHICLES                | 0         |         |
| BALLAST                         | 0         |         |
| FUEL OIL                        | 0         |         |
| METACENTER TO B.L.              | 41.25     |         |
| CNTR OF GRAVITY TO B.L.         | 35.06     |         |
| METACENTRIC HEIGHT (VIRTUAL) GM | 6.19      |         |
| FREE SURFACE CORRECTN           | 0         |         |
| METACENTRIC HEIGHT (CORRECT) GM | 6.19      |         |
| DRAFT & CNTR OF FOOT            |           | 14'-0"  |
| LONGST CNTR OF GRAVITY LCG      |           |         |
| LONGST CNTR. OF BUOYANCY LCB    |           |         |
| TRIMMING LEVER %                |           |         |
| MOMENT TO TRIM ONE INCH MTI     |           | 1272    |
| TOTAL TRIM & STA. 0 TO          |           |         |
| LONGST CNTR. OF GRAVITY LCG     |           | 59.08   |
| LONGST CNTR. OF BUOYANCY LCB    |           |         |
| TONS PER INCH                   |           |         |
| HEEL DEGREE & MARKS             |           |         |
| FORWARD                         |           | 8'-2"   |
| AFT                             |           | 13'-7"  |
| AT                              |           | 17'-19" |

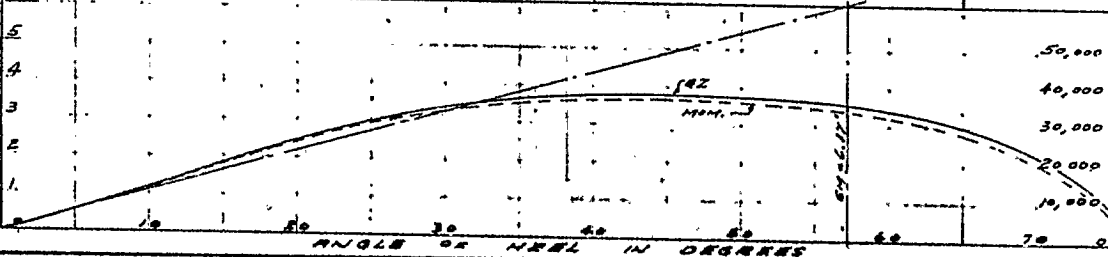


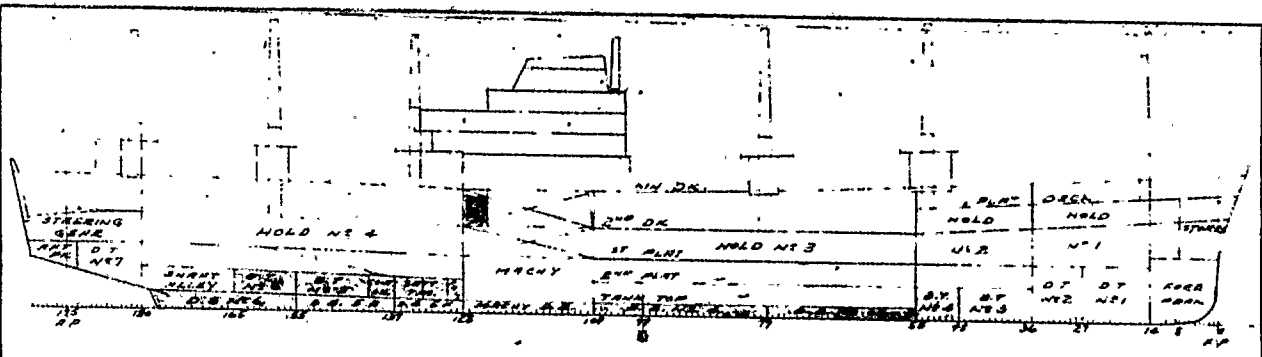


**CONDITION NO. II LIGHT SERVICE CONDITION (2500 MI. TRIP)**

| ITEM                                   | WT TONS     | VCG          | LCG          | FB EFF      | REMARKS |
|--|-------------|--------------|--------------|-------------|---------|
| LIGHT SHIP                             | 3175        | 35.06        | 256.2        | -           |         |
| CREW & EFFECTS                         | 15          | 68.00        | 277.5        | -           |         |
| STORES, PROVISIONS & LUBR OIL          | 80          | 47.08        | 222.8        | -           |         |
| TANKS:                                 |             |              |              |             |         |
| FOREPEAK TANK                          |             |              |              |             |         |
| DEEP TANK NO. 1                        |             |              |              |             |         |
| NO. 2                                  |             |              |              |             |         |
| NO. 3                                  |             |              |              |             |         |
| TANKS NO. 4                            | 392         | 7.25         | 91.0         | -           | BALLAST |
| F.O. SETTLING TANKS (130°/134°)        | 55          | 7.30         | 316.3        | 289         |         |
| (134°-187°)                            | 55          | 7.55         | 327.1        | 289         |         |
| CONTAMINATED FUEL OIL                  | 25          | 7.40         | 337.5        | 268         |         |
| DEEP TANK NO. 5                        |             |              |              |             |         |
| NO. 6                                  |             |              |              |             |         |
| TANKS NO. 7                            |             |              |              |             |         |
| ART PEAK TANK                          | 265         | 20.57        | 446.2        | -           | BALLAST |
| DOUBLE BOTTOMS NO. 8                   | 61          | 22.67        | 449.2        | -           | "       |
| NO. 9 OUTBD.                           |             |              |              |             |         |
| NO. 10 INBD.                           |             |              |              |             |         |
| NO. 11 OUTBD.                          |             |              |              |             |         |
| NO. 12 OUTBD.                          |             |              |              |             |         |
| YACHTY INBD.                           | 179         | 2.49         | 277.1        | 835         |         |
| YACHTY OUTBD.                          | 185         | 2.81         | 274.7        | 1874        |         |
| ROFFOM NO. 13 OUTBD.                   |             |              |              |             |         |
| ROFFOM NO. 14 OUTBD.                   |             |              |              |             |         |
| NO. 15 INBD.                           |             |              |              |             |         |
| NO. 16 INBD.                           |             |              |              |             |         |
| RESERVE FUEL TANKS OUTBD.              | 64          | 40.44        | 301.8        | 102         |         |
| POTABLE WATER TANKS INBD.              | 31          | 42.00        | 301.8        | 6           |         |
| CARGO SPACES:                          |             |              |              |             |         |
| NO. 1 MAIN DECK                        |             |              |              |             |         |
| 2ND DECK                               |             |              |              |             |         |
| 3RD DECK                               |             |              |              |             |         |
| NO. 2 MAIN DECK                        |             |              |              |             |         |
| 2ND DECK                               |             |              |              |             |         |
| 1ST DECK                               |             |              |              |             |         |
| NO. 3 MAIN DECK                        |             |              |              |             |         |
| 2ND DECK                               |             |              |              |             |         |
| 1ST DECK                               |             |              |              |             |         |
| TANK TOP                               |             |              |              |             |         |
| NO. 4 MAIN DECK                        |             |              |              |             |         |
| 2ND DECK                               |             |              |              |             |         |
| 1ST DECK                               |             |              |              |             |         |
| 2ND DECK                               |             |              |              |             |         |
| STERN DRIVEWAY & MIDSHIP DRIVEWAY STBD |             |              |              |             |         |
| <b>TOTAL DISPLACEMENT</b>              | <b>9552</b> | <b>32.05</b> | <b>257.0</b> | <b>3663</b> |         |

| DEADWEIGHT                       |       | STABILITY                  |      | TRIM       |  |
|----------------------------------|-------|----------------------------|------|------------|--|
| TOTAL DEADWEIGHT                 | 1377  | DEEPT & CNTR OF BUOYANCY   | LCG  | 16'-0"     |  |
| CARGO - GENERAL                  | 0     | LONG'S CNTR. OF GRAVITY    | LCG  | 257.0      |  |
| CARGO - VEHICLES                 | 0     | LONG'S CNTR. OF GRAVITY    | LCG  | 234.2      |  |
| BALLAST                          | 708   | MOVING LEVER               |      | 22.8       |  |
| FUEL OIL                         | 499   | MOVING TRIM & STA O. K. 20 |      | 137.2      |  |
| METACENTER REV. 84               | 58.60 | LONG'S CNTR. OF GRAVITY    | LCG  | 158.7      |  |
| CNTR. OF GRAVITY REV. 84         | 32.05 | LONG'S CNTR. OF GRAVITY    | LCG  | 14.2       |  |
| METACENTRIC HEIGHT (VIRTUAL) GM  | 26.55 | TONS PER INCH              | TRIM | 60.79      |  |
| FREE SURFACE CORRECTN            | 1.38  | REAL DEEPTS & MARKS:       |      |            |  |
| METACENTRIC HEIGHT (CORRECTD) GM | 6.17  | FORWARD                    |      | 9'-23 1/2" |  |
|                                  |       | MIDSHIPS                   |      | 15'-5 7/8" |  |
|                                  |       | AFT                        |      | 21'-11"    |  |

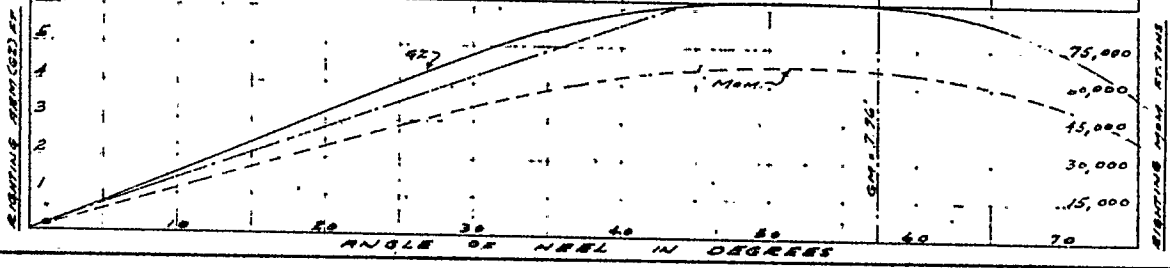


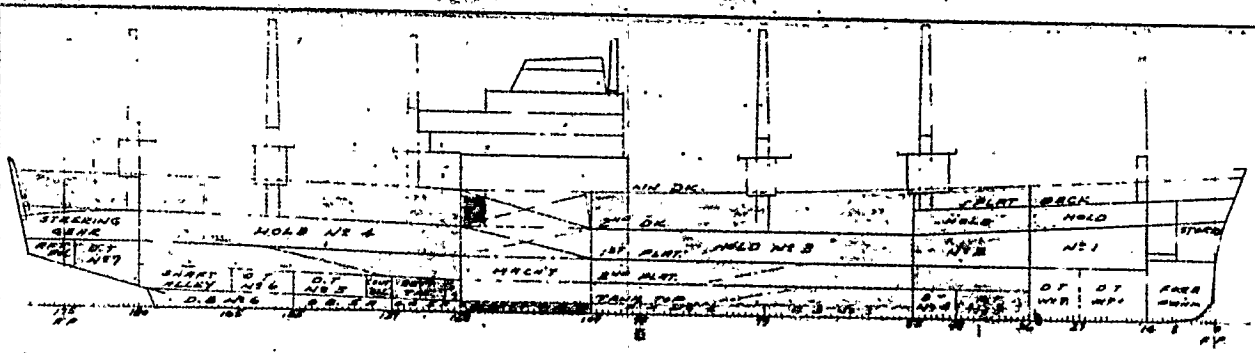


CONDITION NO II LIGHT SERVICE CONDITION (15000 MI. TRIP)

| ITEM                                    | L. TONE      | VCG          | LCG          | FS EFF.     | REMARKS                   |
|---|--------------|--------------|--------------|-------------|---------------------------|
| LIGHT SHIP                              | 2175         | 35.06        | 255.2        |             |                           |
| CREW & EFFECTS                          | 15           | 68.00        | 277.5        |             |                           |
| STOKES, PROVISIONS & LUBR OIL           | 20           | 47.48        | 222.9        |             |                           |
| <b>TANKS:</b>                           |              |              |              |             |                           |
| FOREPEAK TANK                           |              |              |              |             |                           |
| DEEP TANK NO 1                          |              |              |              |             |                           |
| NO 2                                    |              |              |              |             |                           |
| NO 3                                    |              |              |              |             |                           |
| TANKS NO 4                              | 265          | 7.20         | 114.0        | 606         | PARTIAL F.S. FOR 78% FULL |
| F.O. SETTLING TANKS (130°-134°)         | 55           | 9.30         | 316.3        | 289         |                           |
| CONTAMINATED FUEL OIL (136°-139°)       | 55           | 9.55         | 327.1        | 289         |                           |
| DEEP TANK NO 5                          | 25           | 7.40         | 337.5        | 262         |                           |
| NO 6                                    | 160          | 10.25        | 357.5        | 263         |                           |
| TANKS NO 7                              | 103          | 10.85        | 383.5        | 127         |                           |
| REAR PEAK TANK                          |              |              |              |             |                           |
| <b>DOUBLE BOTTOMS</b>                   |              |              |              |             |                           |
| NO 3 INBD                               | 213          | 2.45         | 152.9        | 220         |                           |
| NO 3 OUTBD                              | 142          | 2.80         | 156.7        | 284         |                           |
| NO 4 INBD                               | 254          | 2.47         | 217.2        | 247         |                           |
| NO 4 OUTBD                              | 149          | 2.74         | 200.5        | 281         |                           |
| NO 4A INBD                              | 161          | 2.72         | 234.4        | 335         |                           |
| MACHY INBD                              | 179          | 2.49         | 277.1        | 375         |                           |
| BOTTOM NO 5A OUTBD                      | 185          | 2.81         | 274.7        | 374         |                           |
| NO 5A INBD                              | 105          | 2.58         | 318.8        | 250         |                           |
| BOTTOMS NO 5A OUTBD                     | 66           | 3.56         | 318.1        | 116         |                           |
| NO 5A INBD                              | 170          | 3.27         | 350.4        | 540         |                           |
| BOTTOM NO 5A INBD                       | 83           | 4.08         | 392.4        | 438         |                           |
| RESERVE FEED TANKS OUTBD                | 64           | 40.44        | 301.8        | 102         |                           |
| INBD                                    | 31           | 42.00        | 301.8        | 6           |                           |
| <b>RESERVE FEED TANKS</b>               |              |              |              |             |                           |
| NO 1 MAIN DECK                          |              |              |              |             |                           |
| NO 1 1ST DECK                           |              |              |              |             |                           |
| NO 1 2ND DECK                           |              |              |              |             |                           |
| NO 1 3RD DECK                           |              |              |              |             |                           |
| NO 2 MAIN DECK                          |              |              |              |             |                           |
| NO 2 1ST DECK                           |              |              |              |             |                           |
| NO 2 2ND DECK                           |              |              |              |             |                           |
| NO 2 3RD DECK                           |              |              |              |             |                           |
| NO 3 MAIN DECK                          |              |              |              |             |                           |
| NO 3 1ST DECK                           |              |              |              |             |                           |
| NO 3 2ND DECK                           |              |              |              |             |                           |
| NO 3 TANK TOP                           |              |              |              |             |                           |
| NO 4 MAIN DECK                          |              |              |              |             |                           |
| NO 4 1ST DECK                           |              |              |              |             |                           |
| NO 4 2ND DECK                           |              |              |              |             |                           |
| STEERN DRIVEWAY & MIDSHIP DRIVEWAY, STD |              |              |              |             |                           |
| <b>TOTAL DISPLACEMENT</b>               | <b>10735</b> | <b>28.43</b> | <b>254.4</b> | <b>7415</b> |                           |

| DEADWEIGHT                      |       | STABILITY                      |     | TRIM       |  |
|---------------------------------|-------|--------------------------------|-----|------------|--|
| TOTAL DEADWEIGHT                | 2560  | DEEPT & CNTR OF FLOT.          | M   | 17'-6 3/4" |  |
| CARGO - GENERAL                 | 0     | LONGS CNTR OF GRAY             | LCG | 254.4      |  |
| CARGO - VEHICLES                | 0     | LONGS CNTR OF BODY             | LGB | 235.7      |  |
| BALLAST                         | 0     | TRIMMING LEVER                 |     | 18.7       |  |
| COAL OIL                        | 2290  | MOMENT TO BRING ONE INCH MTI   |     | 145.3      |  |
| METACENTER ABV B.L.             | 37.08 | TOTAL TRIM & STAB. CTR         |     | 138.2      |  |
| CNTR OF GRAVITY ABV B.L.        | 28.48 | LONGS CNTR OF FLOT.            | LCE | 16.8       |  |
| METACENTRIC HEIGHT (VIRTUAL) GM | 8.60  | TONS PER INCH                  | TAI | 62.15      |  |
| FREE SURFACE CORRN              | -6.9  | <b>HEEL DEPTS &amp; MARKS:</b> |     |            |  |
| METACENTRIC HEIGHT (CORRN) GM   | 7.94  | FORWARD                        |     | 11'-7 1/4" |  |
|                                 |       | MIDSHIPS                       |     | 17'-0 3/4" |  |
|                                 |       | AFT                            |     | 22'-7 3/4" |  |

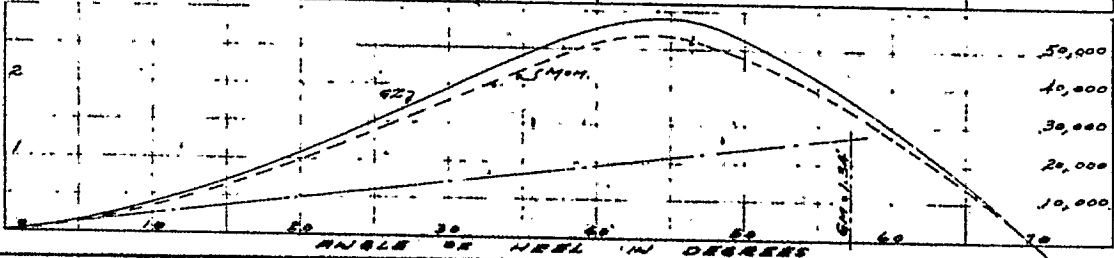


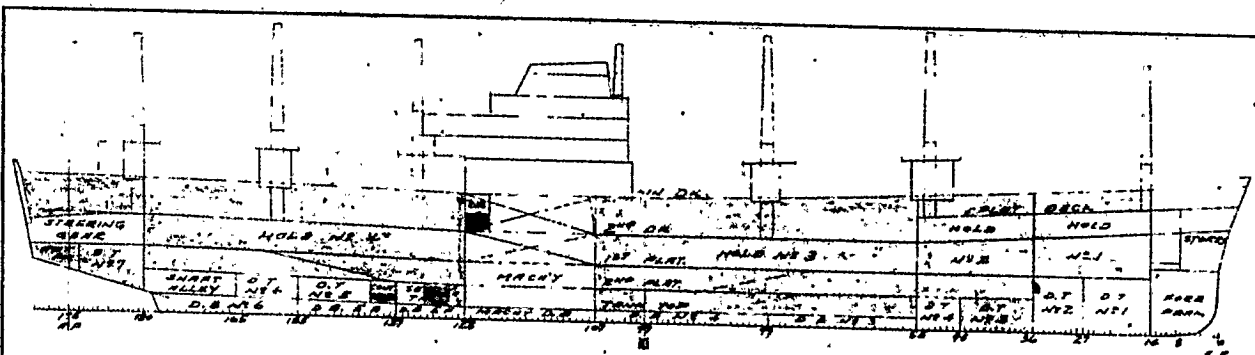


**CONDITION NO. IV DEPARTURE - GENERAL CARGO - 2500 MI. TRIP**

| ITEM                            | L TONS       | VCG          | LCG          | FB EFF.     | REMARKS           |
|---------------------------------|--------------|--------------|--------------|-------------|-------------------|
| LIGHT SHIP                      | 2175         | 35.06        | 255.2        |             |                   |
| CREW & EFFECTS                  | 45           | 68.88        | 277.5        |             |                   |
| STORES, PROVISIONS & LUBR OIL   | 60           | 49.80        | 222.5        |             |                   |
| TANKS:                          |              |              |              |             |                   |
| FOREPEAK TANK                   |              |              |              |             |                   |
| DEEP TANK NO. 1                 |              |              |              |             |                   |
| NO. 2                           |              |              |              |             |                   |
| NO. 3                           |              |              |              |             |                   |
| NO. 4                           | 392          | 7.25         | 91.0         |             | BALLAST           |
| P.O. SETTLING TANKS (180-187)   |              |              |              |             |                   |
| NO. 5                           | 55           | 7.30         | 316.3        | 289         |                   |
| CONTAMINATED FUEL OIL (188-189) | 55           | 7.55         | 327.1        | 289         |                   |
| DEEP TANK NO. 6                 | 25           | 7.40         | 337.5        | 248         |                   |
| TANKS NO. 7                     |              |              |              |             |                   |
| REAR PEAK TANK                  | 255          | 20.57        | 446.2        |             | BALLAST           |
| DOUBLE BOTTOMS NO. 2            | 61           | 22.67        | 469.2        |             |                   |
| NO. 3 INSD                      |              |              |              |             |                   |
| NO. 4 OUTSD                     |              |              |              |             |                   |
| NO. 5 INSD                      |              |              |              |             |                   |
| NO. 6 OUTSD                     |              |              |              |             |                   |
| MACHY INSD                      | 179          | 2.49         | 277.7        | 835         |                   |
| MACHY OUTSD                     | 185          | 2.81         | 274.7        | 1474        |                   |
| BOTTOM NO. 5A CNTR              |              |              |              |             |                   |
| BOTTOMS NO. 5E OUTSD            |              |              |              |             |                   |
| NO. 5A                          |              |              |              |             |                   |
| NO. 5E CNTR                     |              |              |              |             |                   |
| BOTTOMS NO. 6                   |              |              |              |             |                   |
| NO. 6A CNTR                     |              |              |              |             |                   |
| RESERVE WATER TANKS OUTSD       | 64           | 40.44        | 301.8        | 102         |                   |
| POTABLE WATER TANKS INSD        | 31           | 42.00        | 391.8        | 11.6        |                   |
| CARGO SPACES                    |              |              |              |             |                   |
| NO. 1 MAIN DECK                 |              |              |              |             |                   |
| PLAT. DECK                      |              |              |              |             |                   |
| 2ND DECK                        |              |              |              |             |                   |
| 1ST DECK                        |              |              |              |             |                   |
| NO. 2 MAIN DECK                 | 598          | 41.95        | 53.7         |             |                   |
| PLAT. DECK                      |              |              |              |             |                   |
| 2ND DECK                        |              |              |              |             |                   |
| 1ST DECK                        |              |              |              |             |                   |
| NO. 3 MAIN DECK                 | 1068         | 35.18        | 99.3         |             |                   |
| PLAT. DECK                      |              |              |              |             |                   |
| 2ND DECK                        |              |              |              |             |                   |
| 1ST DECK                        |              |              |              |             |                   |
| NO. 4 MAIN DECK                 | 3937         | 28.74        | 187.4        |             | HOMOGENEOUS CARGO |
| 2ND DECK                        |              |              |              |             |                   |
| 1ST DECK                        |              |              |              |             |                   |
| 2ND PLAT                        |              |              |              |             | 93.3 CU FT/LT     |
| TANK TOP                        |              |              |              |             |                   |
| NO. 5 MAIN DECK                 | 3014         | 34.01        | 367.7        |             |                   |
| 2ND DECK                        |              |              |              |             |                   |
| 1ST DECK                        |              |              |              |             |                   |
| 2ND PLAT                        |              |              |              |             |                   |
| STERN DRIVEWAY E.               | 127          | 45.18        | 461.0        |             |                   |
| MIDSHIP DRIVEWAY STBD.          |              |              |              |             |                   |
| <b>TOTAL DISPLACEMENT</b>       | <b>18286</b> | <b>52.26</b> | <b>245.9</b> | <b>3663</b> |                   |

| DEADWEIGHT                           | STABILITY |                              | TRIM       |            |
|--------------------------------------|-----------|------------------------------|------------|------------|
| TOTAL DEADWEIGHT                     | 10111     | DRAFT @ CNTR OF FLOT         | 27'-1 1/2" |            |
| CARGO - GENERAL                      | 8734      | LONGEST CNTR. OF GRAV        | LCG        | 245.9      |
| CARGO - VEHICLES                     | 700       | LONGEST CNTR. OF BODY        | LCB        | 244.1      |
| BALLAST                              | 497       | TRIMMING LEVER               |            | 1.8        |
| FUEL OIL                             | 33        | ADJUST TO TRIM ON 1 INCH MTI |            | 19.5       |
| METACENTER @ 1/2 L                   | 33        | TOTAL TRIM @ STA. 0 @ 20     |            | 17.3       |
| CNTR. OF GRAVITY @ 1/2 L             | 32        | LONGEST SUPR. OF FLOT        | LCF        | 27.6       |
| METACENTRIC HEIGHT (VIRTUAL) @ 1/2 L | 1         | TONS PER INCH                | TPI        | 69.40      |
| DECK SURFACE CURVATURE               | 1         | CARGO DECKLE & MARKS         |            |            |
| METACENTRIC HEIGHT (CARRY) @ 1/2 L   | 1         | FORWARD                      |            | 24'-37"    |
|                                      |           | MIDSHIPS                     |            | 27'-0 1/2" |
|                                      |           | AFT                          |            | 27'-8 1/2" |

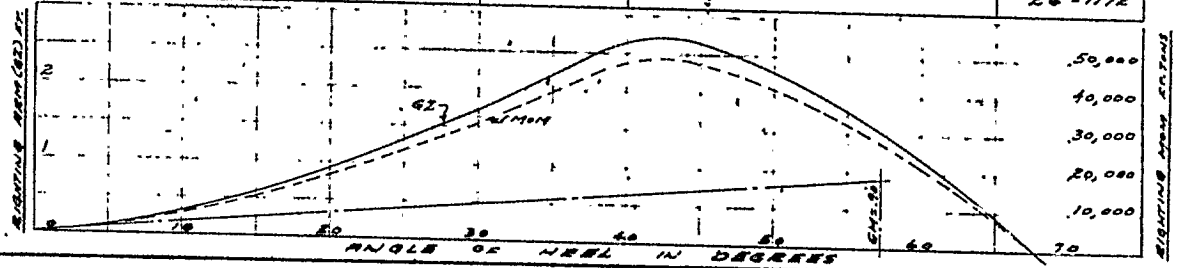


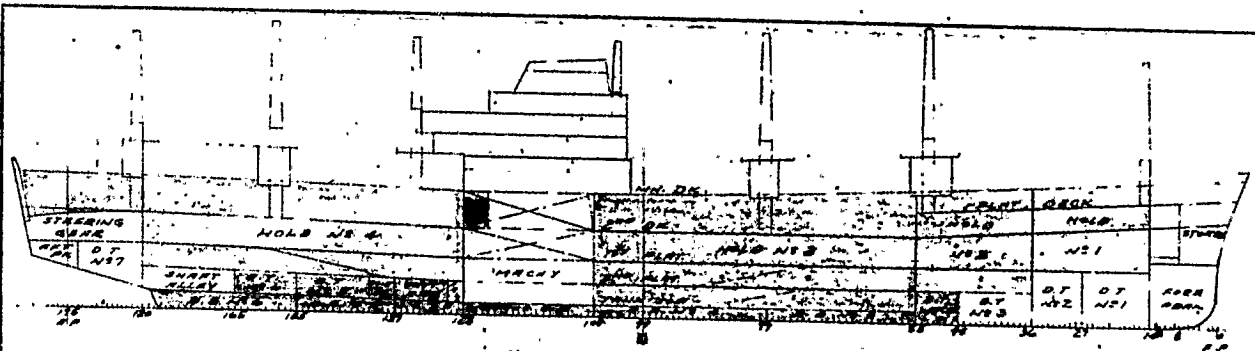


**CONDITION NO. 1 ARRIVAL - GENERAL CARGO - 2500 MI. TRIP**

| ITEM                               | L TONS        | VCG          | LCG          | K.S. EFF.  | REMARKS |
|------------------------------------|---------------|--------------|--------------|------------|---------|
| LIGHT SHIP                         | 2,175         | 35.06        | 255.2        |            |         |
| CREW & EFFECTS                     | 16            | 68.00        | 277.5        |            |         |
| STOWS, PROVISIONS & LUBE OIL       | 69            | 27.25        | 222.3        |            |         |
| TANKS:                             |               |              |              |            |         |
| FOREPEAK TANK                      |               |              |              |            |         |
| DEEP TANK NO. 1                    |               |              |              |            |         |
| NO. 2                              |               |              |              |            |         |
| NO. 3                              |               |              |              |            |         |
| TANKS NO. 4                        | 392           | 7.25         | 91.0         |            | BALLAST |
| P.O. SETTLING TANKS (SOLIDITY)     |               |              |              |            |         |
| A.O. (136'-187')                   | 55            | 7.30         | 316.3        | 289        |         |
| CONTAMINATED FUEL OIL              |               |              |              |            |         |
| DEEP TANK NO. 5                    | 25            | 7.40         | 337.5        | 268        |         |
| NO. 6                              |               |              |              |            |         |
| TANKS NO. 7                        |               |              |              |            |         |
| NO. 8                              |               |              |              |            |         |
| NO. 9                              |               |              |              |            |         |
| NO. 10                             |               |              |              |            |         |
| NO. 11                             |               |              |              |            |         |
| NO. 12                             |               |              |              |            |         |
| NO. 13                             |               |              |              |            |         |
| NO. 14                             |               |              |              |            |         |
| NO. 15                             |               |              |              |            |         |
| NO. 16                             |               |              |              |            |         |
| NO. 17                             |               |              |              |            |         |
| NO. 18                             |               |              |              |            |         |
| NO. 19                             |               |              |              |            |         |
| NO. 20                             |               |              |              |            |         |
| NO. 21                             |               |              |              |            |         |
| NO. 22                             |               |              |              |            |         |
| NO. 23                             |               |              |              |            |         |
| NO. 24                             |               |              |              |            |         |
| NO. 25                             |               |              |              |            |         |
| NO. 26                             |               |              |              |            |         |
| NO. 27                             |               |              |              |            |         |
| NO. 28                             |               |              |              |            |         |
| NO. 29                             |               |              |              |            |         |
| NO. 30                             |               |              |              |            |         |
| NO. 31                             |               |              |              |            |         |
| NO. 32                             |               |              |              |            |         |
| NO. 33                             |               |              |              |            |         |
| NO. 34                             |               |              |              |            |         |
| NO. 35                             |               |              |              |            |         |
| NO. 36                             |               |              |              |            |         |
| NO. 37                             |               |              |              |            |         |
| NO. 38                             |               |              |              |            |         |
| NO. 39                             |               |              |              |            |         |
| NO. 40                             |               |              |              |            |         |
| NO. 41                             |               |              |              |            |         |
| NO. 42                             |               |              |              |            |         |
| NO. 43                             |               |              |              |            |         |
| NO. 44                             |               |              |              |            |         |
| NO. 45                             |               |              |              |            |         |
| NO. 46                             |               |              |              |            |         |
| NO. 47                             |               |              |              |            |         |
| NO. 48                             |               |              |              |            |         |
| NO. 49                             |               |              |              |            |         |
| NO. 50                             |               |              |              |            |         |
| RESERVE FEED TANKS                 | 30            | 37.28        | 301.8        | 702        |         |
| POTABLE WATER TANKS                | 15            | 38.23        | 301.8        | 6          |         |
| CARGO SPACES: (93.3 cu. ft./L.TON) |               |              |              |            |         |
| NO. 1 MAIN DECK                    |               |              |              |            |         |
| 1ST DECK                           |               |              |              |            |         |
| 2ND DECK                           |               |              |              |            |         |
| 3RD DECK                           |               |              |              |            |         |
| NO. 2 MAIN DECK                    | 578           | 41.25        | 431.7        |            |         |
| 1ST DECK                           |               |              |              |            |         |
| 2ND DECK                           |               |              |              |            |         |
| 3RD DECK                           |               |              |              |            |         |
| NO. 3 MAIN DECK                    | 1,058         | 35.18        | 99.3         |            |         |
| 1ST DECK                           |               |              |              |            |         |
| 2ND DECK                           |               |              |              |            |         |
| 3RD DECK                           |               |              |              |            |         |
| NO. 4 MAIN DECK                    | 3,237         | 28.74        | 187.4        |            |         |
| 1ST DECK                           |               |              |              |            |         |
| 2ND DECK                           |               |              |              |            |         |
| 3RD DECK                           |               |              |              |            |         |
| NO. 5 MAIN DECK                    | 3,914         | 34.01        | 367.7        |            |         |
| 1ST DECK                           |               |              |              |            |         |
| 2ND DECK                           |               |              |              |            |         |
| 3RD DECK                           |               |              |              |            |         |
| STERN DRIVEWAY &                   | 127           | 45.18        | 461.0        |            |         |
| MIDSHIP DRIVEWAY STD.              |               |              |              |            |         |
| <b>TOTAL DISPLACEMENT</b>          | <b>17,817</b> | <b>32.90</b> | <b>244.9</b> | <b>665</b> |         |

| DEADWEIGHT                      |       | STABILITY                     |     | TRIM       |  |
|---------------------------------|-------|-------------------------------|-----|------------|--|
| TOTAL DEADWEIGHT                | 2,442 | DEPT & CNTR OF ALOT           | 46  | 26'-6 3/4" |  |
| CARGO - GENERAL                 | 2,234 | LOWEST CNTR OF GRAY.          | LCG | 244.9      |  |
| CARGO - VEHICLES                | 200   | LOWEST CNTR OF BUDY.          | LCB | 243.7      |  |
| BALLAST                         | 700   | TRIMMING LEVER                |     | 1.2        |  |
| FUEL OIL                        | 80    | MOVING TO "RIMS ONE INCH MTI" |     | 187.8      |  |
| METACENTER BY SL                | 33    | TOTAL TRIM & STA O F 20       |     | 11.4"      |  |
| CNTR. OF GRAVITY BY SL          | 52    | LOWEST CNTR. OF ALOT          | LCF | 27.3       |  |
| METACENTRIC HEIGHT (MATH) BY SL |       | TONS PER INCH                 | TAI | 69.05      |  |
| FREE SURFACE CORRN              |       |                               |     |            |  |
| METACENTRIC HEIGHT (GEAR) GR    |       |                               |     |            |  |
|                                 |       | REAL DEPT & MARKS.            |     |            |  |
|                                 |       | DOWNWARD                      |     | 26'-0 1/8" |  |
|                                 |       | UPWARD                        |     | 26'-6"     |  |
|                                 |       | MARKS                         |     | 26'-1 1/2" |  |

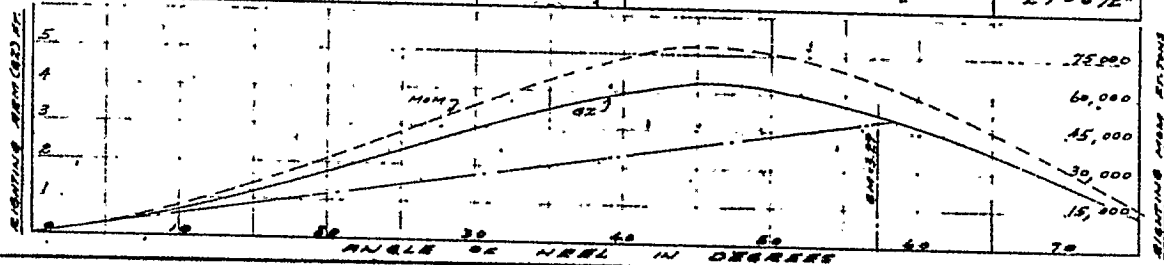


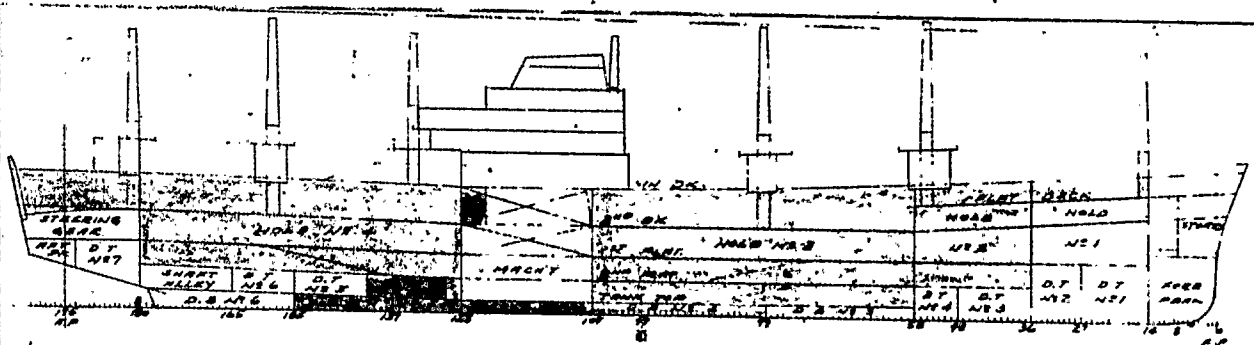


CONDITION NO. II DEPARTURE - GENERAL CARGO - 7500 MI. RETURN

| ITEM                                    | L TONS | VCG   | LCG   | FS. EFF. | REMARKS |
|---|--------|-------|-------|----------|---------|
| ALGHT. SHIP                             | 2125   | 35.26 | 255.2 |          |         |
| CREW & EFFECTS                          | 15     | 68.00 | 277.5 |          |         |
| STORES, PROVISIONS & LUBR. OIL          | 42     | 47.00 | 222.0 |          |         |
| TANKS                                   |        |       |       |          |         |
| FOREPEAK TANK                           |        |       |       |          |         |
| DEEP TANK NO. 1                         |        |       |       |          |         |
| NO. 2                                   |        |       |       |          |         |
| NO. 3                                   |        |       |       |          |         |
| TANKS NO. 4                             |        |       |       |          |         |
| F.O. SETTLING TANKS (130-134)           | 245    | 7.20  | 114.0 | 406      |         |
| F.O. (135-139)                          | 55     | 9.50  | 316.8 | 209      |         |
| CONTAMINATED FUEL OIL                   | 25     | 9.50  | 327.1 | 209      |         |
| DEEP TANK NO. 5                         | 140    | 10.40 | 337.5 | 268      |         |
| NO. 6                                   | 103    | 10.25 | 357.5 | 263      |         |
| TANKS NO. 7                             |        |       |       |          |         |
| DEEP TANK                               |        |       |       |          |         |
| DOUBLE BOTTOMS                          |        |       |       |          |         |
| NO. 3 INBD.                             | 213    | 2.25  | 152.9 | 220      |         |
| NO. 3 OUTBD.                            | 162    | 2.80  | 156.9 | 209      |         |
| NO. 4 INBD.                             | 254    | 2.47  | 217.2 | 267      |         |
| NO. 4 OUTBD.                            | 149    | 2.74  | 200.5 | 201      |         |
| NO. 5 INBD.                             | 167    | 2.72  | 234.6 | 340      |         |
| MACHY INBD.                             | 179    | 2.49  | 277.1 | 335      |         |
| BOTTOM NO. 5A CNTR.                     | 185    | 2.81  | 274.7 | 374      |         |
| BOTTOMS NO. 5E OUTBD.                   | 165    | 2.58  | 318.8 | 250      |         |
| NO. 5A                                  | 170    | 3.56  | 318.1 | 166      |         |
| BOTTOM NO. 6 CNTR.                      | 183    | 3.27  | 350.6 | 169      |         |
| RESERVE KEEL TANKS OUTBD.               | 64     | 4.08  | 392.4 | 334      |         |
| POTABLE WATER TANKS INBD.               | 31     | 42.00 | 301.8 | 10       |         |
| CARGO SPACES (107.9 cu. ft./L.TON)      |        |       |       |          |         |
| NO. 1 MAIN DECK                         |        |       |       |          |         |
| PLAT. DECK                              |        |       |       |          |         |
| 2ND DECK                                |        |       |       |          |         |
| 1ST PLAT.                               | 516    | 41.95 | 53.7  |          |         |
| NO. 2 MAIN DECK                         |        |       |       |          |         |
| PLAT. DECK                              |        |       |       |          |         |
| 2ND DECK                                |        |       |       |          |         |
| 1ST PLAT.                               | 215    | 35.18 | 99.3  |          |         |
| 2ND PLAT.                               |        |       |       |          |         |
| NO. 3 MAIN DECK                         |        |       |       |          |         |
| 2ND DECK                                |        |       |       |          |         |
| 1ST PLAT.                               |        |       |       |          |         |
| 2ND PLAT.                               | 3404   | 28.74 | 187.4 |          |         |
| TANK TOP                                |        |       |       |          |         |
| NO. 4 MAIN DECK                         |        |       |       |          |         |
| 2ND DECK                                |        |       |       |          |         |
| 1ST PLAT.                               |        |       |       |          |         |
| 2ND PLAT.                               | 2406   | 34.01 | 367.7 |          |         |
| STERN DRIVEWAY & MIDSHIP DRIVEWAY STBD. | 110    | 45.18 | 461.0 |          |         |
| TOTAL DISPLACEMENT                      | 18286  | 30.10 | 245.9 | 7415     |         |

| DEADWEIGHT                      |       | STABILITY                     |     | TRIM       |  |
|---------------------------------|-------|-------------------------------|-----|------------|--|
| TOTAL DEADWEIGHT                | 10111 | DEEPT. & CNTR. OF FLOT        | N   | 27'-1 1/4" |  |
| CARGO - GENERAL                 | 7251  | LONG. CNTR. OF GRV.           | LCG | 245.9      |  |
| CARGO - VEHICLES                | 0     | LONG. CNTR. OF BUDY           | LCB | 244.1      |  |
| BALLAST                         | 0     | TRIMMING LEVER                |     | 1.8        |  |
| FUEL OIL                        | 2380  | MOMENT TO "A" INCH INCH INTL. |     | 19.3       |  |
| METACENTER TBY. & L.            | 33.80 | TOTAL TRIM & STR. OF 20       |     | 17.3       |  |
| CNTR. OF GRAVITY TBY. & L.      | 30.10 | LONG. CNTR. OF FLOT           | LCF | 27.6       |  |
| METACENTRIC HEIGHT (VIRTUAL) GM | 3.70  | TONS PER INCH                 | TPI | 69.40      |  |
| FREE SURFACE CORRN              | 3.41  | KEEL DEPTS. & MARKS           |     | 26'-3 7/8" |  |
| METACENTRIC HEIGHT (CORRN) GM   | 3.29  | FORWARD                       |     | 27'-0 1/8" |  |
|                                 |       | AT                            |     | 27'-8 1/2" |  |

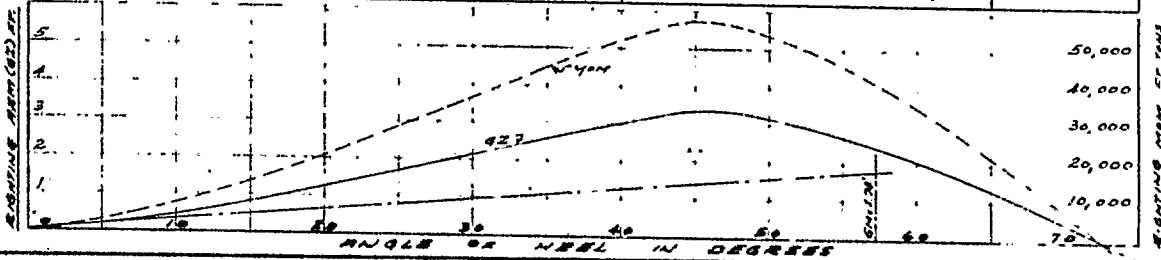




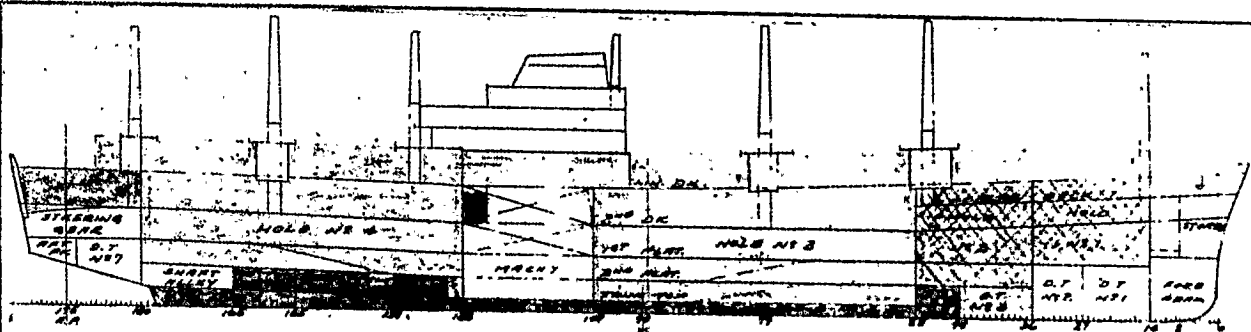
**CONDITION No VII ARRIVAL - GENERAL CARGO - 7500 MI. RETURN**

| ITEM                                     | TONS  | VCG   | LCG   | FB EFF | REMARKS |
|--|-------|-------|-------|--------|---------|
| <b>LIGHT SHIP</b>                        | 8125  | 35.06 | 255.2 |        |         |
| <b>CREW &amp; EFFECTS</b>                |       | 68.00 | 277.5 |        |         |
| <b>STORES, PROVISIONS &amp; LUBE OIL</b> | 60    | 49.00 | 222.8 |        |         |
| <b>TANKS:</b>                            |       |       |       |        |         |
| FOREPEAK TANK                            |       |       |       |        |         |
| DEEP TANK No 1                           |       |       |       |        |         |
| No 2                                     |       |       |       |        |         |
| No 3                                     |       |       |       |        |         |
| TANKS No 4                               |       |       |       |        |         |
| P.O. SETTLING TANKS (180/184)            |       |       |       |        |         |
| CONTAMINATED FUEL OIL (185-187)          | 55    | 9.30  | 316.8 | 287    |         |
| DEEP TANK No 5                           | 55    | 9.58  | 327.1 | 287    |         |
| No 6                                     | 25    | 7.40  | 337.5 | 248    |         |
| TANKS No 7                               |       |       |       |        |         |
| REAR PEAK TANK                           |       |       |       |        |         |
| <b>DOUBLE BOTTOMS</b>                    |       |       |       |        |         |
| No 3                                     |       |       |       |        |         |
| No 3                                     | 149   | 2.74  | 200.5 | 281    |         |
| No 4                                     | 161   | 2.72  | 234.6 | 340    |         |
| No 4A                                    | 179   | 2.49  | 277.1 | 235    |         |
| MACHY                                    | 185   | 2.81  | 274.7 | 11874  |         |
| BOTTOM No 5A                             | 105   | 2.58  | 318.8 | 250    |         |
| BOTTOMS No 5K                            | 64    | 3.56  | 318.1 | 116    |         |
| BOTTOM No 6A                             | 170   | 3.27  | 350.4 | 560    |         |
| RESERVE FUEL TANKS                       | 30    | 37.28 | 301.8 | 102    |         |
| POTABLE WATER TANKS                      | 15    | 38.25 | 301.8 | 6      |         |
| <b>CARGO SPACES: (147.9 cuft./LT)</b>    |       |       |       |        |         |
| No 1 MAIN DECK                           |       |       |       |        |         |
| BLAT DECK                                |       |       |       |        |         |
| 2ND DECK                                 |       |       |       |        |         |
| 1ST BLAT                                 | 516   | 41.95 | 53.7  |        |         |
| No 2 MAIN DECK                           |       |       |       |        |         |
| BLAT DECK                                |       |       |       |        |         |
| 2ND DECK                                 | 915   | 35.18 | 99.3  |        |         |
| 1ST BLAT                                 |       |       |       |        |         |
| 2ND BLAT                                 |       |       |       |        |         |
| No 3 MAIN DECK                           |       |       |       |        |         |
| 2ND DECK                                 |       |       |       |        |         |
| 1ST BLAT                                 | 3404  | 28.74 | 187.4 |        |         |
| 2ND BLAT                                 |       |       |       |        |         |
| TANK TOP                                 |       |       |       |        |         |
| No 4 MAIN DECK                           |       |       |       |        |         |
| 2ND DECK                                 |       |       |       |        |         |
| 1ST BLAT                                 | 2404  | 34.01 | 367.7 |        |         |
| 2ND BLAT                                 |       |       |       |        |         |
| STEAM DRIVEWAY & MIDSHIP DRIVEWAY STD.   | 110   | 45.18 | 461.0 |        |         |
| <b>TOTAL DISPLACEMENT</b>                | 16996 | 37.87 | 247.6 | 5210   |         |

| DEADWEIGHT                      |           | STABILITY                   |     | TE M       |
|---------------------------------|-----------|-----------------------------|-----|------------|
| TOTAL DEADWEIGHT                | 8821      | DRAFT @ CNTR. OF FLOT       | 46  | 25'-6 1/2" |
| CARGO - GENERAL                 | 7551      | LONG. CNTR. OF GRAY         | LCG | 247'-6"    |
| CARGO - VEHICLES                |           | LONG. CNTR. OF BUOY         | LCB | 242'-8"    |
| GALLIUM                         |           | TRIMMING LEVER              |     | 4'-8"      |
| FUEL OIL                        | 1259      | MOMENT TO TRIM ONE INCH MTI |     | 18.35      |
| METACENTER HGT. @ L             | 33'-9.2"  | TOTAL TRIM @ STR. 0 @ 20    |     | 44'-5"     |
| CNTR. OF GRAVITY HGT. @ L       | 31'-1.87" | LONG. CNTR. OF FLOT         | LCF | 26'-6"     |
| METACENTRIC HEIGHT (VIRTUAL) GM | 2'-1.03"  | TONS PER INCH               | TPI | 68.35      |
| DEEP SURFACE CORCTN             | -1.81"    | HEEL DRAFTS @ MARKS         |     |            |
| METACENTRIC HEIGHT (CORCTD) GM  | 1.74"     | FORWARD                     |     | 23'-6 1/8" |
|                                 |           | amidships                   |     | 25'-3 1/8" |
|                                 |           | ast                         |     | 27'-1"     |



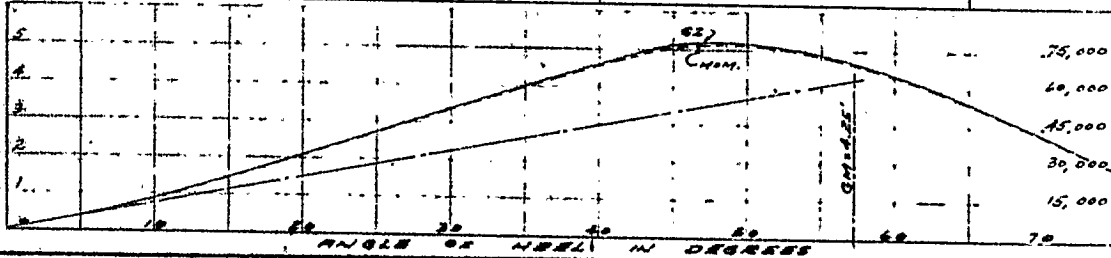




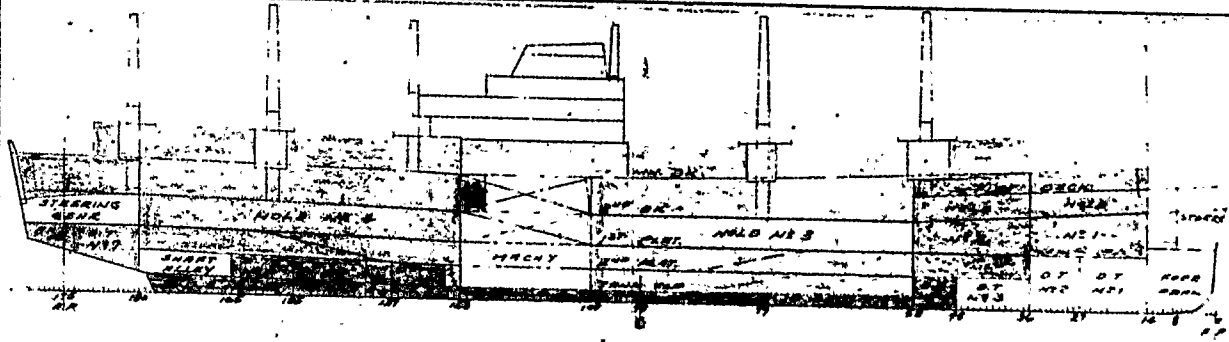
### CONDITION NO. VIII DEPARTURE - VEHICLES FOR INFANTRY DIVISION (FUEL FOR 7500 MI. TRIP & RETURN)

| ITEM                         | L TONS       | VCE          | LCG          | F.S. EFF.   | REMARKS       |
|------------------------------|--------------|--------------|--------------|-------------|---------------|
| <b>LIGHT SHIP</b>            | <b>2,175</b> | <b>35.06</b> | <b>255.2</b> |             |               |
| CRAN & EFFECTS               |              |              |              |             |               |
| STOWED PROVISIONS & LUBE OIL | 40           | 47.00        | 277.5        |             |               |
| TANKS:                       |              |              |              |             |               |
| FOREPEAK TANK                |              |              |              |             |               |
| DEEP TANK NO. 1              |              |              |              |             |               |
| NO. 2                        |              |              |              |             |               |
| NO. 3                        |              |              |              |             |               |
| NO. 4                        | 2            | 7.25         | 91.0         |             | BALLAST       |
| NO. 5                        | 2            | 7.25         | 114.0        |             |               |
| NO. 6                        | 55           | 7.25         | 514.4        |             | 606           |
| NO. 7                        | 55           | 7.25         | 327.1        |             | 228           |
| NO. 8                        | 25           | 7.25         | 228.5        |             | 228           |
| NO. 9                        | 100          | 7.25         | 357.5        |             | 127           |
| NO. 10                       | 100          | 7.25         | 357.5        |             |               |
| NO. 11                       | 100          | 7.25         | 357.5        |             |               |
| NO. 12                       | 100          | 7.25         | 357.5        |             |               |
| NO. 13                       | 100          | 7.25         | 357.5        |             |               |
| NO. 14                       | 100          | 7.25         | 357.5        |             |               |
| NO. 15                       | 100          | 7.25         | 357.5        |             |               |
| NO. 16                       | 100          | 7.25         | 357.5        |             |               |
| NO. 17                       | 100          | 7.25         | 357.5        |             |               |
| NO. 18                       | 100          | 7.25         | 357.5        |             |               |
| NO. 19                       | 100          | 7.25         | 357.5        |             |               |
| NO. 20                       | 100          | 7.25         | 357.5        |             |               |
| NO. 21                       | 100          | 7.25         | 357.5        |             |               |
| NO. 22                       | 100          | 7.25         | 357.5        |             |               |
| NO. 23                       | 100          | 7.25         | 357.5        |             |               |
| NO. 24                       | 100          | 7.25         | 357.5        |             |               |
| NO. 25                       | 100          | 7.25         | 357.5        |             |               |
| NO. 26                       | 100          | 7.25         | 357.5        |             |               |
| NO. 27                       | 100          | 7.25         | 357.5        |             |               |
| NO. 28                       | 100          | 7.25         | 357.5        |             |               |
| NO. 29                       | 100          | 7.25         | 357.5        |             |               |
| NO. 30                       | 100          | 7.25         | 357.5        |             |               |
| NO. 31                       | 100          | 7.25         | 357.5        |             |               |
| NO. 32                       | 100          | 7.25         | 357.5        |             |               |
| NO. 33                       | 100          | 7.25         | 357.5        |             |               |
| NO. 34                       | 100          | 7.25         | 357.5        |             |               |
| NO. 35                       | 100          | 7.25         | 357.5        |             |               |
| NO. 36                       | 100          | 7.25         | 357.5        |             |               |
| NO. 37                       | 100          | 7.25         | 357.5        |             |               |
| NO. 38                       | 100          | 7.25         | 357.5        |             |               |
| NO. 39                       | 100          | 7.25         | 357.5        |             |               |
| NO. 40                       | 100          | 7.25         | 357.5        |             |               |
| NO. 41                       | 100          | 7.25         | 357.5        |             |               |
| NO. 42                       | 100          | 7.25         | 357.5        |             |               |
| NO. 43                       | 100          | 7.25         | 357.5        |             |               |
| NO. 44                       | 100          | 7.25         | 357.5        |             |               |
| NO. 45                       | 100          | 7.25         | 357.5        |             |               |
| NO. 46                       | 100          | 7.25         | 357.5        |             |               |
| NO. 47                       | 100          | 7.25         | 357.5        |             |               |
| NO. 48                       | 100          | 7.25         | 357.5        |             |               |
| NO. 49                       | 100          | 7.25         | 357.5        |             |               |
| NO. 50                       | 100          | 7.25         | 357.5        |             |               |
| NO. 51                       | 100          | 7.25         | 357.5        |             |               |
| NO. 52                       | 100          | 7.25         | 357.5        |             |               |
| NO. 53                       | 100          | 7.25         | 357.5        |             |               |
| NO. 54                       | 100          | 7.25         | 357.5        |             |               |
| NO. 55                       | 100          | 7.25         | 357.5        |             |               |
| NO. 56                       | 100          | 7.25         | 357.5        |             |               |
| NO. 57                       | 100          | 7.25         | 357.5        |             |               |
| NO. 58                       | 100          | 7.25         | 357.5        |             |               |
| NO. 59                       | 100          | 7.25         | 357.5        |             |               |
| NO. 60                       | 100          | 7.25         | 357.5        |             |               |
| NO. 61                       | 100          | 7.25         | 357.5        |             |               |
| NO. 62                       | 100          | 7.25         | 357.5        |             |               |
| NO. 63                       | 100          | 7.25         | 357.5        |             |               |
| NO. 64                       | 100          | 7.25         | 357.5        |             |               |
| NO. 65                       | 100          | 7.25         | 357.5        |             |               |
| NO. 66                       | 100          | 7.25         | 357.5        |             |               |
| NO. 67                       | 100          | 7.25         | 357.5        |             |               |
| NO. 68                       | 100          | 7.25         | 357.5        |             |               |
| NO. 69                       | 100          | 7.25         | 357.5        |             |               |
| NO. 70                       | 100          | 7.25         | 357.5        |             |               |
| NO. 71                       | 100          | 7.25         | 357.5        |             |               |
| NO. 72                       | 100          | 7.25         | 357.5        |             |               |
| NO. 73                       | 100          | 7.25         | 357.5        |             |               |
| NO. 74                       | 100          | 7.25         | 357.5        |             |               |
| NO. 75                       | 100          | 7.25         | 357.5        |             |               |
| NO. 76                       | 100          | 7.25         | 357.5        |             |               |
| NO. 77                       | 100          | 7.25         | 357.5        |             |               |
| NO. 78                       | 100          | 7.25         | 357.5        |             |               |
| NO. 79                       | 100          | 7.25         | 357.5        |             |               |
| NO. 80                       | 100          | 7.25         | 357.5        |             |               |
| NO. 81                       | 100          | 7.25         | 357.5        |             |               |
| NO. 82                       | 100          | 7.25         | 357.5        |             |               |
| NO. 83                       | 100          | 7.25         | 357.5        |             |               |
| NO. 84                       | 100          | 7.25         | 357.5        |             |               |
| NO. 85                       | 100          | 7.25         | 357.5        |             |               |
| NO. 86                       | 100          | 7.25         | 357.5        |             |               |
| NO. 87                       | 100          | 7.25         | 357.5        |             |               |
| NO. 88                       | 100          | 7.25         | 357.5        |             |               |
| NO. 89                       | 100          | 7.25         | 357.5        |             |               |
| NO. 90                       | 100          | 7.25         | 357.5        |             |               |
| NO. 91                       | 100          | 7.25         | 357.5        |             |               |
| NO. 92                       | 100          | 7.25         | 357.5        |             |               |
| NO. 93                       | 100          | 7.25         | 357.5        |             |               |
| NO. 94                       | 100          | 7.25         | 357.5        |             |               |
| NO. 95                       | 100          | 7.25         | 357.5        |             |               |
| NO. 96                       | 100          | 7.25         | 357.5        |             |               |
| NO. 97                       | 100          | 7.25         | 357.5        |             |               |
| NO. 98                       | 100          | 7.25         | 357.5        |             |               |
| NO. 99                       | 100          | 7.25         | 357.5        |             |               |
| NO. 100                      | 100          | 7.25         | 357.5        |             |               |
| RESERVE TANKS                | 64           | 40.44        | 301.8        | 108         |               |
| BOTTLE WATER TANKS           | 31           | 42.00        | 301.8        | 108         |               |
| RESERVE WATER TANKS          | 31           | 42.00        | 301.8        | 108         |               |
| CARGO SPACED:                |              |              |              |             |               |
| NO. 1 MAIN DECK              | 478          | 35.23        | 87.3         |             | GENERAL CARGO |
| NO. 1 PLAT. DECK             | 10           | 60.50        | 57.0         |             | IN HOLDERS    |
| NO. 1 2ND DECK               | 10           | 7            | 53.6         |             | VEHICLES      |
| NO. 1 1ST PLAT.              | 10           | 24.50        | 53.6         |             | "             |
| NO. 2 MAIN DECK              | 14           | 58.00        | 96.0         |             | "             |
| NO. 2 PLAT. DECK             | 14           | 28.75        | 99.7         |             | "             |
| NO. 2 2ND DECK               | 14           | 25.57        | 99.7         |             | "             |
| NO. 2 1ST PLAT.              | 14           | 15.73        | 99.7         |             | "             |
| NO. 3 MAIN DECK              | 284          | 55.77        | 151.4        |             | "             |
| NO. 3 2ND DECK               | 284          | 37.64        | 182.6        |             | "             |
| NO. 3 1ST PLAT.              | 284          | 35.42        | 178.7        |             | "             |
| NO. 3 2ND PLAT.              | 284          | 25.64        | 173.4        |             | "             |
| NO. 3 TANK TOP               | 284          | 7.54         | 179.2        |             | "             |
| NO. 4 MAIN DECK              | 65           | 54.95        | 372.0        |             | "             |
| NO. 4 2ND DECK               | 65           | 37.53        | 354.1        |             | "             |
| NO. 4 1ST PLAT.              | 65           | 24.70        | 351.1        |             | "             |
| NO. 4 2ND PLAT.              | 65           | 14.01        | 365.4        |             | "             |
| STEER DRIVEWAY               | 240          | 44.00        | 452.5        |             | GENERAL CARGO |
| MIDSHIP DRIVEWAY STD.        | 240          |              |              |             |               |
| <b>TOTAL DISPLACEMENT</b>    | <b>14724</b> | <b>29.64</b> | <b>242.7</b> | <b>7617</b> |               |

| DEADWEIGHT                    |       | STABILITY                   |     | TRIM        |  |
|-------------------------------|-------|-----------------------------|-----|-------------|--|
| TOTAL DEADWEIGHT              | 14724 | DRIFT & ENTR. OF FLOT.      | 40  | 22'-9 3/4"  |  |
| CARGO - GENERAL               | 14284 | LONG. ENTR. OF GRAY         | LCG | 242.7       |  |
| CARGO - VEHICLES              | 440   | LONG. ENTR. OF BUDY         | LCB | 240.5       |  |
| BALLAST                       |       | TRANSVERSE CENTER           | TCM | 2.2         |  |
| FUEL OIL                      |       | MOMENT TO TRIM ONE INCH MTI |     | 17.3        |  |
| HEIGHT CENTER GRAVITY         | 34.4  | TOTAL TRIM @ STA. # 220     |     | 19.0        |  |
| CENTERS OF GRAVITY            | 34.4  | LONG. ENTR. OF FLOT         | LCF | 24.3        |  |
| CENTERS OF GRAVITY (STANDARD) | 4.1   | TONS PER INCH               | TP1 | 66.44       |  |
| FREE SURFACE CORRECT.         | 1.52  |                             |     |             |  |
| METACENTRIC HEIGHT (CORRECT)  | 4.25  | SMALL DEPTHS & MARKS        |     |             |  |
|                               |       | FORWARD                     |     | 21'-11 1/2" |  |
|                               |       | AFT                         |     | 22'-8 3/8"  |  |
|                               |       |                             |     | 23'-5 7/8"  |  |



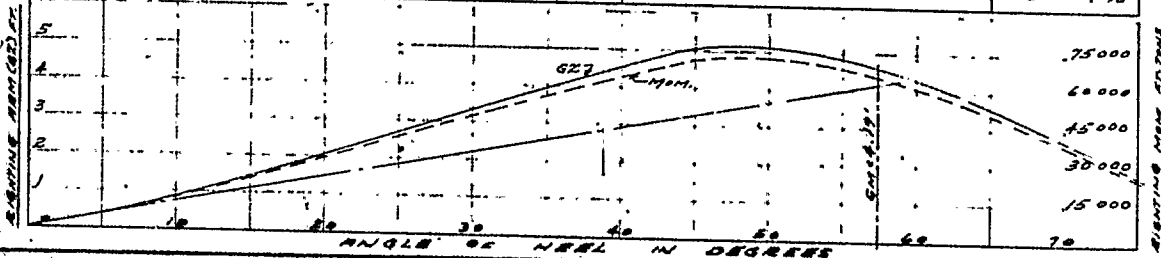


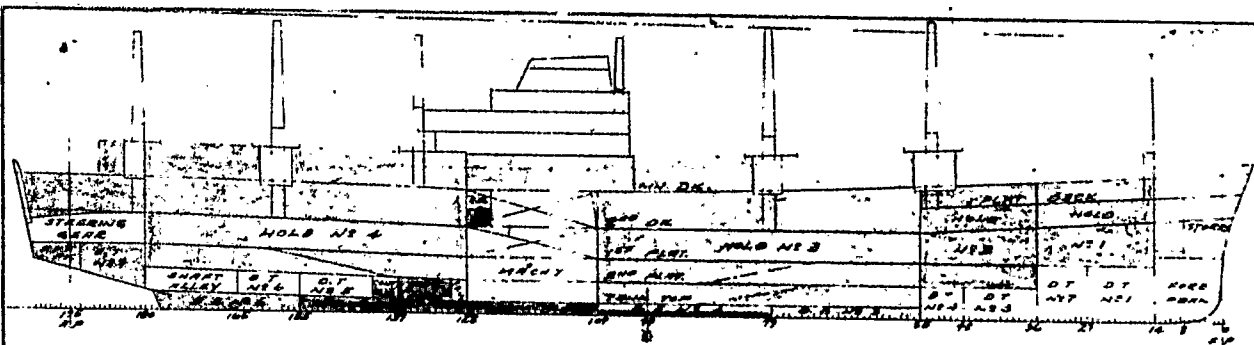


**CONDITION NO. 1 DEPARTURE - COMMERCIAL VEHICLES & GEN'L CARGO**  
(FUEL FOR 7500 MI. TRIP & RETURN)

| ITEM                                 | L. TONS      | VCG          | LCG          | FS EFF      | REMARKS             |
|--------------------------------------|--------------|--------------|--------------|-------------|---------------------|
| LIGHT SHIP                           | 8175         | 35.86        | 253.2        |             |                     |
| CREW & EFFECTS                       |              | 68.20        | 272.6        |             |                     |
| STOKES, PROVISIONS & LUBE OIL        | 60           | 47.90        | 222.2        |             |                     |
| <b>TANKS:</b>                        |              |              |              |             |                     |
| FOREPEAK TANK                        |              |              |              |             |                     |
| DEEP TANK NO. 1                      |              |              |              |             |                     |
| " NO. 2                              |              |              |              |             |                     |
| " NO. 3                              |              |              |              |             |                     |
| " NO. 4                              |              |              |              |             |                     |
| F.O. SETTLING TANKS (140134)         | 2.65         | 7.20         | 114.0        | 60.2        |                     |
| F.O. CONTAMINATED FUEL OIL (134-187) | 55           | 7.30         | 314.3        | 28.7        |                     |
| DEEP TANK NO. 5                      | 2.5          | 7.40         | 37.4         | 2.8         |                     |
| " NO. 6                              | 1.40         | 19.25        | 57.5         | 2.4         |                     |
| " TANKS NO. 7                        | 1.03         | 19.85        | 83.5         | 1.87        |                     |
| AFT PEAK TANK                        | 2.45         | 20.67        | 146.2        |             |                     |
| DOUBLE BOTTOMS NO. 3 INBD            | 4.1          | 22.42        | 467.2        |             | BALLAST             |
| " NO. 3 OUTBD                        |              |              |              |             |                     |
| " NO. 4 INBD                         |              |              |              |             |                     |
| " NO. 4 OUTBD                        |              |              |              |             |                     |
| " NO. 4A INBD                        |              |              |              |             |                     |
| " NO. 4A OUTBD                       |              |              |              |             |                     |
| " MACHY INBD                         | 1726         | 2.77         | 247.6        | 5667        |                     |
| " MACHY OUTBD                        |              |              |              |             |                     |
| BOTTOM NO. 5A CUYD                   |              |              |              |             |                     |
| BOTTOMS NO. 5A OUTBD                 |              |              |              |             |                     |
| " NO. 5A                             |              |              |              |             |                     |
| BOTTOM NO. 5A CUYD                   |              |              |              |             |                     |
| BOTTOM NO. 5A OUTBD                  |              |              |              |             |                     |
| BOTTOM NO. 5A                        |              |              |              |             |                     |
| RESERVE FUEL TANKS INBD              | 4.4          | 40.44        | 301.8        | 192         |                     |
| POTABLE WATER TANKS INBD             | 3.1          | 42.80        | 391.8        | 192         |                     |
| <b>CARGO SPACES:</b>                 |              |              |              |             |                     |
| NO. 1 MAIN DECK                      |              |              |              |             |                     |
| 1ST DECK                             | 32           | 63.30        | 59.3         |             | 2 LOADED TRAILERS   |
| 2ND DECK                             |              |              |              |             |                     |
| 1ST DECK                             | 548          | 47.25        | 42.7         |             | GEN'L CARGO INWD/FT |
| NO. 2 MAIN DECK                      |              |              |              |             |                     |
| 1ST DECK                             | 44           | 42.27        | 85.0         |             | 4 LOADED TRAILERS   |
| 2ND DECK                             |              |              |              |             |                     |
| 1ST DECK                             | 787          | 35.18        | 99.3         |             | GEN'L CARGO INWD/FT |
| 2ND DECK                             |              |              |              |             |                     |
| NO. 3 MAIN DECK                      |              |              |              |             |                     |
| 1ST DECK                             | 128          | 58.81        | 180.0        |             | 8 LOADED TRAILERS   |
| 2ND DECK                             | 125          | 37.50        | 180.4        |             |                     |
| 1ST DECK                             | 143          | 25.25        | 187.4        |             | CARS & TRUCKS       |
| 2ND DECK                             | 158          | 14.25        | 170.3        |             | AVE. 200#/VEHICLE   |
| TANK TOP                             | 128          | 7.83         | 132.6        |             | 5 4.2 x 7 VEHICLES  |
| NO. 4 MAIN DECK                      |              |              |              |             |                     |
| 1ST DECK                             | 160          | 57.83        | 394.0        |             | 10 LOADED TRAILERS  |
| 2ND DECK                             | 127          | 38.80        | 368.5        |             |                     |
| 1ST DECK                             | 128          | 22.18        | 365.3        |             | CARS & TRUCKS       |
| 2ND DECK                             | 143          | 14.18        | 260.1        |             | AVE. 200#/VEHICLE   |
| STERN DRIVEWAY                       | 17           | 41.15        | 459.5        |             | 5 4.2 x 7 VEHICLES  |
| MIDSHIP DRIVEWAY                     | 23           | 48.50        | 471.5        |             | "                   |
| <b>TOTAL DISPLACEMENT</b>            | <b>12225</b> | <b>27.88</b> | <b>240.9</b> | <b>7677</b> |                     |

| DEADWEIGHT                       |       | STABILITY                   |     | TRIM       |  |
|----------------------------------|-------|-----------------------------|-----|------------|--|
| TOTAL DEADWEIGHT                 | 12225 | DRAFT @ CNTR OF FLOT        | N   | 22'-1 1/2" |  |
| CARGO - GENERAL                  | 12225 | LONG. CNTR. OF GRAV         | LCG | 240.9      |  |
| CARGO - VEHICLES                 | 12225 | LONG. CNTR. OF BODY         | LCB | 237.9      |  |
| BALLAST                          | 12225 | TRIMMING LEVER              |     | 11.0       |  |
| FUEL OIL                         | 12225 | ADJUST TO TRIM ONE INCH MTI |     | 14.2       |  |
| METACENTER TRV. @ L              | 12225 | TOTAL TRIM @ STA 0 @ 20     |     | 8.5        |  |
| CNTR. OF GRAVITY TRV. @ L        | 12225 | LONG. CNTR. OF FLOT         | LCF | 23.5       |  |
| METACENTRIC HEIGHT (VIRTUAL) @ L | 12225 | TRV. @ 20                   | TRV | 65.7       |  |
| FREE SURFACE CORRECTN            | 12225 |                             |     |            |  |
| METACENTRIC HEIGHT (CORRECT) @ L | 12225 |                             |     |            |  |
|                                  |       | <b>HEEL DRAFTS @ MARKS:</b> |     |            |  |
|                                  |       | FORWARD                     |     | 21'-8 3/4" |  |
|                                  |       | AFT                         |     | 22'-9 3/4" |  |
|                                  |       |                             |     | 22'-4 3/8" |  |

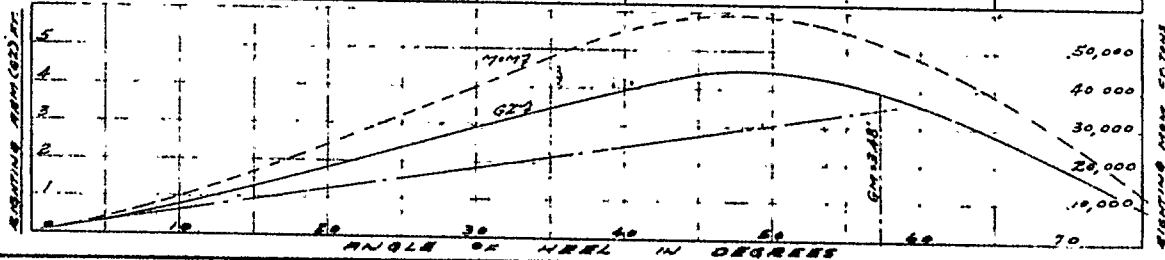


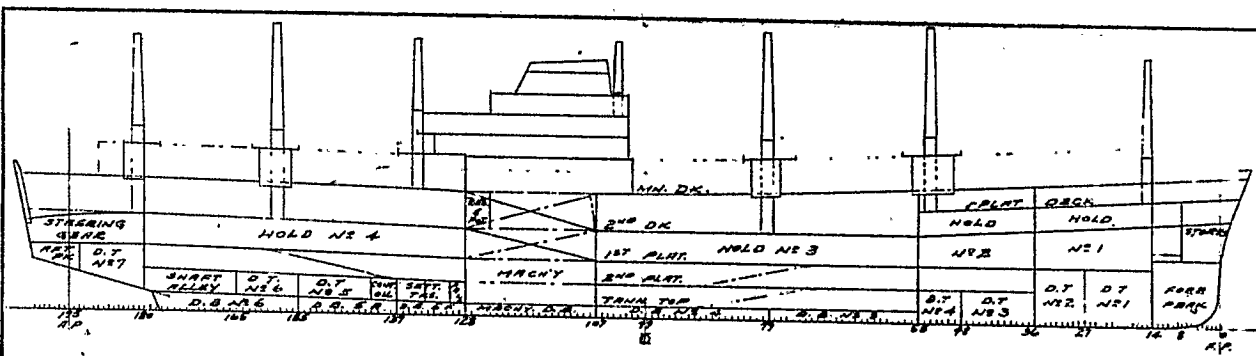


**CONDITION NO XI ARRIVAL - COMMERCIAL VEHICLES & GEN'L CARGO**  
(FUEL FOR 7500 MILE RETURN)

| ITEM                                 | L TONS       | VCB          | LCB          | FS. EFF     | REMARKS  |
|--------------------------------------|--------------|--------------|--------------|-------------|----------|
| ALIGHT SHIP                          | 3175         | 35.06        | 255.2        |             |          |
| CREW & EFFECTS                       | 66           | 6.82         | 277.5        |             |          |
| STOKES, PROVISIONS & LUBE OIL        | 660          | 47.00        | 228.8        |             |          |
| <b>TANKS:</b>                        |              |              |              |             |          |
| FORBANK TANK                         |              |              |              |             |          |
| DEEP TANK NO 1                       |              |              |              |             |          |
| NO 2                                 |              |              |              |             |          |
| NO 3                                 |              |              |              |             |          |
| NO 4                                 |              |              |              |             |          |
| E.O. SATTLING TANKS (280134)         | 55           | 7.30         | 316.3        | 233         | FUEL OIL |
| P.O. CONTAMINATED FUEL OIL (134-187) | 55           | 7.65         | 327.1        | 233         | "        |
| DEEP TANK NO 5                       | 25           | 7.40         | 337.5        | 248         | "        |
| NO 6                                 |              |              |              |             |          |
| TANKS NO 7                           | 255          | 20.57        | 142.2        |             | BALLAST  |
| APT. DECK TANK                       | 51           | 22.47        | 142.2        |             | "        |
| DOUBLE BOTTOMS NO 3 INBD.            | 234          | 2.10         | 152.3        |             | "        |
| NO 3 OUTBD.                          | 178          | 2.80         | 152.9        |             | "        |
| NO 4 INBD.                           |              |              |              |             |          |
| NO 4A OUTBD.                         | 149          | 2.74         | 200.5        | 231         | FUEL OIL |
| NO 4B OUTBD.                         | 141          | 2.70         | 224.6        | 340         | "        |
| MACHY INBD.                          | 173          | 2.43         | 277.1        | 335         | "        |
| BOTTOM NO 5A OUTBD.                  | 185          | 2.41         | 274.7        | 1874        | "        |
| BOTTOMS NO 5A OUTBD.                 | 105          | 2.58         | 318.8        | 250         | "        |
| NO 5B                                | 44           | 3.56         | 318.1        | 116         | "        |
| BOTTOM NO 5B OUTBD.                  | 170          | 2.87         | 350.6        | 560         | "        |
| RESERVE FUEL TANKS OUTBD.            | 30           | 4.08         | 372.4        |             | BALLAST  |
| ROTABLE WATER TANKS INBD.            | 15           | 37.28        | 301.8        | 102         | "        |
|                                      |              | 2.42         | 201.8        |             |          |
| <b>CARGO SPACES:</b>                 |              |              |              |             |          |
| NO 1 MAIN DECK                       | 32           |              |              |             |          |
| APT. DECK                            | 32           | 43.30        | 59.3         |             |          |
| 2ND DECK                             |              |              |              |             |          |
| 3RD DECK                             | 58           | 41.95        | 52.7         |             |          |
| NO 2 MAIN DECK                       | 64           | 42.27        | 85.0         |             |          |
| APT. DECK                            |              |              |              |             |          |
| 2ND DECK                             | 247          | 35.18        | 77.3         |             |          |
| NO 3 MAIN DECK                       | 128          | 58.81        | 180.0        |             |          |
| 2ND DECK                             | 125          | 37.50        | 188.4        |             |          |
| APT. DECK                            | 125          | 45.25        | 107.4        |             |          |
| 2ND DECK                             | 158          | 16.25        | 190.3        |             |          |
| TANK TCE                             | 153          | 17.83        | 192.6        |             |          |
| NO 4 MAIN DECK                       | 144          | 57.83        | 394.0        |             |          |
| 2ND DECK                             | 127          | 38.80        | 348.5        |             |          |
| APT. DECK                            | 172          | 27.12        | 365.2        |             |          |
| 2ND DECK                             | 123          | 16.12        | 360.4        |             |          |
| STERN DRIVEWAY &                     | 12           | 41.15        | 459.5        |             |          |
| MIDSHIP DRIVEWAY STD.                | 23           | 57.80        | 271.5        |             |          |
| <b>TOTAL DISPLACEMENT</b>            | <b>13439</b> | <b>31.07</b> | <b>241.1</b> | <b>5210</b> |          |

| DEADWEIGHT                      |       | STABILITY                      |     | TRIM       |  |
|---------------------------------|-------|--------------------------------|-----|------------|--|
| TOTAL DEADWEIGHT                | 5264  | DEPT & CNTR OF FLOT            | 4   | 21'-1 1/2" |  |
| CARGO - GENERAL                 | 1154  | LONGS CNTR OF GRAV             | LCG | 241.1      |  |
| CARGO - VEHICLES                | 1450  | LONGS CNTR OF BUDY             | LCB | 232.0      |  |
| BALLAST                         | 219   | TRIMMING LEVER                 |     | 2.1        |  |
| CURAL OIL                       | 1450  | MOMENT TO TRIM ONE INCH MTI    |     | 143.6      |  |
| METACENTER, NAT. & L. CM        | 34.20 | TOTAL TRIM @ STR 0 & 20        |     | 17.13      |  |
| CNTR OF GRAVITY NAT. & L. CG    | 31.97 | LONGS CNTR. OF FLOT            | LCF | 22.13      |  |
| METACENTRIC HEIGHT (NATURAL) GM | 3.23  | TONS PER INCH                  | TR  | 65.19      |  |
| DECK SURFACE DEPTH              | 1.39  | <b>HEEL DEPTHS &amp; MARKS</b> |     |            |  |
| METACENTRIC HEIGHT (CORRECT) GM | 3.48  | FORWARD                        |     | 20'-4 1/4" |  |
|                                 |       | AFT                            |     | 21'-0 1/2" |  |
|                                 |       |                                |     | 21'-9"     |  |





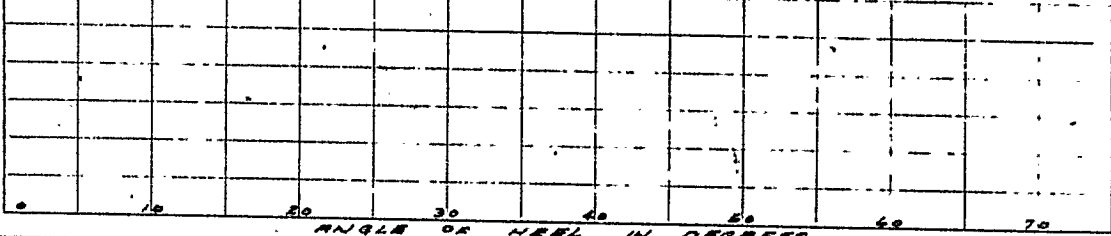
**CONDITION NO.**

| ITEM                               | L. TONS | VCG | LCG | A.S. EFF. | REMARKS |
|------------------------------------|---------|-----|-----|-----------|---------|
| <b>LIGHT SHIP</b>                  |         |     |     |           |         |
| CREW & EFFECTS                     |         |     |     |           |         |
| STORES, PROVISIONS & LUBE OIL      |         |     |     |           |         |
| <b>TANKS:</b>                      |         |     |     |           |         |
| FOREPEAK TANK                      |         |     |     |           |         |
| DEEP TANK NO. 1                    |         |     |     |           |         |
| "          NO. 2                   |         |     |     |           |         |
| "          NO. 3                   |         |     |     |           |         |
| "          NO. 4                   |         |     |     |           |         |
| F.O. SETTLING TANKS (180-184)      |         |     |     |           |         |
| F.O.          "          (185-187) |         |     |     |           |         |
| CONTAMINATED FUEL OIL              |         |     |     |           |         |
| DEEP TANK NO. 5                    |         |     |     |           |         |
| "          NO. 6                   |         |     |     |           |         |
| "          NO. 7                   |         |     |     |           |         |
| ART. DECK TANK                     |         |     |     |           |         |
| DOUBLE BOTTOMS NO. 3               |         |     |     |           |         |
| "          NO. 3                   |         |     |     |           | INBD.   |
| "          NO. 3                   |         |     |     |           | OUTBD.  |
| "          NO. 4                   |         |     |     |           | INBD.   |
| "          NO. 4                   |         |     |     |           | OUTBD.  |
| "          NO. 5                   |         |     |     |           | OUTBD.  |
| "          NO. 5                   |         |     |     |           | INBD.   |
| "          MACHY                   |         |     |     |           | OUTBD.  |
| "          BOTTOM NO. 5A           |         |     |     |           | CNTR.   |
| "          BOTTOMS NO. 5A          |         |     |     |           | OUTBD.  |
| "          "          NO. 5A       |         |     |     |           |         |
| "          BOTTOM NO. 6            |         |     |     |           | CNTR.   |
| RESERVE FEED TANKS                 |         |     |     |           | OUTBD.  |
| POTABLE WATER TANKS                |         |     |     |           | INBD.   |
| <b>CARGO SPACES:</b>               |         |     |     |           |         |
| NO. 1. MAIN DECK                   |         |     |     |           |         |
| PLAT. DECK                         |         |     |     |           |         |
| 2ND DECK                           |         |     |     |           |         |
| 1ST PLAT.                          |         |     |     |           |         |
| 2ND PLAT.                          |         |     |     |           |         |
| NO. 2. MAIN DECK                   |         |     |     |           |         |
| PLAT. DECK                         |         |     |     |           |         |
| 2ND DECK                           |         |     |     |           |         |
| 1ST PLAT.                          |         |     |     |           |         |
| 2ND PLAT.                          |         |     |     |           |         |
| NO. 3. MAIN DECK                   |         |     |     |           |         |
| 2ND DECK                           |         |     |     |           |         |
| 1ST PLAT.                          |         |     |     |           |         |
| 2ND PLAT.                          |         |     |     |           |         |
| TANK TOP                           |         |     |     |           |         |
| NO. 4. MAIN DECK                   |         |     |     |           |         |
| 2ND DECK                           |         |     |     |           |         |
| 1ST PLAT.                          |         |     |     |           |         |
| 2ND PLAT.                          |         |     |     |           |         |
| STERN DRIVEWAY &                   |         |     |     |           |         |
| MIDSHIP DRIVEWAY STBD.             |         |     |     |           |         |
| TOTAL DISPLACEMENT                 |         |     |     |           |         |

| DEADWEIGHT                          |    | STABILITY |  | TRIM |  |
|-------------------------------------|----|-----------|--|------|--|
| TOTAL DEADWEIGHT                    |    |           |  |      |  |
| CARGO - GENERAL                     |    |           |  |      |  |
| CARGO - VEHICLES                    |    |           |  |      |  |
| BALLAST                             |    |           |  |      |  |
| FUEL OIL                            |    |           |  |      |  |
| METACENTER, ADV. B.L.               | KM |           |  |      |  |
| CNTR. OF GRAVITY, ADV. B.L.         | M  |           |  |      |  |
| METACENTRIC HEIGHT (VIRTUAL) B.M.   |    |           |  |      |  |
| HEEL SURFACE CORRN.                 |    |           |  |      |  |
| METACENTRIC HEIGHT (CORRECTED) B.M. |    |           |  |      |  |
|                                     |    |           |  |      |  |
|                                     |    |           |  |      |  |
|                                     |    |           |  |      |  |

EXISTING PERM. ST. MARKS

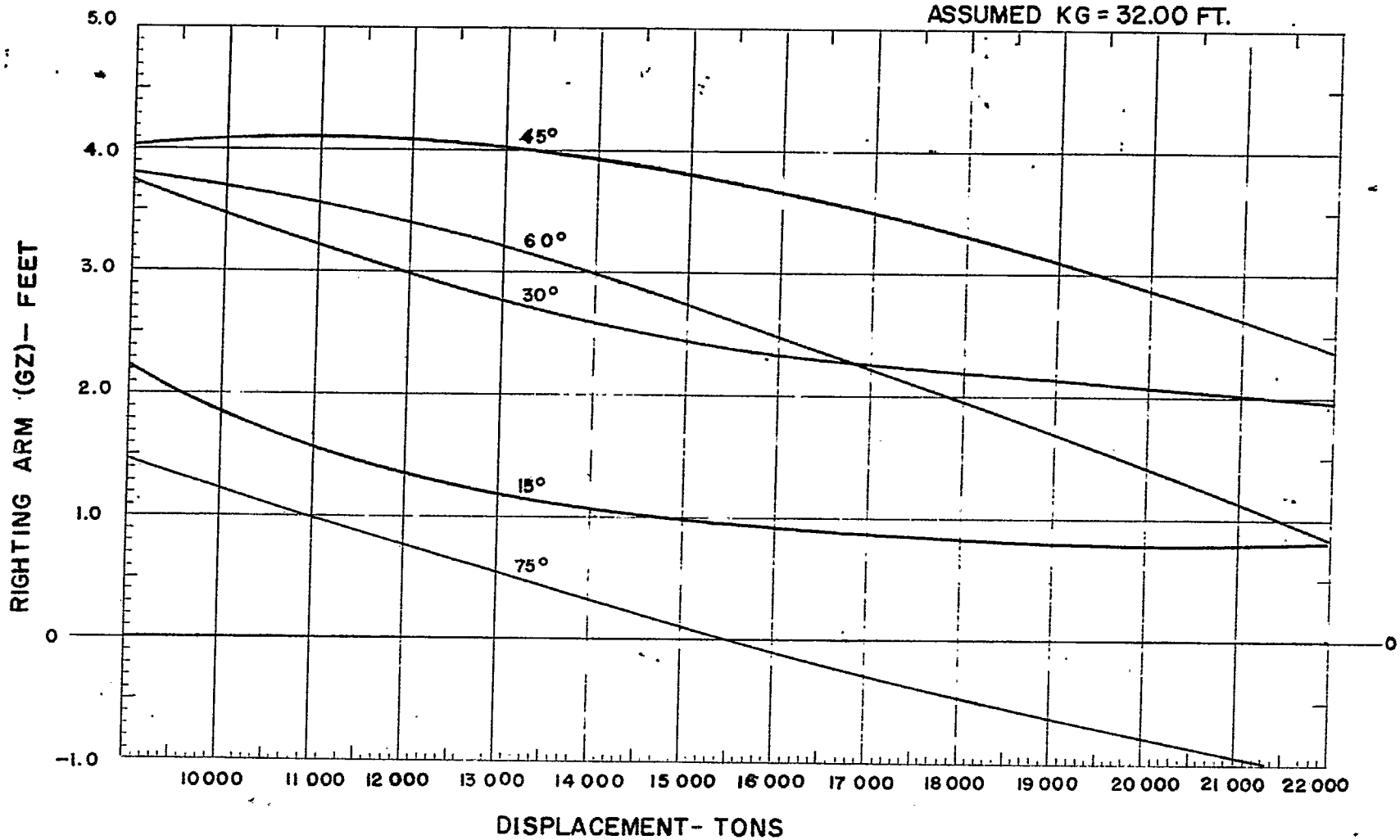
EXISTING PERM. ST. MARKS



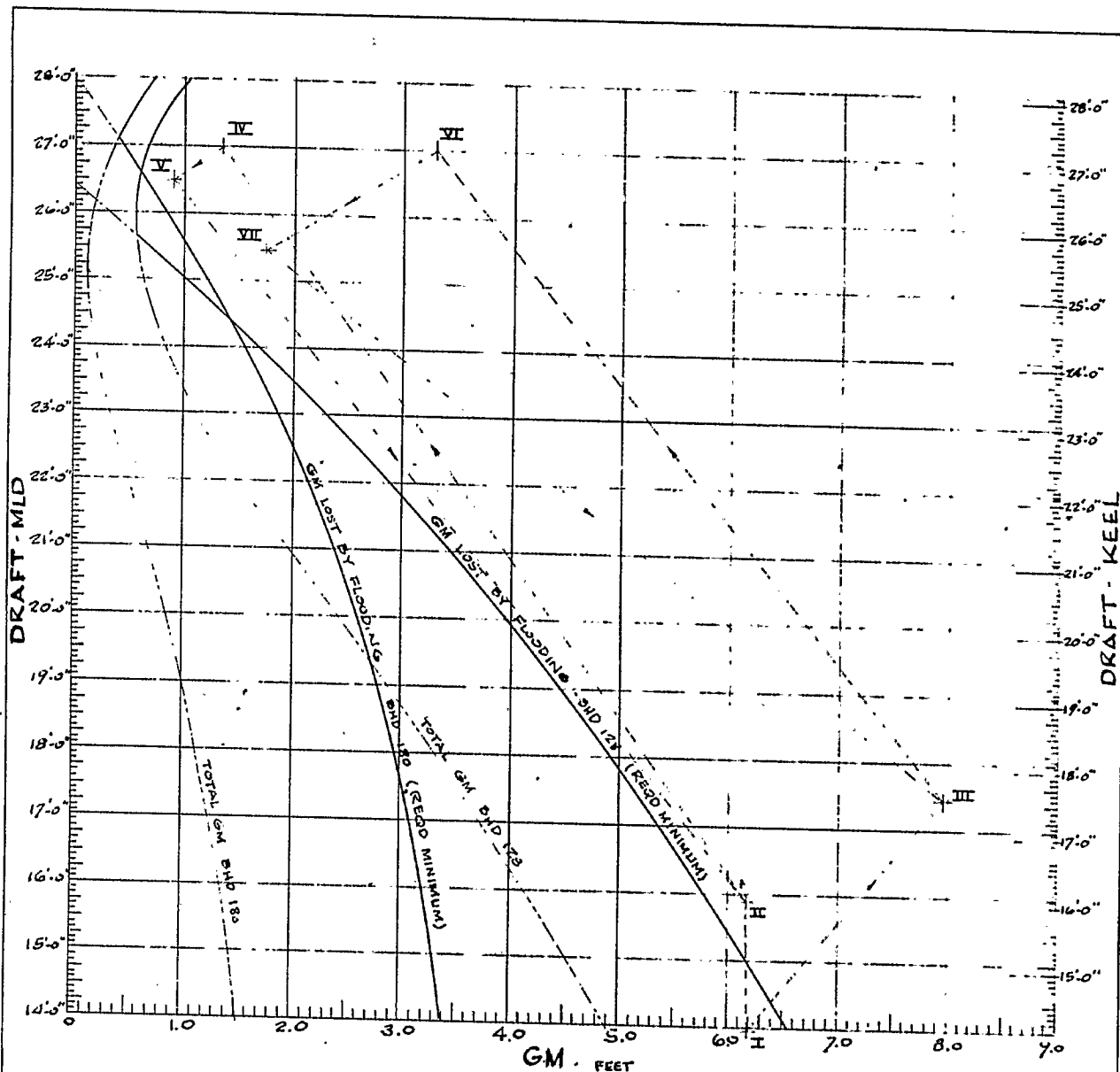
# CROSS CURVES OF STABILITY

NOTE: NO ALLOWANCE GIVEN FOR  
SUPERSTRUCTURES OR FREE SURFACE

ASSUMED KG = 32.00 FT.



601-700E-0B2



THE ROMAN NUMERALS CORRESPOND TO THE LOADING CONDITIONS GIVEN IN DETAIL ON THE PRECEDING PAGES.

THE LIMIT FOR IMMERSION IS THE MODIFIED MARGIN LINE, I.E., 3" BELOW THE MAIN DECK AT SIDE FROM STEM TO BHD 128. ALL MAIN DECK OPENINGS FROM BHD 128 TO STERN ARE ASSUMED WATER-TIGHT, HENCE STERN SUBMERGENCE TO MARGIN LINE AT BHD 128 IS ALLOWED (PER MARAD LETTER QM 229/810 MAR 18, 1957)

HEELING AFTER DAMAGE IS LIMITED TO 15° OR IMMERSION OF THE MARGIN LINE WHICHEVER OCCURS FIRST.

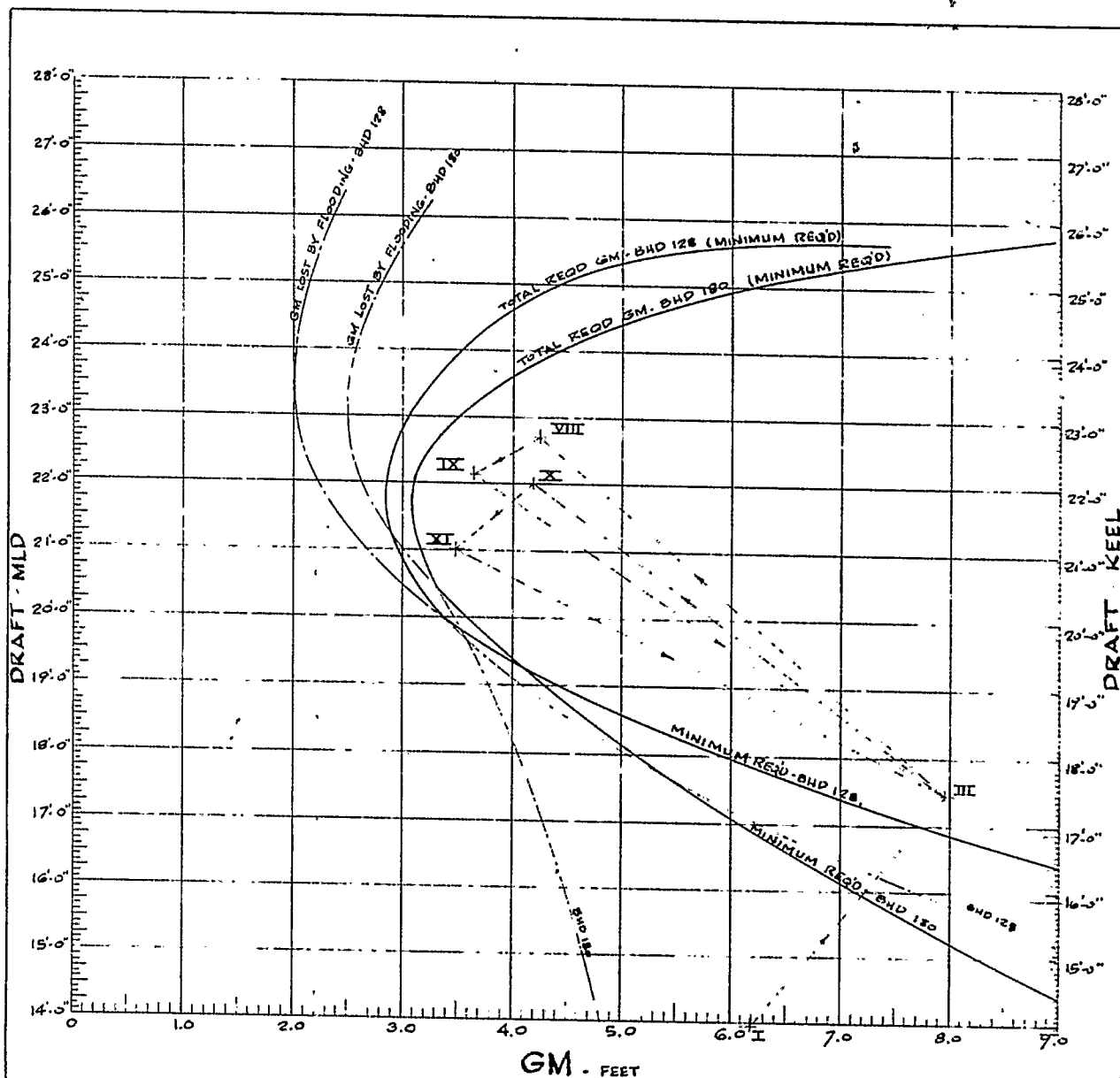
THE CONTINUOUS CURVES GIVE THE MINIMUM REQUIRED INTACT GM, EITHER TO LIMIT HEEL DUE TO UNSYMMETRICAL BUOYANCY OR TO MAINTAIN POSITIVE GM AFTER DAMAGE. THE DIFFERENCE BETWEEN THE TOTAL GM AND THE GM LOST DUE TO FLOODING IS THE RESIDUAL GM REQUIRED TO LIMIT HEEL.

ALL CALCULATIONS ARE BASED ON DISPLACEMENTS AT EVEN KEEL BEFORE DAMAGE. ACTUAL TRIM LINES AND SHIP'S CHARACTERISTICS ARE USED FOR DAMAGED & HEELED CONDITIONS; NO EMPIRICAL FORMULATIONS OR CONSTANTS ARE EMPLOYED. EXTENT OF DAMAGE IS GENERALLY THAT WHICH IS REASONABLE OR GOVERNED BY CONVENTION. 63% PERMEABILITY IS ASSUMED IN ALL GENERAL CARGO SPACES.

DAMAGE AT EITHER BHD 55 OR BHD 107 IS LESS SEVERE THAN THE GIVEN BHD 128 & BHD 180 CURVES.

## DAMAGED STABILITY

GENERAL CARGO - TWO COMPARTMENT SUBDIVISION



THE ROMAN NUMERALS CORRESPOND TO THE LOADING CONDITIONS GIVEN IN DETAIL ON THE PRECEDING PAGES.

THE LIMIT FOR IMMERSION IS THE MODIFIED MARGIN LINE, I.E., 3" BELOW THE MAIN DECK AT SIDE FROM STEM TO BHD 128. ALL MAIN DECK OPENINGS FROM BHD 128 TO STERN ARE ASSUMED WATERTIGHT, HENCE STERN SUBMERGENCE TO MARGIN LINE AT BHD 128 IS ALLOWED (PER MARAD LETTER QM 229/810 MAR 18, 1957).

HEELING AFTER DAMAGE IS LIMITED TO 15° OR IMMERSION OF THE MARGIN LINE WHICH EVER OCCURS FIRST.

THE CONTINUOUS CURVES GIVE THE MINIMUM REQUIRED INTACT GM, EITHER TO LIMIT HEEL DUE TO UNSYMMETRICAL BUOYANCY OR TO MAINTAIN POSITIVE GM AFTER DAMAGE. THE DIFFERENCE BETWEEN THE TOTAL REQUIRED GM AND THE GM LOST DUE TO FLOODING IS THE RESIDUAL GM REQUIRED TO LIMIT HEEL.

ALL CALCULATIONS ARE BASED ON DISPLACEMENTS AT EVEN KEEL BEFORE DAMAGE. ACTUAL TRIM LINES AND SHIP'S CHARACTERISTICS ARE USED FOR DAMAGED & HEELED CONDITIONS, NO EMPIRICAL FORMULATIONS OR CONSTANTS ARE EMPLOYED. EXTENT OF DAMAGE IS GENERALLY THAT WHICH IS REASONABLE OR GOVERNED BY CONVENTION. 75% PERMEABILITY IS ASSUMED IN ALL VEHICLE SPACES.

DAMAGE AT EITHER BHD 55 OR BHD 107 IS LESS SEVERE THAN THE GIVEN BHD 128 AND BHD 180 CURVES.

## DAMAGED STABILITY

### VEHICLE LOAD - TWO COMPARTMENT SUBDIVISION