# STABILITETSBOK

**FÖR**

# GÖTA CARRIER

## 2024-05-03

Utförd av Light Craft Design Group AB
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# INNEHÅLLSFÖRTECKNING

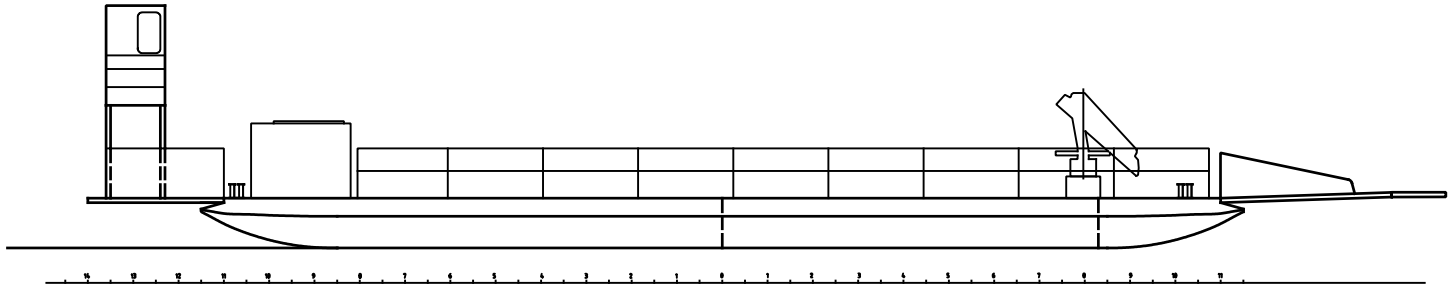
## HUVUDDATA

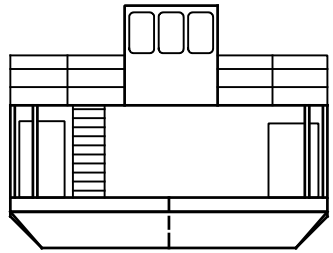
| | |
|---|---|
| Fartygets namn: | GÖTA CARRIER |
| Byggnadsvarv: | Hjälmare Kanal & Slussverk AB, Arboga |
| Byggnadsnummer: | 512 |
| Byggår: | 1962 |
| Igenkänningssignal: | SMCG |
| Hemmahamn: | Stockholm |
| Ägare: | GH SjötransporterAB. Ljusterö |
| Brutto: | 42 |

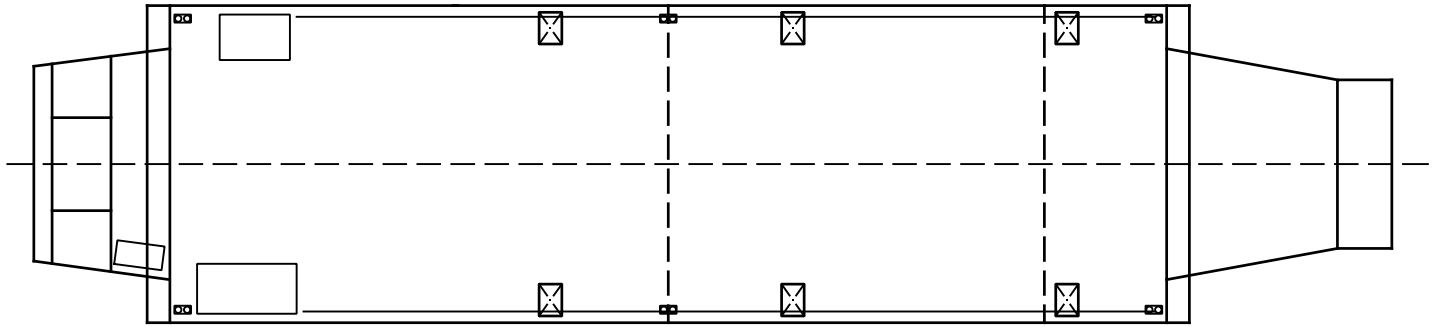
Huvuddimensioner

| | |
|---|---|
| Längd över allt: | 26 m |
| Längd mellan PP: | 22 m |
| Bredd över allt: | 7.0 m |
| Djup mallat: | 1.1m |

| Rev | Revision comprises | Date | Sign |
|---|---|---|---|







HUVUDDIMENSIONER:

| | |
|---|---|
| LÄNGD | 26m |
| LÄNGD INKL.KLAFF | 30m |
| BREDD | 7m |
| DJUP i C.L. | 1,1m |



| | | | | | |
|---|---|---|---|---|---|
| Dimensions are in millimeters<br>Surface finish ~ elesewhere | Debur and break sharp edges | Tolerances linear : –<br>(elsewhere) angular : – | mm<br>deg. | A3 | Tot weight kg<br>XX Kg |
| Designed by<br>YL | Approved by – date<br>– | Filename<br>Göta Carrier GA | Date<br>2041-04-29 | E | Scale<br>– |

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**GÖTA CARRIER**
**Generalarrangemang**
Light Craft Design Group AB

| Revision | Sheet |
|---|---|
| 0 | 1/1 |

## Sammanfattning av lastfall GÖTA CARRIER

| Lastfall | Benämning | Deplacement | Djupgående origo (samma som L/2) | Trim | Djupg. FP | Djupg. AP | GM | KG | KGmax | Fribord L/2 | Boghöjd |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Lätt fartyg | 63,710 | 0,513 | 0,101 | 0,463 | 0,564 | 7,322 | 1,100 | 4,449 | 0,587 | 0,638 |
| 2 | Besättning och förråd | 65,010 | 0,522 | 0,104 | 0,470 | 0,574 | 7,201 | 1,139 | 4,364 | 0,578 | 0,630 |
| 3 | 10 ton TP 19,0 m över däck 2 besättning förråd | 75,010 | 0,590 | 0,082 | 0,549 | 0,631 | 4,181 | 3,667 | 3,759 | 0,510 | 0,551 |
| 4 | 20 ton TP 8,4 m över däck 2 besättning förråd | 85,010 | 0,656 | 0,059 | 0,627 | 0,686 | 4,362 | 3,106 | 3,166 | 0,444 | 0,474 |
| 5 | 30 ton TP 3,9 m över däck 2 besättning förråd | 95,010 | 0,720 | 0,039 | 0,701 | 0,740 | 4,731 | 2,358 | 2,477 | 0,380 | 0,400 |
| 6 | 40 ton TP 1,9 m över däck 2 besättning förråd | 105,010 | 0,783 | 0,022 | 0,772 | 0,794 | 4,712 | 1,848 | 1,882 | 0,317 | 0,328 |
| 7 | 50 ton TP 0,6 m över däck 2 besättning förråd | 115,010 | 0,845 | 0,005 | 0,843 | 0,848 | 4,788 | 1,383 | 1,408 | 0,255 | 0,258 |

Akterligt trim är positivt
Vikt i ton
Längdmått i meter

Djupgående är till baslinjen
Stabilitetskriterier enligt TSFS 2009:114 Bilaga 4 Regel 3 Alternativa stabilitetskriterier punkt 2.2

Enligt bilaga 4 Regel 3 Punkt 4 tillämpas ej väderkriterium.

# HANDLEDNING VID BERÄKNING AV TRIM OCH STABILITET.

## 1. DJUPGÅENDE OCH TRIM

### 1.1 Allmänt

Ett fartygs trim, skillnaden mellan djupgåendet för och akter, uppstår genom att fartygets viktstyngdpunkt i långskeppsled (LCG) inte sammanfaller med deplacementstyngdpunkten (LCB) på jämn köl i långskeppsled för samma deplacement.

### 1.2 Beräkningsgång

Vid beräkning av fartygets trim bestäms först viktstyngdpunktens läge. Aktuella hävarmar och vikter fås ur tabeller över kapacitet och tyngdpunktskoordinater för lätt fartyg, lastutrymmen och bunkertankar. Viktstyngdpunkten från L/2 erhålls genom dels summering av alla ingående delvikter (w) och dels summering av alla delvikters moment kring L/2 (w*x) med avseende på sina tecken. Därvid beaktas att vikter placerade för om L/2 har positiva hävarmar och vikter placerade akter om L/2 har negativa hävarmar.
LCG = sum(w*x)/sum w.

Viktstyngdpunkten över köl (VCG) erhålls genom summering av alla delvikters moment över baslinjen (w*y).
VCG = sum(w*y)/sum w.

Genom interpolation i de hydrostatiska tabellerna erhålls hydrostatiska data för fartyget. Därvid söks ett deplacement som motsvarar totalvikten, och ett trimläge som motsvarar viktstyngdpunktens placering i långskeppsled.

Trimmets uppdelning för och akter är beroende av flytcentrums (LCF) läge med avseende på L/2. LCF´s läge erhålls från de hydrostatiska tabellerna. Vid överslagsberäkningar antas flytcentrum ligga på L/2 och då erhålls:

| | |
|---|---|
| Djupgående akter (da) | da = d + t/2 |
| Djupgående för (df) | df = d - t/2 |

## 2. TVÄRSKEPPSSTABILITET

### 2.1 Allmänt

När fartyget ligger i upprätt läge ligger viktstyngdpunkten (G) och deplacementstyngdpunkten (B) på samma vertikala linje i centerplanet, och momentet av tyngdkraft och flytkraft är således noll. Då fartyget kränger, ligger G och B ej på samma vertikala linje, varför tyngdkraft och flytkraft ger upphov till ett rätande moment. För att fartyget ej skall öka sin slagsida måste rätande momentet vara minst lika stort som det på fartyget verkande krängande momentet.

Vid små krängningsvinklar kallas skärningspunkten mellan lodlinjen genom B och centerlinjen genom G för metacentrum och betecknas M. avståndet gm kallas metacenterhöjd och är ett mått på fartygets initialstabilitet. Vid stora krängningsvinklar går uppdriftslinjen genom B inte längre genom M utan skärningspunkten rör sig utefter fartygets centerlinje. Skärningspunkten kallas virtuellt metacentrum och betecknas M´.

Det horisontella avståndet GZ kallas rätande hävarm. Om M ligger under G (negativ metacenterhöjd) får fartyget en permanent slagsida, i sämsta fall kantrar det.

Observera att slagsida beroende på negativ metacenterhöjd aldrig får korrigeras genom tömning av bottentankar, ty då ökar den negativa metacenterhöjden.

Avståndet KM och KM´ beror av djupgåendet, KG beror av placering av last, bunker, färskvatten, förråd etc.

### 2.2 Beräkningsgång

KG kan beräknas genom momenträkning kring baslinjen K.

KG = VCG = sum(w*y)/sum w (Se avsnitt 1.2 ovan)

Aktuella vikter och tyngdpunktslägen fås ur tabeller över kapacitet, och tyngdpunktskoordinater för lätt fartyg, last och bunkertankar.

Ur hydrostatiska data erhålls tvärskeppsmetacentrums läge över baslinjen KM.

Metacenterhöjden GM = KM - KG

Förekommer fria vätskeytor i tankarna skall GM reduceras.
Reduktion GG´ = (summa moment av fria vätskeytor)/(viktsdeplacement)

Då erhålls G´M = GM - GG´

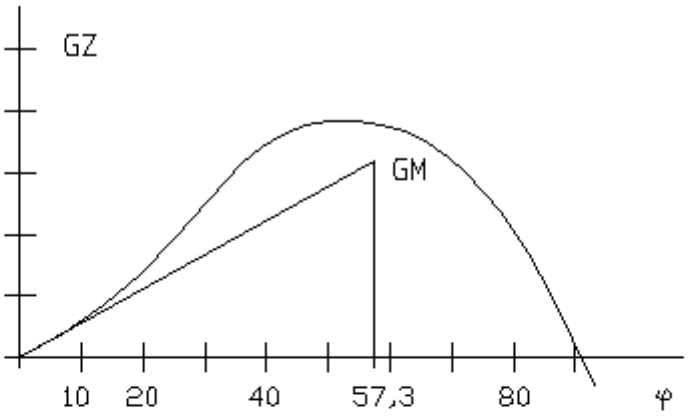
Den rätande hävarmen erhålls sedan som:

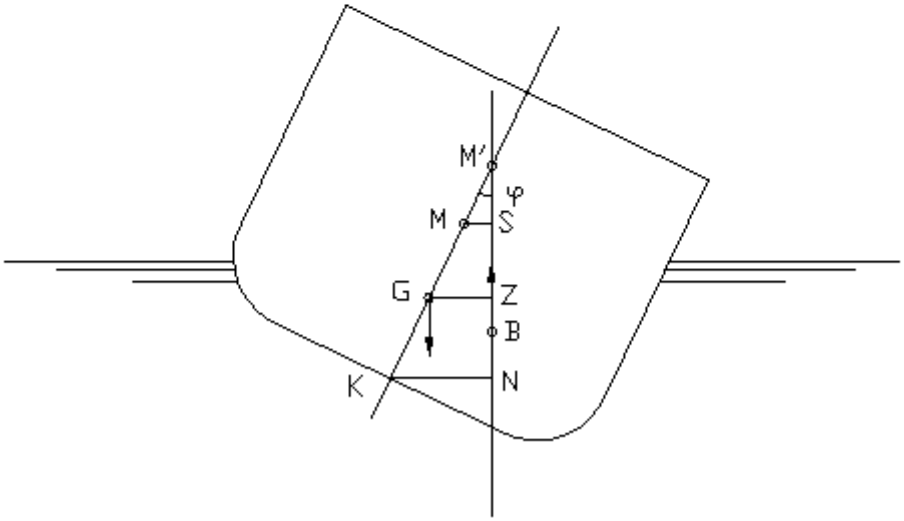
Alt 1.

$$G´Z = MS + G´M * \sin \phi$$

Alt 2.

$$G´Z = KN - KG´ * \sin \phi$$




Ur G´Z - kurvorna erhålls bl.a. den maximala rätande hävarmen, vinkeln vid vilken denna uppträder, samt stabilitetsvidden.

## ALLMÄNNA RÅD.

Att fartyget uppfyller de allmänna stabilitetskriterierna och har godkända stabilitetshandlingar ombord är ingen garanti för att fartyget oberoende av omständigheterna inte kan kappsejsa och sjunka. Inte heller befriar det fartygets befälhavare från någon av hans skyldigheter i samband med lastning och framförande av fartyget. Befälhavaren skall hantera sitt fartyg med gott omdöme och gott sjömanskap med avseende på väderleksutsikter och geografiska förhållanden mm. och vidta lämpliga åtgärder avseende kurs och fart med hänsyn till rådande omständigheter.

Fartyget skall lastas och barlastas på sådant sätt att kraven på stabilitet, bärighet och styrka uppfylls under hela resan. Observera att däckets spantning är förhållandevis svag, därför bör noggranna beräkningar göras innan tyngre laster tas ombord

Innan resan påbörjas skall åtgärder för att förhindra lastförskjutning vidtas. Nödvändig trimning skall utföras och i förekommande fall, skott sättas upp i lastrummen. Nödvändiga lastsurrningar skall utföras.

I stabilitetsboken ingår stabilitetsinformation om ett antal för fartyget typiska lastfall och ytterligare information, som gör det möjligt för fartygets befälhavare att beräkna fartygets stabilitetsegenskaper i alla tänkbara lastkonditioner.

Lastning och lossning skall ske på sådant sätt att fartyget trimmar och kränger så lite som möjligt.

## LÄTT FARTYG.

Fartygets vikt och tyngdpunktsläge har bestämts med hjälp av fribordsmätning utförd 2024-04-19. Lätt fartygs VCG har satts i höjd med huvuddäck.

## KOMMENTARER TILL LASTFALLEN.

Lastfallen är beräknade enligt de svenska reglerna för fartyg, TSFS 2009:114, Bilaga 4 Regel 3, alternativa stabilitetskriterier punkt 2.2. Observera att beräkningarna endast avser stabiliteten, inte däckets styrka och förmåga att bära last.

I lastfallsberäkningarna är följande förkortningar använda:

| | |
|---|---|
| MT | Metric Tonnes |
| LCB | Longitudinal Center of Buoyancy |
| TCB | Transversal Center of Buoyancy |
| VCB | Vertical Center of Buoyancy |
| GML | Longitudinal Metacentric Height |
| GMT | Transversal Metacentric Height |
| LCG | Longitudinal Center of Gravity |
| TCG | Transversal Center of Gravity |
| VCG | Vertical Center of Gravity |
| SpGr | Specific Gravity |
| FSM | Free Surface Moment |
| RefHt | Reference Point Height |
| WPA | Water Plane Area |
| LCF | Longitudinal Center of Flotation |
| TCF | Transversal Center of Flotation |
| BML | Longitudinal Metacenter above Center of Buoyancy |
| BMT | Transversal Metacenter above Center of Buoyancy |
| MT/CM | Metric Tonnes per Centimeter Immersion |

I rubriken till varje lastfall finns angivet djupgåendet till baslinjen vid L/2 (Origin), samt trimmet över en längd av 20,00 meter.

**Definition av baslinje och origo.**
Fartygets skrovform är typisk för en pråm. Botten på pråmen är plan. Baslinjen ligger i skrovets tänkta köllinje, i höjd med undersidan av bottenbordläggningen. Köllinjen är parallell med konstruktionsvattenlinjen. Origo ligger på baslinjen vid L/2. Positiva x-värden räknas förut och negativt akterut. Trim är djupgående vid AP minus djupgående vid FP.

**Placering av åmning.**
Fartygets åmning är okänd. Vid vägningen av fartyget mättes friborden upp till ovansida däcksplåt. Dessa mätningar jämfördes med spanttabellen i geometribeskrivningen, som finns i slutet av denna stabilitetsbok. Spanttabellen är gjord på utsida bordläggning och däck.

Vid noggrannare beräkningar bör fribordet till huvuddäck mätas, och vattenlinjens placering bestämmas med hjälp av geometribeskrivningen i slutet av stabilitetsboken.

**Skrovdefinition.**
Skrovet är definierat på utsida bordläggning. Alla beräkningar är gjorda till utsida bordläggning. I beräkningarna har skrovets volym upp till och med huvuddäck tagits med. Inga kritiska öppningar har angivits, alla öppningar i huvuddäck är vattentätt stängbara. I geometribeskrivningen finns en enkel schematisk bild över skrovets och tankarnas geometri, och ett förminskat generalarrangemang. Position av ”origin” (origo) finns också angivet.

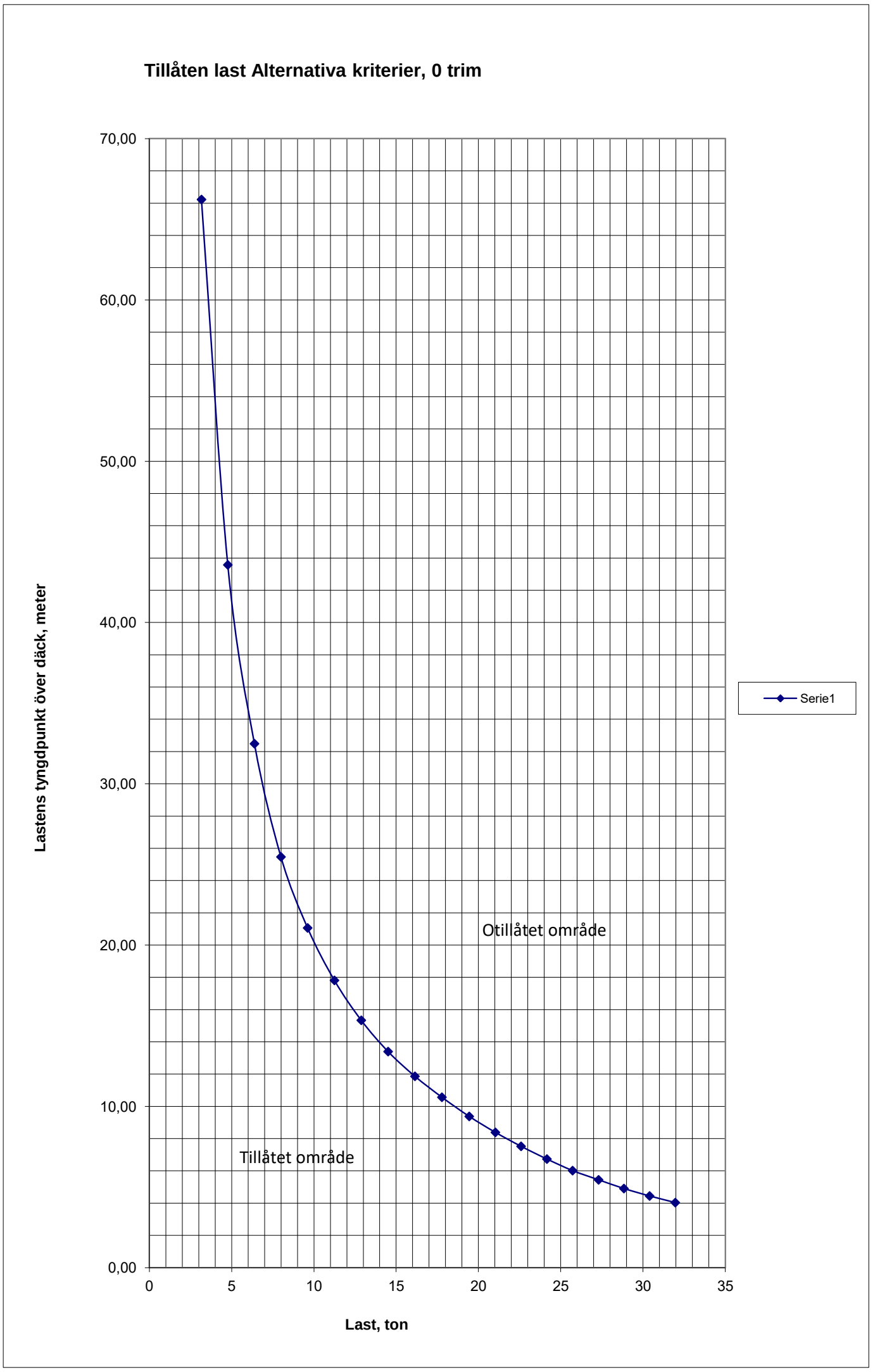
**Programvara**

Alla hydrostatiska beräkningar är utförda med ”General HydroStatics” version 19.00 eller senare. Programmet är utvecklat av Creative Systems Inc. Port Townsend WA USA. www.ghsport.com

# Tillåten last på GÖTA CARRIER, 0 trim

Beräkning av max tp över däck, enligt Transportstyrelsens alternativa stabilitetskriterier.
0 trim
Prånens egenvikt är vägd till 63,71 ton.
Prånens tyngdpunkt är satt till 1,10 meter över köl.

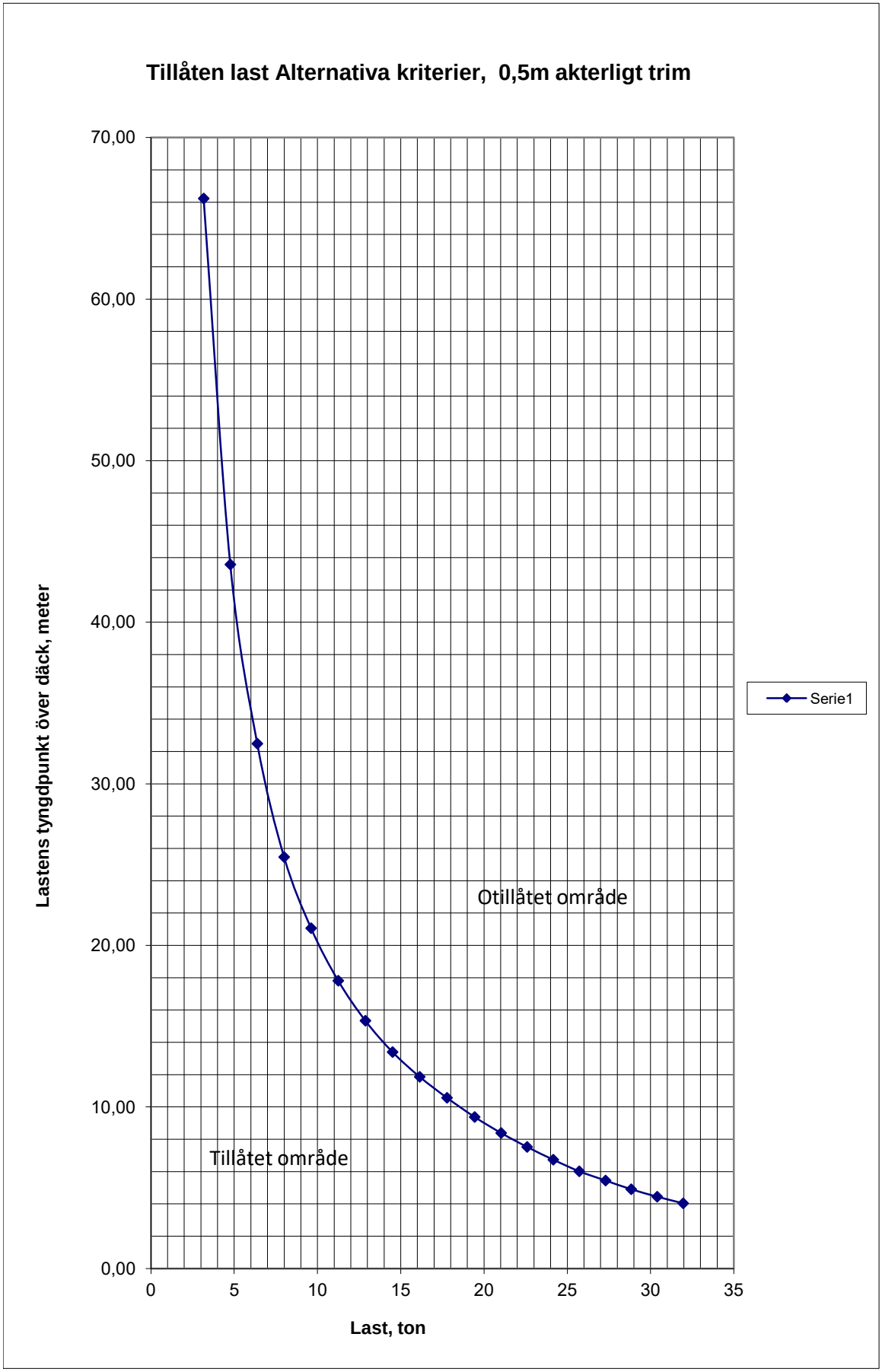
| MaxVCG | Deplacement | Lastens vikt i ton. | Lastens tyngdpunkt över däck, meter. |
|---|---|---|---|
| 4,239 | 66,88 | 3,17 | 66,23 |
| 4,135 | 68,48 | 4,77 | 43,57 |
| 4,061 | 70,10 | 6,39 | 32,48 |
| 3,941 | 71,71 | 8,00 | 25,47 |
| 3,863 | 73,33 | 9,62 | 21,06 |
| 3,773 | 74,96 | 11,25 | 17,81 |
| 3,679 | 76,59 | 12,88 | 15,34 |
| 3,585 | 78,22 | 14,51 | 13,40 |
| 3,498 | 79,85 | 16,14 | 11,86 |
| 3,405 | 81,49 | 17,78 | 10,56 |
| 3,292 | 83,15 | 19,44 | 9,38 |
| 3,181 | 84,74 | 21,03 | 8,39 |
| 3,069 | 86,30 | 22,59 | 7,52 |
| 2,951 | 87,87 | 24,16 | 6,73 |
| 2,830 | 89,43 | 25,72 | 6,02 |
| 2,733 | 91,01 | 27,3 | 5,44 |
| 2,628 | 92,55 | 28,84 | 4,90 |
| 2,535 | 94,11 | 30,4 | 4,44 |
| 2,447 | 95,67 | 31,96 | 4,03 |
| 2,325 | 97,41 | 33,7 | 3,54 |
| 2,230 | 98,97 | 35,26 | 3,17 |
| 2,015 | 102,41 | 38,7 | 2,42 |
| 1,864 | 104,96 | 41,25 | 1,94 |
| 1,696 | 107,68 | 43,97 | 1,46 |
| 1,577 | 110,48 | 46,77 | 1,13 |
| 1,467 | 113,36 | 49,65 | 0,84 |
| 1,344 | 116,26 | 52,55 | 0,54 |


Tillåten last Alternativa kriterier, 0 trim
70,00
60,00
50,00
40,00
30,00
20,00
10,00
0,00
0
5
10
15
20
25
30
35
Lastens tyngdpunkt över däck, meter
Last, ton
Serie1
Otillåtet område
Tillåtet område

# Tillåten last på GÖTA CARRIER, 0,5m akterligt trim

Beräkning av max tp över däck, enligt Transportstyrelsens alternativa stabilitetskriterier.
0,5 m akterligt trim
Prånens egenvikt är vägd till 63,71 ton.
Prånens tyngdpunkt är satt till 1,10 meter över köl.

| MaxVCG | Deplacement | Lastens vikt i ton. | Lastens tyngdpunkt över däck, meter. |
|---|---|---|---|
| 3,787 | 66,88 | 3,17 | 56,69 |
| 3,690 | 68,48 | 4,77 | 37,18 |
| 3,590 | 70,10 | 6,39 | 27,32 |
| 3,491 | 71,71 | 8,00 | 21,43 |
| 3,398 | 73,33 | 9,62 | 17,52 |
| 3,303 | 74,96 | 11,25 | 14,68 |
| 3,206 | 76,59 | 12,88 | 12,52 |
| 3,107 | 78,22 | 14,51 | 10,82 |
| 3,015 | 79,85 | 16,14 | 9,47 |
| 2,913 | 81,49 | 17,78 | 8,31 |
| 2,827 | 83,15 | 19,44 | 7,39 |
| 2,719 | 84,74 | 21,03 | 6,52 |
| 2,645 | 86,30 | 22,59 | 5,90 |
| 2,560 | 87,87 | 24,16 | 5,31 |
| 2,469 | 89,43 | 25,72 | 4,76 |
| 2,387 | 91,01 | 27,3 | 4,29 |
| 2,304 | 92,55 | 28,84 | 3,86 |
| 2,219 | 94,11 | 30,4 | 3,46 |
| 2,133 | 95,67 | 31,96 | 3,09 |
| 2,039 | 97,41 | 33,7 | 2,71 |
| 1,961 | 98,97 | 35,26 | 2,42 |
| 1,765 | 102,41 | 38,7 | 1,76 |
| 1,664 | 104,96 | 41,25 | 1,44 |
| 1,548 | 107,68 | 43,97 | 1,10 |
| 1,419 | 110,48 | 46,77 | 0,75 |
| 1,295 | 113,36 | 49,65 | 0,45 |
| 1,183 | 116,26 | 52,55 | 0,18 |


Tillåten last Alternativa kriterier, 0,5m akterligt trim
Lastens tyngdpunkt över däck, meter
70,00
60,00
50,00
40,00
30,00
20,00
10,00
0,00
0
5
10
15
20
25
30
35
Last, ton
Otillåtet område
Tillåtet område
Serie1

MAXIMUM VCG vs. DISPLACEMENT

Trim = Aft 0.750/22.000 at zero heel (trim righting arm held at zero)

| Displacement | | --- Margins --- | | |
|---|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 | LIM3 |
| 66.88 | 3.233 | 3146% | 0% | 9d |
| 68.48 | 3.142 | 3117% | 0% | 9d |
| 70.10 | 3.048 | 3097% | 0% | 10d |
| 71.71 | 2.964 | 3072% | 0% | 10d |
| 73.33 | 2.873 | 3055% | 0% | 10d |
| 74.96 | 2.783 | 3040% | 0% | 11d |
| 76.59 | 2.732 | 3002% | 1% | 11d |
| 78.22 | 2.619 | 3008% | 0% | 12d |
| 79.85 | 2.530 | 2999% | 0% | 12d |
| 81.49 | 2.445 | 2991% | 0% | 13d |
| 83.15 | 2.359 | 2981% | 0% | 13d |
| 84.74 | 2.288 | 2976% | 0% | 14d |
| 86.30 | 2.212 | 2978% | 0% | 14d |
| 87.87 | 2.137 | 2979% | 0% | 15d |
| 89.43 | 2.067 | 2979% | 2% | 16d |
| 91.01 | 2.002 | 2977% | 0% | 16d |
| 92.55 | 1.899 | 2998% | 0% | 18d |
| 94.11 | 1.820 | 3006% | 2% | 19d |
| 95.67 | 1.772 | 2995% | 0% | 19d |
| 97.41 | 1.696 | 2970% | 0% | 20d |
| 98.97 | 1.626 | 2995% | 0% | 21d |
| 102.41 | 1.486 | 2833% | 0% | 23d |
| 104.96 | 1.387 | 2758% | 0% | 25d |
| 107.68 | 1.287 | 2675% | 0% | 27d |
| 110.48 | 1.186 | 2591% | 0% | 30d |
| 113.36 | 1.089 | 2506% | 0% | 33d |
| 116.26 | 1.000 | 2413% | 0% | 36d |

Trim = Aft 0.500/22.000 at zero heel (trim righting arm held at zero)

| Displacement | | --- Margins --- | | |
|---|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 | LIM3 |
| 66.88 | 3.787 | 2947% | 0% | 7d |
| 68.48 | 3.690 | 2943% | 0% | 7d |
| 70.10 | 3.590 | 2910% | 0% | 8d |
| 71.71 | 3.491 | 2915% | 0% | 8d |
| 73.33 | 3.398 | 2914% | 0% | 8d |
| 74.96 | 3.303 | 2917% | 0% | 9d |
| 76.59 | 3.206 | 2916% | 0% | 9d |
| 78.22 | 3.107 | 2915% | 0% | 9d |
| 79.85 | 3.015 | 2906% | 0% | 10d |
| 81.49 | 2.913 | 2906% | 0% | 10d |
| 83.15 | 2.827 | 2896% | 0% | 11d |
| 84.74 | 2.719 | 2906% | 1% | 11d |
| 86.30 | 2.645 | 2895% | 0% | 12d |
| 87.87 | 2.560 | 2894% | 0% | 12d |
| 89.43 | 2.469 | 2898% | 0% | 13d |
| 91.01 | 2.387 | 2897% | 0% | 13d |
| 92.55 | 2.304 | 2899% | 0% | 14d |
| 94.11 | 2.219 | 2904% | 0% | 15d |
| 95.67 | 2.133 | 2910% | 0% | 15d |
| 97.41 | 2.039 | 2916% | 0% | 16d |
| 98.97 | 1.961 | 2919% | 1% | 17d |
| 102.41 | 1.765 | 2948% | 0% | 20d |
| 104.96 | 1.664 | 2950% | 1% | 21d |
| 107.68 | 1.548 | 2953% | 0% | 22d |
| 110.48 | 1.419 | 2970% | 0% | 25d |
| 113.36 | 1.295 | 2985% | 0% | 28d |
| 116.26 | 1.183 | 2954% | 0% | 30d |

Trim = Aft 0.250/22.000 at zero heel (trim righting arm held at zero)

| Displacement | | --- Margins --- | | |
|---|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 | LIM3 |
| 66.88 | 4.162 | 2649% | 0% | 6d |
| 68.48 | 4.052 | 2666% | 0% | 6d |
| 70.10 | 3.943 | 2686% | 0% | 7d |
| 71.71 | 3.861 | 2691% | 1% | 7d |
| 73.33 | 3.772 | 2703% | 0% | 7d |
| 74.96 | 3.664 | 2730% | 0% | 7d |
| 76.59 | 3.561 | 2757% | 0% | 8d |
| 78.22 | 3.459 | 2782% | 0% | 8d |
| 79.85 | 3.356 | 2807% | 0% | 8d |
| 81.49 | 3.239 | 2840% | 1% | 9d |
| 83.15 | 3.134 | 2861% | 1% | 9d |
| 84.74 | 3.050 | 2870% | 0% | 10d |
| 86.30 | 2.950 | 2882% | 0% | 10d |
| 87.87 | 2.851 | 2872% | 0% | 11d |
| 89.43 | 2.754 | 2893% | 0% | 11d |
| 91.01 | 2.661 | 2911% | 0% | 12d |
| 92.55 | 2.566 | 2932% | 0% | 12d |
| 94.11 | 2.472 | 2950% | 0% | 13d |
| 95.67 | 2.377 | 2964% | 0% | 14d |
| 97.41 | 2.269 | 2979% | 0% | 15d |
| 98.97 | 2.179 | 2985% | 0% | 16d |
| 102.41 | 1.979 | 3000% | 0% | 18d |
| 104.96 | 1.842 | 3006% | 0% | 19d |
| 107.68 | 1.709 | 3005% | 3% | 21d |
| 110.48 | 1.589 | 2995% | 0% | 23d |
| 113.36 | 1.397 | 3034% | 0% | 27d |
| 116.26 | 1.290 | 3020% | 1% | 29d |

Trim = zero at zero heel (trim righting arm held at zero)

| Displacement | | --- Margins --- | | |
|---|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 | LIM3 |
| 66.88 | 4.239 | 2592% | 0% | 6d |
| 68.48 | 4.135 | 2583% | 0% | 6d |
| 70.10 | 4.061 | 2578% | 0% | 6d |
| 71.71 | 3.941 | 2606% | 1% | 7d |
| 73.33 | 3.863 | 2609% | 0% | 7d |
| 74.96 | 3.773 | 2623% | 0% | 7d |
| 76.59 | 3.679 | 2641% | 0% | 7d |
| 78.22 | 3.585 | 2663% | 0% | 8d |
| 79.85 | 3.498 | 2682% | 0% | 8d |
| 81.49 | 3.405 | 2707% | 0% | 8d |
| 83.15 | 3.292 | 2747% | 0% | 9d |
| 84.74 | 3.181 | 2789% | 0% | 9d |
| 86.30 | 3.069 | 2834% | 1% | 10d |
| 87.87 | 2.951 | 2885% | 0% | 10d |
| 89.43 | 2.830 | 2939% | 0% | 11d |
| 91.01 | 2.733 | 2979% | 0% | 12d |
| 92.55 | 2.628 | 3010% | 0% | 13d |
| 94.11 | 2.535 | 3017% | 0% | 13d |
| 95.67 | 2.447 | 3023% | 0% | 14d |
| 97.41 | 2.325 | 3045% | 0% | 15d |
| 98.97 | 2.230 | 3057% | 0% | 16d |
| 102.41 | 2.015 | 3087% | 0% | 18d |
| 104.96 | 1.864 | 3102% | 0% | 20d |
| 107.68 | 1.696 | 3126% | 7% | 22d |
| 110.48 | 1.577 | 3081% | 5% | 24d |
| 113.36 | 1.467 | 3082% | 3% | 26d |
| 116.26 | 1.344 | 3080% | 0% | 28d |

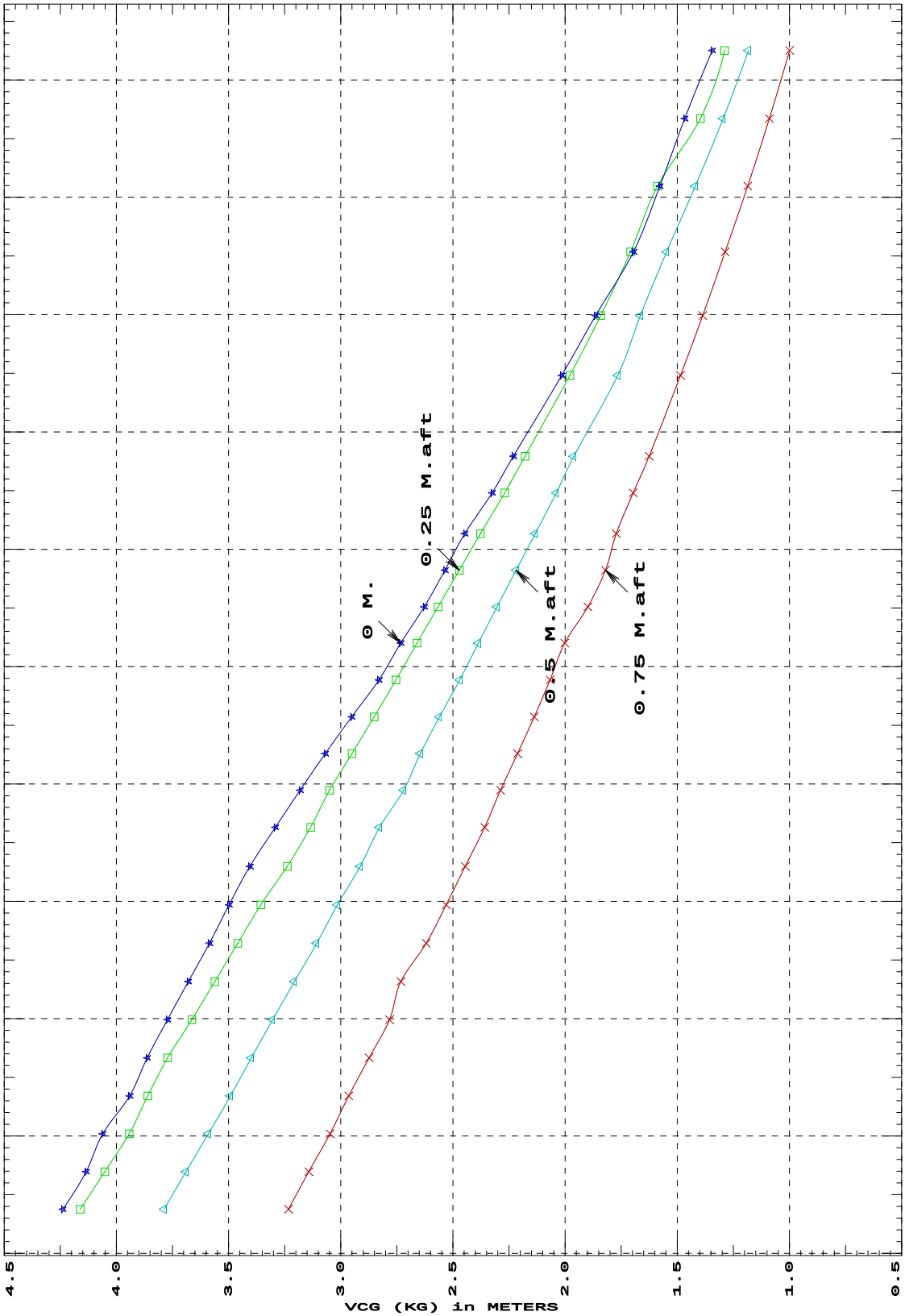
Distances in METERS.---Specific Gravity = 1.000.---d = degrees.

| LIM----------STABILITY CRITERION---------- | | Min/Max |
|---|---|---|
| (1) GM Upright | > | 0.150 m. |
| (2) Area from Equilibrium to MaxRA or Flood | > | 0.0800 m.-Rad |
| (3) Angle from Equilibrium to RAzero or Flood | > | 20.00 deg |

# LIGHT CRAFT DESIGN
## GOTA CARRIER
## MAX VCG CURVES



MAXIMUM VCG (KG)
at various trims (initial)




Specific Gravity = 1.000 "K" = BPL
Trim is per 22 M.

**GÖTA CARRIER SMCG**
**Beräkning av minsta tillåtna boghöjd enligt TSFS 2009:114 Bilaga 5 Regel 8.**

Indata:

$L_{LL} := 22.00$ $B := 7.00$ $d_1 := 0.935$ $\Delta_{vold1} := 128.0$ $A_{wf} := 77.0$

$$C_b := \frac{\Delta_{vold1}}{L_{LL} \cdot B \cdot d_1} = 0.889 \qquad C_{wf} := \frac{A_{wf}}{\left(\frac{L_{LL}}{2}\right) \cdot B} = 1$$

$$C_b := \begin{cases} C_b & \text{if } C_b \geq 0.68 \\ 0.68 & \text{otherwise} \end{cases} \qquad C_b = 0.889$$

(Cb skall inte vara lägre än 0.68)

Kriterier:

$$F_{b1} := 17 \cdot L_{LL} + 700 = 1074 \quad \text{mm}$$

$$F_{b2} := \left[6075 \cdot \left(\frac{L_{LL}}{100}\right) - 1875 \cdot \left(\frac{L_{LL}}{100}\right)^2 + 200 \cdot \left(\frac{L_{LL}}{100}\right)^3\right] \cdot \left[2.08 + 0.609 \cdot C_b - 1.603 \cdot C_{wf} - 0.0129 \left(\frac{L_{LL}}{d_1}\right)\right]$$

$F_{b2} = 892$ mm

$$F_{b3} := 56 \cdot L_{LL} \cdot \left(1 - \frac{L_{LL}}{500}\right) \cdot \frac{1.36}{C_b + 0.68} = 1021 \quad \text{mm}$$

Minsta tillåtna boghöjd för fartområde C:

$F_{b1C} := 0.95 \cdot F_{b1}$ $F_{b1C} = 1020$ mm

$F_{b2C} := 0.95 \cdot F_{b2}$ $F_{b2C} = 847$ mm

$F_{b3C} := 0.95 \cdot F_{b3}$ $F_{b3C} = 970$ mm

Minsta tillåtna boghöjd för fartområde D:

$F_{b1D} := 0.85 \cdot F_{b1}$ $F_{b1D} = 913$ mm

$F_{b2D} := 0.85 \cdot F_{b2}$ $F_{b2D} = 758$ mm

$F_{b3D} := 0.85 \cdot F_{b3}$ $F_{b3D} = 868$ mm

$F_{b2C}$ och $F_{b2D}$ är begränsande värden för respektive fartområde. Transportstyrelsen kan i enskilda fall göra en särskild bedömning för fartyg som är konstruerade för att möta särskilda operationella krav och som därmed inte kan uppfylla (ovan) angivna krav. Boghöjden får aldrig understiga minsta tillåtna fribord.

I detta fall är fartyget likt en vägfärja, med en ramp i fören. Rampen kan manövreras så, att höjden på rampspetsen kan uppnå boghöjdskraven.

GHS 19.00 GOTA CARRIER
No 1: Light ship condition

WEIGHT and DISPLACEMENT and WATERPLANE and FREEBOARD STATUS
Baseline draft: 0.513 @ Origin
Trim: Aft 0.101/22.000, Heel: Port 0.44 deg.

| Part | | Weight(MT) | LCG | TCG | VCG | FSM |
|---|---|---|---|---|---|---|
| WEIGHT | | 63.71 | 0.402a | 0.058p | 1.100 | |
| Total Tanks---------> | | 0.00 | | | | 0.00 |
| | SpGr | Displ(MT) | LCB | TCB | VCB | RefHt |
| HULL | 1.000 | 63.71 | 0.406a | 0.064p | 0.273 | -0.513 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Righting Arms: | | | 0.000 | 0.000p | | |
| Part | SpGr | WPA | LCF | TCF | BML | BMT |
| Total Waterplane----> | 1.000 | 143.7 | 0.212a | 0.039p | 88.50 | 8.149 |
| | | MT/cm | m. | MT/cm | GML | GMT |
| | | 1.44 | | 2.54 | 87.67 | 7.322 |

Distances in METERS.----------Moments in m.-MT.

Least freeboard is 0.510 m. located at 10.995a
Least extra freeboard (to margin line) is 0.435 m. located at 10.995a

MAXIMUM VCG vs. DISPLACEMENT
Trim = Aft 0.101/22.000 at zero heel (trim righting arm held at zero)

| Displacement | | Margins | |
|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 |
| 63.71 | 4.449 | 0% | 5d |

Distances in METERS.---Specific Gravity = 1.000.---d = degrees.

| LIM | STABILITY CRITERION | Min/Max |
|---|---|---|
| (1) | Area from 0 deg to MaxRA or Flood | > 0.0800 m.-Rad |
| (2) | Absolute Angle at RAzero | > 20.00 deg |

No 1: Light ship condition

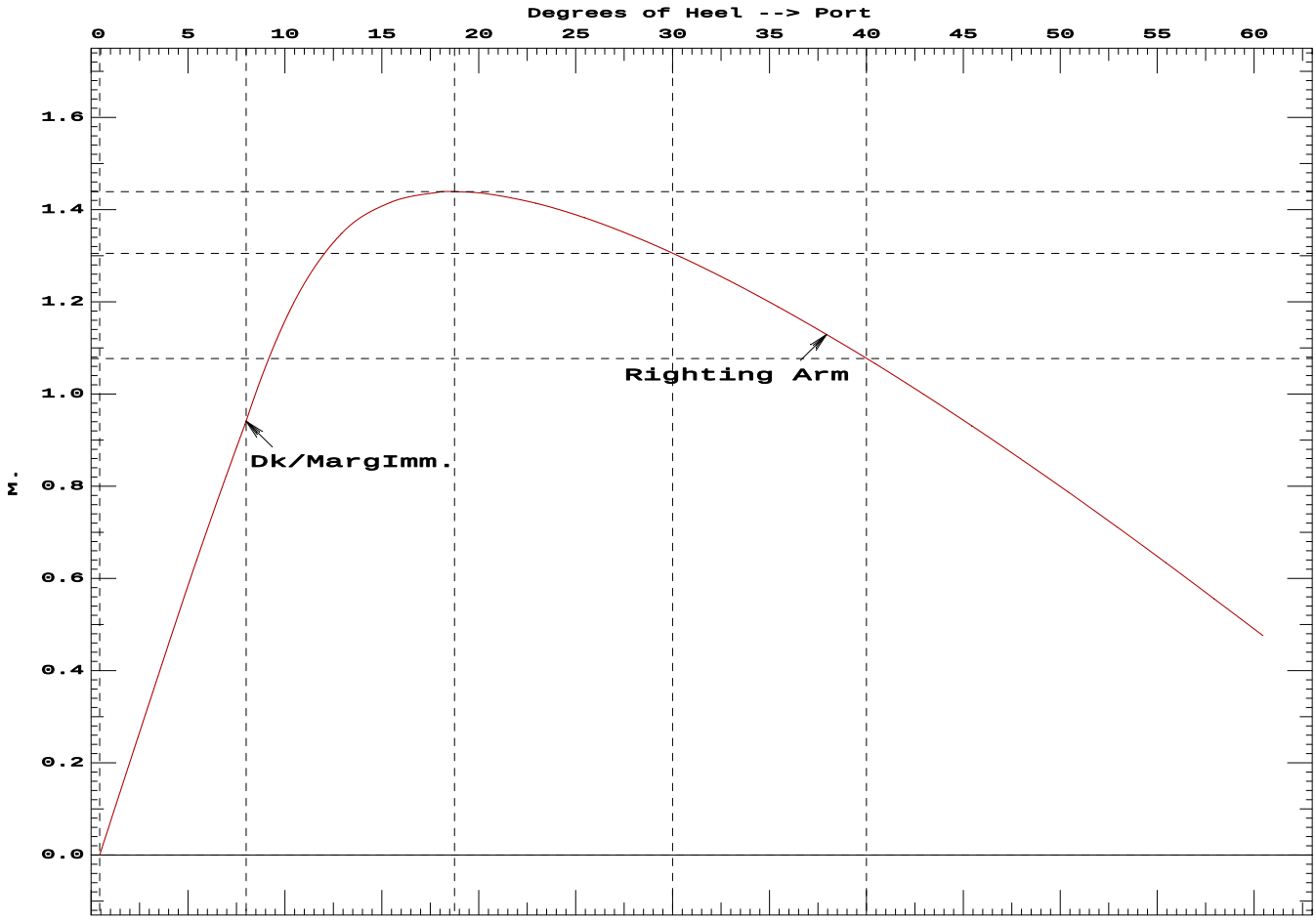
RIGHTING ARMS vs HEEL ANGLE
LCG = 0.402a TCG = 0.058p VCG = 1.100

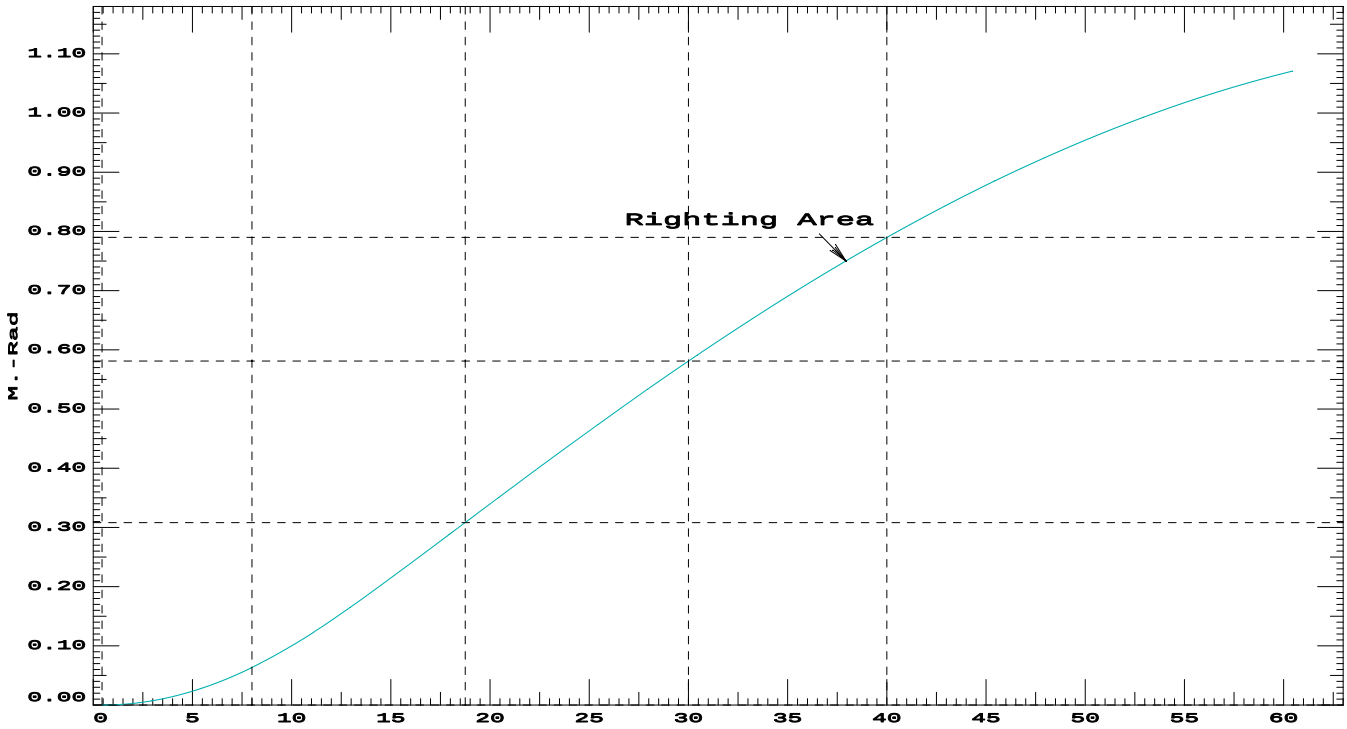
| Origin Depth | Degrees of Trim | Heel | Displacement Weight(MT) | Righting Arms in Trim | in Heel | --> Area | Freebd (Extra) |
|---|---|---|---|---|---|---|---|
| 0.513 | 0.26a | 0.44p | 63.711 | 0.000 | 0.000 | 0.0000 | 0.435 |
| 0.507 | 0.26a | 2.94p | 63.710 | 0.000 | 0.323 | 0.0070 | 0.287 |
| 0.493 | 0.26a | 5.44p | 63.711 | 0.000 | 0.639 | 0.0281 | 0.144 |
| 0.475 | 0.27a | 7.94p | 63.713 | 0.000 | 0.935 | 0.0624 | 0.003 |
| 0.475 | 0.27a | 8.00p | 63.703 | 0.000 | 0.941 | 0.0634 | 0.000 |
| 0.452 | 0.30a | 10.44p | 63.716 | 0.000 | 1.197 | 0.1090 | -0.136 |
| 0.422 | 0.36a | 12.94p | 63.710 | 0.000 | 1.349 | 0.1645 | -0.278 |
| 0.390 | 0.43a | 15.44p | 63.710 | 0.000 | 1.416 | 0.2248 | -0.420 |
| 0.357 | 0.50a | 17.94p | 63.710 | 0.000 | 1.438 | 0.2872 | -0.560 |
| 0.347 | 0.52a | 18.75p | 63.710 | 0.000 | 1.439 | 0.3076 | -0.606 |
| 0.324 | 0.57a | 20.44p | 63.711 | 0.000 | 1.434 | 0.3499 | -0.700 |
| 0.290 | 0.64a | 22.94p | 63.724 | 0.000 | 1.414 | 0.4122 | -0.839 |
| 0.255 | 0.71a | 25.44p | 63.722 | 0.000 | 1.383 | 0.4732 | -0.976 |
| 0.220 | 0.77a | 27.94p | 63.720 | 0.000 | 1.343 | 0.5326 | -1.111 |
| 0.184 | 0.84a | 30.44p | 63.711 | 0.000 | 1.297 | 0.5902 | -1.245 |
| 0.148 | 0.91a | 32.94p | 63.711 | 0.000 | 1.245 | 0.6457 | -1.377 |
| 0.111 | 0.97a | 35.44p | 63.711 | 0.000 | 1.189 | 0.6988 | -1.506 |
| 0.074 | 1.03a | 37.94p | 63.711 | 0.000 | 1.129 | 0.7494 | -1.632 |
| 0.037 | 1.10a | 40.44p | 63.710 | 0.000 | 1.066 | 0.7973 | -1.756 |
| 0.000 | 1.16a | 42.94p | 63.710 | 0.000 | 1.000 | 0.8424 | -1.877 |
| -0.037 | 1.22a | 45.44p | 63.710 | 0.000 | 0.931 | 0.8845 | -1.994 |
| -0.074 | 1.28a | 47.94p | 63.710 | 0.000 | 0.860 | 0.9236 | -2.108 |
| -0.111 | 1.33a | 50.44p | 63.710 | 0.000 | 0.786 | 0.9595 | -2.218 |
| -0.147 | 1.39a | 52.94p | 63.710 | 0.000 | 0.711 | 0.9922 | -2.324 |
| -0.184 | 1.44a | 55.44p | 63.710 | 0.000 | 0.634 | 1.0215 | -2.426 |
| -0.220 | 1.49a | 57.94p | 63.710 | 0.000 | 0.556 | 1.0475 | -2.523 |
| -0.256 | 1.53a | 60.44p | 63.710 | 0.000 | 0.476 | 1.0700 | -2.616 |

Distances in METERS.----Specific Gravity = 1.000.---------Area in m.-Rad.

| LIM STABILITY CRITERION | Min/Max | | Attained |
|---|---|---|---|
| (1) Area from abs 0.444 deg to MaxRA or Flood | > | 0.0800 m.-Rad | 0.3076 P |
| (2) Absolute Angle at RAzero | > | 20.00 deg | LARGE |

----------Relative angles measured from 0.444p----------


Degrees of Heel --> Port
0
5
10
15
20
25
30
35
40
45
50
55
60
M.
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Righting Arm
Dk/MargImm.


M.-Rad
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0
5
10
15
20
25
30
35
40
45
50
55
60
Righting Area

No 2: Besaettning och foerraad

WEIGHT and DISPLACEMENT and WATERPLANE and FREEBOARD STATUS
Baseline draft: 0.522 @ Origin
Trim: Aft 0.104/22.000, Heel: Port 0.44 deg.

| Part | Weight(MT) | LCG | TCG | VCG | FSM |
|---|---|---|---|---|---|
| LIGHT SHIP | 63.71 | 0.402a | 0.058p | 1.100 | |
| Besaettning | 0.30 | 3.100f | 0.000 | 5.300 | |
| Foerraad | 1.00 | 2.000a | 0.000 | 2.400 | |
| Total Weight-------> | 65.01 | 0.410a | 0.057p | 1.139 | |
| Total Tanks---------> | 0.00 | | | | 0.00 |

| | SpGr | Displ(MT) | LCB | TCB | VCB | RefHt |
|---|---|---|---|---|---|---|
| HULL | 1.000 | 65.01 | 0.415a | 0.063p | 0.278 | -0.522 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Righting Arms: | | 0.000 | 0.000p | | | |
| Part | SpGr | WPA | LCF | TCF | BML | BMT |
| Total Waterplane----> | 1.000 | 144.2 | 0.220a | 0.040p | 87.26 | 8.063 |
| | | MT/cm | m.- | MT/cm | GML | GMT |
| | | 1.44 | | 2.55 | 86.40 | 7.201 |

Distances in METERS.---Moments in m.-MT.

Least freeboard is 0.499 m. located at 10.995a
Least extra freeboard (to margin line) is 0.424 m. located at 10.995a

MAXIMUM VCG vs. DISPLACEMENT
Trim = Aft 0.104/22.000 at zero heel (trim righting arm held at zero)

| Displacement | Max VCG | Margins LIM1 | LIM2 |
|---|---|---|---|
| METRIC TONS | | | |
| 65.01 | 4.364 | 0% | 6d |

Distances in METERS.---Specific Gravity = 1.000.---d = degrees.

| LIM | STABILITY CRITERION | Min/Max |
|---|---|---|
| (1) | Area from 0 deg to MaxRA or Flood | > 0.0800 m.-Rad |
| (2) | Absolute Angle at RAzero | > 20.00 deg |

No 2: Besaettning och foerraad

RIGHTING ARMS vs HEEL ANGLE
LCG = 0.410a TCG = 0.057p VCG = 1.139

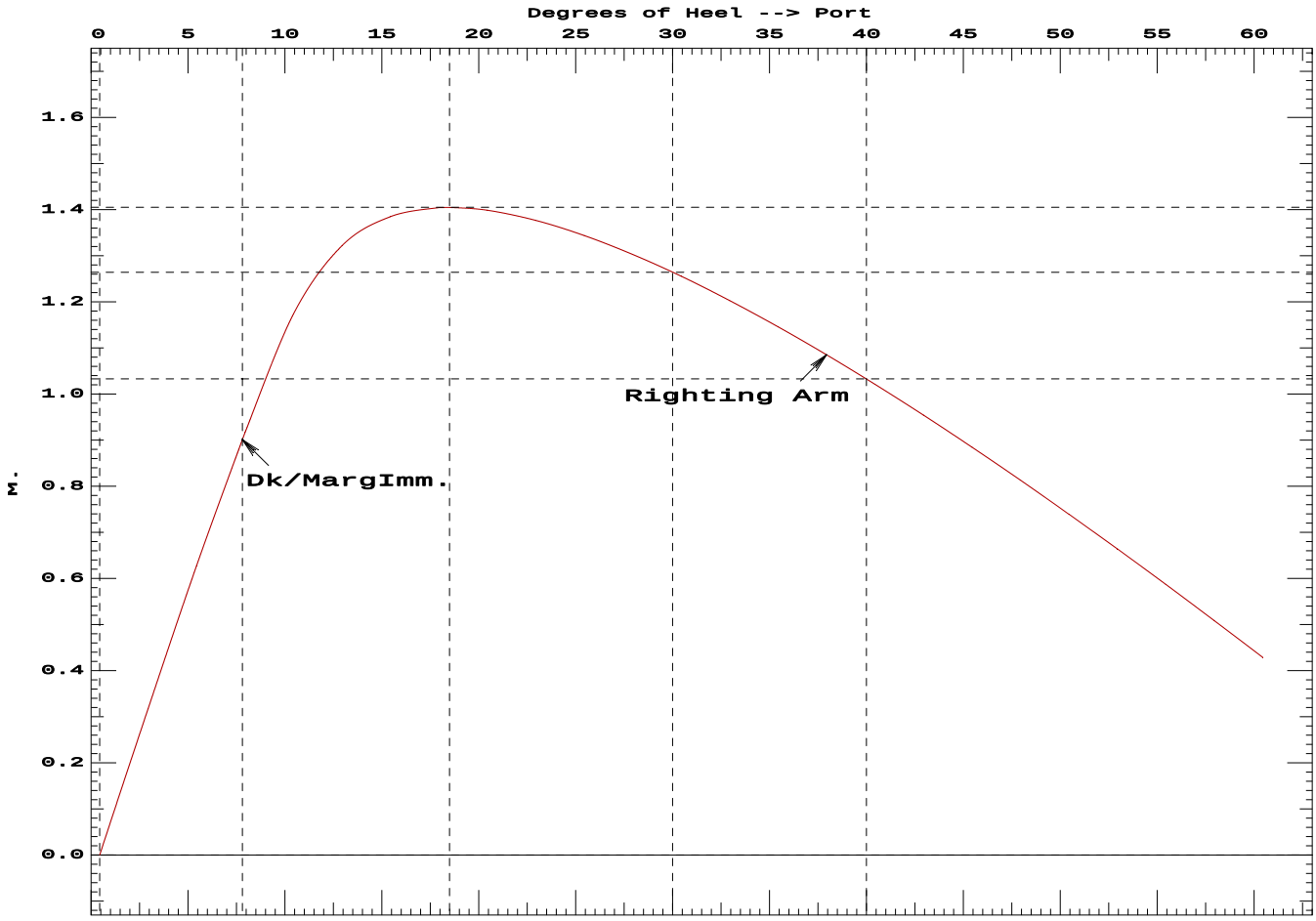
| Origin Depth | Degrees of Trim | Heel | Displacement Weight(MT) | Righting Arms in Trim | in Heel | --> Area | Freebd (Extra) |
|---|---|---|---|---|---|---|---|
| 0.522 | 0.27a | 0.44p | 65.010 | 0.000 | 0.000 | 0.0000 | 0.424 |
| 0.516 | 0.27a | 2.94p | 65.010 | 0.000 | 0.318 | 0.0069 | 0.277 |
| 0.503 | 0.27a | 5.44p | 65.013 | 0.000 | 0.628 | 0.0276 | 0.134 |
| 0.486 | 0.28a | 7.80p | 65.010 | 0.000 | 0.901 | 0.0591 | -0.000 |
| 0.485 | 0.28a | 7.94p | 65.011 | 0.000 | 0.917 | 0.0613 | -0.008 |
| 0.462 | 0.31a | 10.44p | 65.015 | 0.000 | 1.174 | 0.1070 | -0.148 |
| 0.434 | 0.38a | 12.94p | 65.010 | 0.000 | 1.322 | 0.1615 | -0.293 |
| 0.405 | 0.45a | 15.44p | 65.010 | 0.000 | 1.385 | 0.2205 | -0.438 |
| 0.374 | 0.52a | 17.94p | 65.011 | 0.000 | 1.404 | 0.2815 | -0.581 |
| 0.367 | 0.54a | 18.49p | 65.010 | 0.000 | 1.405 | 0.2949 | -0.612 |
| 0.343 | 0.59a | 20.44p | 65.011 | 0.000 | 1.399 | 0.3427 | -0.724 |
| 0.311 | 0.66a | 22.94p | 65.023 | 0.000 | 1.377 | 0.4034 | -0.865 |
| 0.278 | 0.74a | 25.44p | 65.021 | 0.000 | 1.344 | 0.4627 | -1.005 |
| 0.245 | 0.81a | 27.94p | 65.019 | 0.000 | 1.303 | 0.5205 | -1.143 |
| 0.211 | 0.88a | 30.44p | 65.011 | 0.000 | 1.255 | 0.5763 | -1.279 |
| 0.177 | 0.94a | 32.94p | 65.011 | 0.000 | 1.203 | 0.6299 | -1.413 |
| 0.142 | 1.01a | 35.44p | 65.011 | 0.000 | 1.146 | 0.6812 | -1.545 |
| 0.107 | 1.08a | 37.94p | 65.011 | 0.000 | 1.085 | 0.7299 | -1.674 |
| 0.072 | 1.15a | 40.44p | 65.011 | 0.000 | 1.021 | 0.7758 | -1.800 |
| 0.037 | 1.21a | 42.94p | 65.010 | 0.000 | 0.954 | 0.8189 | -1.923 |
| 0.001 | 1.27a | 45.44p | 65.010 | 0.000 | 0.885 | 0.8590 | -2.043 |
| -0.034 | 1.33a | 47.94p | 65.010 | 0.000 | 0.813 | 0.8961 | -2.159 |
| -0.069 | 1.39a | 50.44p | 65.010 | 0.000 | 0.739 | 0.9300 | -2.271 |
| -0.105 | 1.45a | 52.94p | 65.010 | 0.000 | 0.664 | 0.9606 | -2.379 |
| -0.140 | 1.50a | 55.44p | 65.010 | 0.000 | 0.587 | 0.9879 | -2.482 |
| -0.174 | 1.55a | 57.94p | 65.010 | 0.000 | 0.509 | 1.0118 | -2.581 |
| -0.209 | 1.60a | 60.44p | 65.010 | 0.000 | 0.429 | 1.0322 | -2.675 |

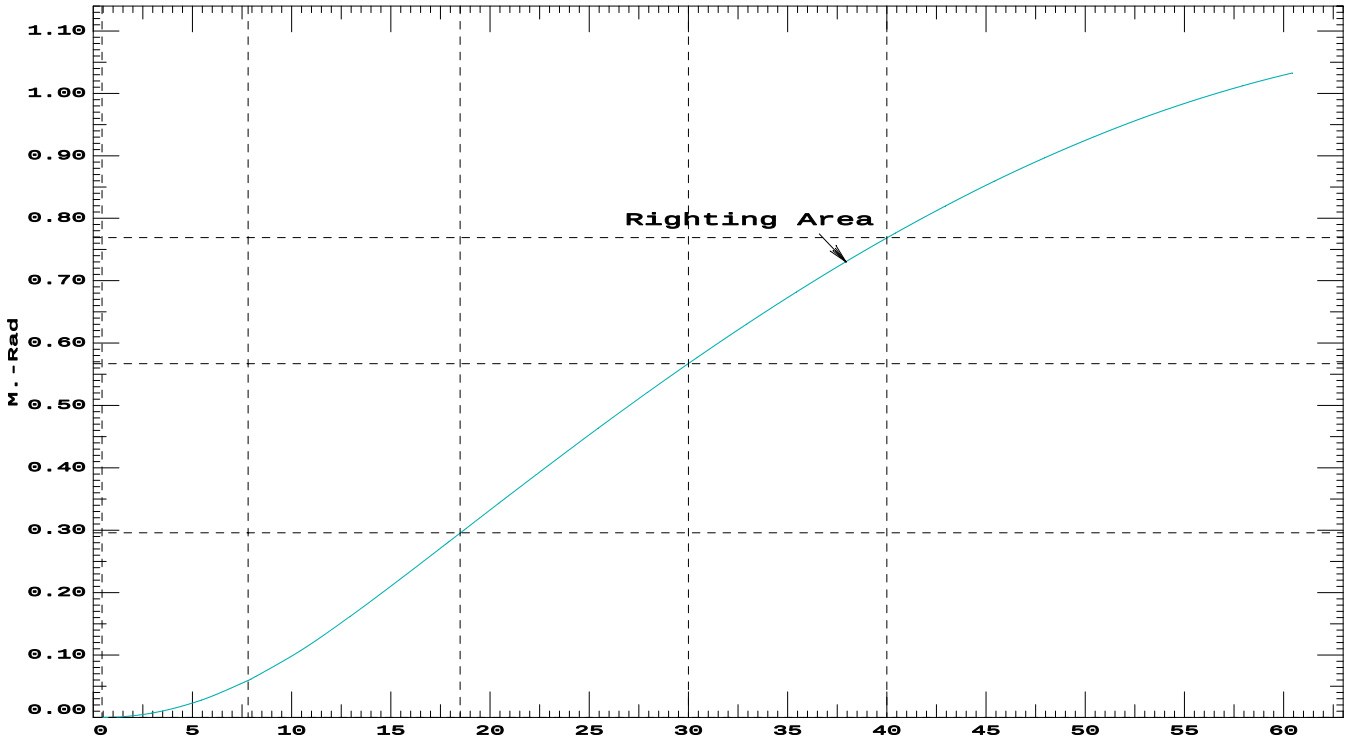
Distances in METERS.----Specific Gravity = 1.000.---------Area in m.-Rad.

| LIM STABILITY CRITERION | Min/Max | | Attained |
|---|---|---|---|
| (1) Area from abs 0.443 deg to MaxRA or Flood | > | 0.0800 m.-Rad | 0.2949 P |
| (2) Absolute Angle at RAzero | > | 20.00 deg | LARGE |

Relative angles measured from 0.443p

No 2: Besaettning och foerraad



GHS 19.00 GOTA CARRIER
No 3: 10 ton, Besaettning och foerraad

WEIGHT and DISPLACEMENT and WATERPLANE and FREEBOARD STATUS
Baseline draft: 0.590 @ Origin
Trim: Aft 0.082/22.000, Heel: Port 0.12 deg.

| Part | Weight(MT) | LCG | TCG | VCG | FSM |
|---|---|---|---|---|---|
| LIGHT SHIP | 63.71 | 0.402a | 0.058p | 1.100 | |
| Besaettning | 0.30 | 3.100f | 0.000 | 5.300 | |
| Foerraad | 1.00 | 2.000a | 0.000 | 2.400 | |
| Daeckslast | 10.00 | 0.500f | 0.300s | 20.100 | |
| Total Weight--------> | 75.01 | 0.289a | 0.009p | 3.667 | |
| Total Tanks---------> | 0.00 | | | | 0.00 |

| | SpGr | Displ(MT) | LCB | TCB | VCB | RefHt |
|---|---|---|---|---|---|---|
| HULL | 1.000 | 75.01 | 0.301a | 0.016p | 0.314 | -0.590 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Righting Arms: | | | 0.000 | 0.000 | | |
| Part | SpGr | WPA | LCF | TCF | BML | BMT |
| Total Waterplane----> | 1.000 | 149.5 | 0.115a | 0.012p | 80.80 | 7.534 |
| | | MT/cm | -m.- | MT/cm | GML | GMT |
| | | 1.49 | | 2.64 | 77.45 | 4.181 |

Distances in METERS.---Moments in m.-MT.
Least freeboard is 0.461 m. located at 10.995a
Least extra freeboard (to margin line) is 0.386 m. located at 10.995a

MAXIMUM VCG vs. DISPLACEMENT
Trim = Aft 0.082/22.000 at zero heel (trim righting arm held at zero)

| Displacement | | Margins | |
|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 |
| 75.01 | 3.759 | 0% | 7d |

Distances in METERS.---Specific Gravity = 1.000.---d = degrees.

| LIM | STABILITY CRITERION | Min/Max |
|---|---|---|
| (1) | Area from 0 deg to MaxRA or Flood | > 0.0800 m.-Rad |
| (2) | Absolute Angle at RAzero | > 20.00 deg |

No 3: 10 ton, Besaettning och foerraad

RIGHTING ARMS vs HEEL ANGLE
LCG = 0.289a TCG = 0.009p VCG = 3.667

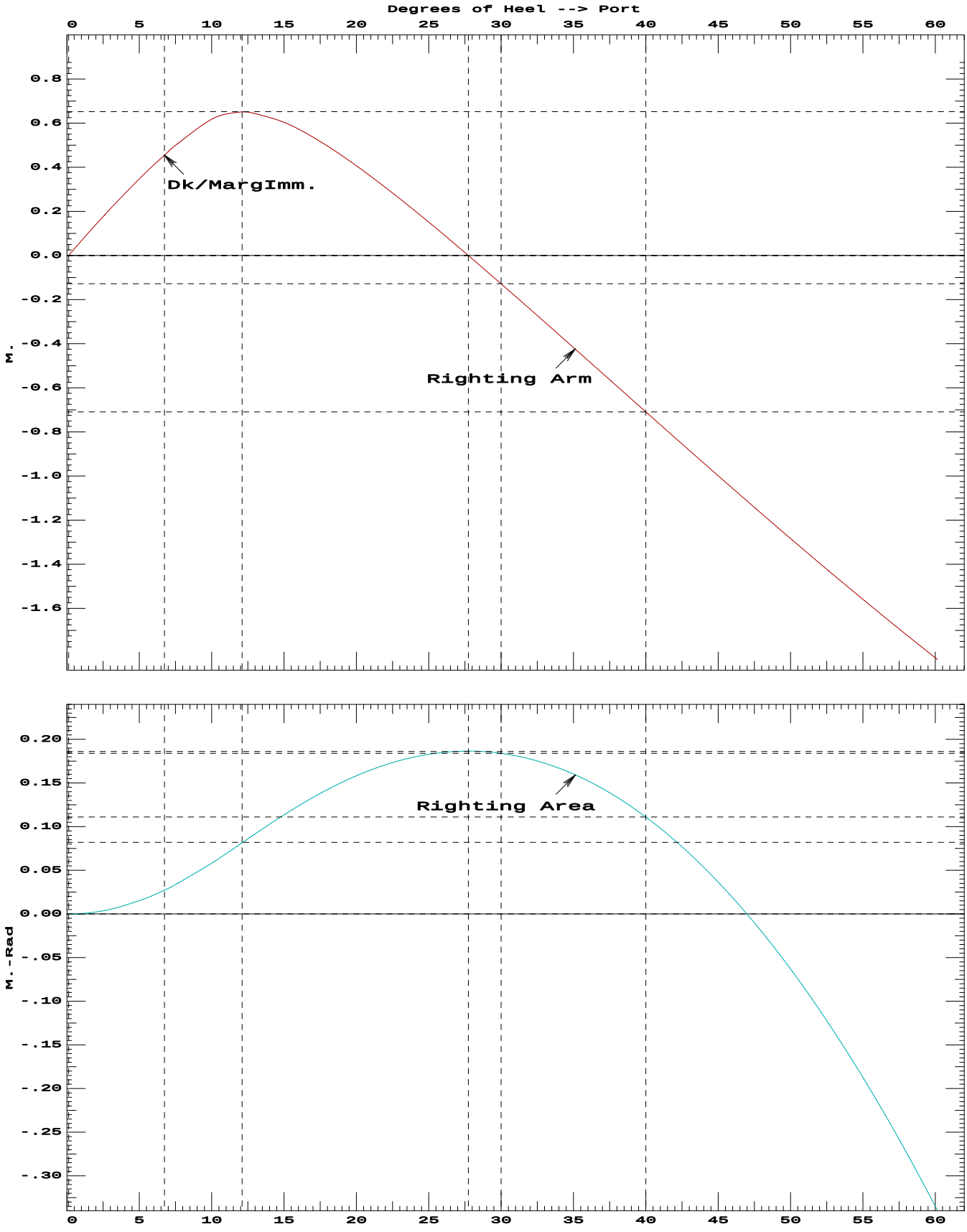
| Origin Depth | Degrees of Trim | Heel | Displacement Weight(MT) | Righting Arms in Trim | in Heel | --> Area | Freebd (Extra) |
|---|---|---|---|---|---|---|---|
| 0.590 | 0.21a | 0.12p | 75.025 | 0.000 | 0.000 | 0.0000 | 0.386 |
| 0.585 | 0.21a | 2.62p | 75.014 | 0.000 | 0.185 | 0.0040 | 0.238 |
| 0.574 | 0.22a | 5.12p | 75.013 | 0.000 | 0.355 | 0.0159 | 0.093 |
| 0.564 | 0.22a | 6.74p | 75.016 | 0.000 | 0.455 | 0.0273 | -0.000 |
| 0.558 | 0.23a | 7.62p | 75.017 | 0.000 | 0.505 | 0.0347 | -0.051 |
| 0.541 | 0.26a | 10.12p | 75.004 | 0.000 | 0.622 | 0.0594 | -0.197 |
| 0.532 | 0.30a | 12.11p | 75.010 | 0.000 | 0.652 | 0.0814 | -0.323 |
| 0.529 | 0.31a | 12.62p | 75.011 | 0.000 | 0.650 | 0.0873 | -0.356 |
| 0.518 | 0.38a | 15.12p | 75.022 | 0.000 | 0.601 | 0.1146 | -0.516 |
| 0.505 | 0.44a | 17.62p | 75.011 | 0.000 | 0.512 | 0.1390 | -0.676 |
| 0.490 | 0.51a | 20.12p | 75.011 | 0.000 | 0.401 | 0.1590 | -0.834 |
| 0.475 | 0.58a | 22.62p | 75.011 | 0.000 | 0.277 | 0.1739 | -0.991 |
| 0.459 | 0.64a | 25.12p | 75.011 | 0.000 | 0.145 | 0.1831 | -1.147 |
| 0.442 | 0.71a | 27.62p | 75.011 | 0.000 | 0.006 | 0.1864 | -1.301 |
| 0.441 | 0.71a | 27.74p | 75.012 | 0.000 | 0.000 | 0.1864 | -1.308 |
| 0.424 | 0.78a | 30.12p | 75.011 | 0.000 | -0.135 | 0.1836 | -1.453 |
| 0.405 | 0.84a | 32.62p | 75.011 | 0.000 | -0.279 | 0.1746 | -1.602 |
| 0.385 | 0.91a | 35.12p | 75.011 | 0.000 | -0.424 | 0.1592 | -1.748 |
| 0.364 | 0.97a | 37.62p | 75.011 | 0.000 | -0.570 | 0.1375 | -1.892 |
| 0.343 | 1.04a | 40.12p | 75.011 | 0.000 | -0.716 | 0.1095 | -2.032 |
| 0.321 | 1.10a | 42.62p | 75.011 | 0.000 | -0.862 | 0.0750 | -2.168 |
| 0.299 | 1.16a | 45.12p | 75.011 | 0.000 | -1.006 | 0.0343 | -2.300 |
| 0.275 | 1.22a | 47.62p | 75.011 | 0.000 | -1.149 | -0.0127 | -2.428 |
| 0.252 | 1.27a | 50.12p | 75.010 | 0.000 | -1.290 | -0.0659 | -2.551 |
| 0.228 | 1.32a | 52.62p | 75.010 | 0.000 | -1.429 | -0.1252 | -2.669 |
| 0.203 | 1.37a | 55.12p | 75.010 | 0.000 | -1.565 | -0.1906 | -2.782 |
| 0.178 | 1.41a | 57.62p | 75.010 | 0.000 | -1.699 | -0.2618 | -2.890 |
| 0.153 | 1.44a | 60.12p | 75.010 | 0.000 | -1.830 | -0.3388 | -2.992 |

Distances in METERS.----Specific Gravity = 1.000.---------Area in m.-Rad.

| LIM STABILITY CRITERION | Min/Max | | Attained |
|---|---|---|---|
| (1) Area from abs 0.121 deg to MaxRA or Flood | > | 0.0800 m.-Rad | 0.0814 P |
| (2) Absolute Angle at RAzero | > | 20.00 deg | 27.74 P |

----------Relative angles measured from 0.121 ----------

No 3: 10 ton, Besaettning och foerraad



GHS 19.00 GOTA CARRIER

No 4: 20 ton, Besaettning och foerraad

WEIGHT and DISPLACEMENT and WATERPLANE and FREEBOARD STATUS

Baseline draft: 0.656 @ Origin

Trim: Aft 0.059/22.000, Heel: Stbd 0.04 deg.

| Part | Weight(MT) | LCG | TCG | VCG | FSM |
|---|---|---|---|---|---|
| LIGHT SHIP | 63.71 | 0.402a | 0.058p | 1.100 | |
| Besaettning | 0.30 | 3.100f | 0.000 | 5.300 | |
| Foerraad | 1.00 | 2.000a | 0.000 | 2.400 | |
| Daeckslast | 20.00 | 0.500f | 0.200s | 9.500 | |
| Total Weight--------> | 85.01 | 0.196a | 0.004s | 3.106 | |
| Total Tanks---------> | 0.00 | | | | 0.00 |

| | SpGr | Displ(MT) | LCB | TCB | VCB | RefHt |
|---|---|---|---|---|---|---|
| HULL | 1.000 | 85.01 | 0.203a | 0.006s | 0.351 | -0.656 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Righting Arms: | | | 0.000 | 0.000 | | |
| Part | SpGr | WPA | LCF | TCF | BML | BMT |
| Total Waterplane----> | 1.000 | 153.8 | 0.077a | 0.013s | 74.72 | 7.118 |
| | | MT/cm | m.- | MT/cm | GML | GMT |
| | | 1.54 | | 2.78 | 71.97 | 4.362 |

Distances in METERS.---Moments in m.-MT.

Least freeboard is 0.412 m. located at 10.995a

Least extra freeboard (to margin line) is 0.337 m. located at 10.995a

MAXIMUM VCG vs. DISPLACEMENT

Trim = Aft 0.059/22.000 at zero heel (trim righting arm held at zero)

| Displacement | Margins | | |
|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 |
| 85.01 | 3.166 | 0% | 9d |

Distances in METERS.---Specific Gravity = 1.000.---d = degrees.

| LIM | STABILITY CRITERION | Min/Max |
|---|---|---|
| (1) | Area from 0 deg to MaxRA or Flood | > 0.0800 m.-Rad |
| (2) | Absolute Angle at RAzero | > 20.00 deg |

No 4: 20 ton, Besaettning och foerraad

RIGHTING ARMS vs HEEL ANGLE

LCG = 0.196a TCG = 0.004s VCG = 3.106

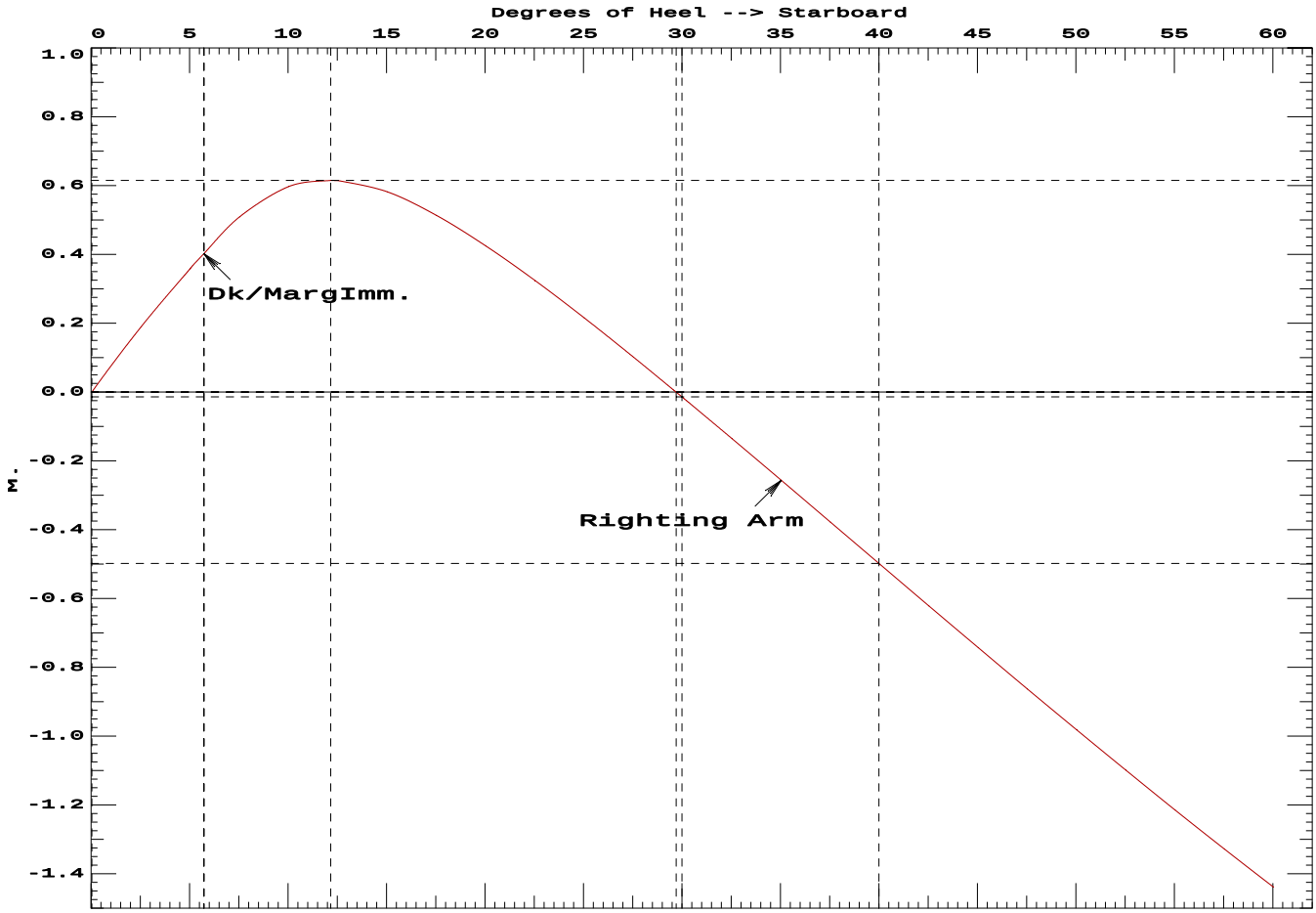
| Origin Depth | Degrees of Trim | Heel | Displacement Weight(MT) | Righting Arms in Trim | in Heel | --> Area | Freebd (Extra) |
|---|---|---|---|---|---|---|---|
| 0.656 | 0.15a | 0.04s | 85.009 | 0.000 | 0.000 | 0.0000 | 0.337 |
| 0.652 | 0.15a | 2.54s | 85.010 | 0.000 | 0.189 | 0.0041 | 0.188 |
| 0.642 | 0.16a | 5.04s | 85.012 | 0.000 | 0.359 | 0.0162 | 0.040 |
| 0.639 | 0.16a | 5.73s | 85.009 | 0.000 | 0.402 | 0.0208 | -0.000 |
| 0.628 | 0.17a | 7.54s | 85.010 | 0.000 | 0.509 | 0.0352 | -0.105 |
| 0.619 | 0.20a | 10.04s | 85.009 | 0.000 | 0.597 | 0.0594 | -0.261 |
| 0.620 | 0.23a | 12.16s | 85.009 | 0.000 | 0.615 | 0.0819 | -0.402 |
| 0.621 | 0.24a | 12.54s | 84.997 | 0.000 | 0.615 | 0.0859 | -0.428 |
| 0.626 | 0.29a | 15.04s | 85.011 | 0.000 | 0.582 | 0.1120 | -0.602 |
| 0.630 | 0.34a | 17.54s | 85.008 | 0.000 | 0.513 | 0.1361 | -0.776 |
| 0.633 | 0.39a | 20.04s | 85.011 | 0.000 | 0.425 | 0.1566 | -0.948 |
| 0.634 | 0.44a | 22.54s | 85.002 | 0.000 | 0.324 | 0.1730 | -1.119 |
| 0.634 | 0.49a | 25.04s | 85.000 | 0.000 | 0.215 | 0.1848 | -1.288 |
| 0.633 | 0.54a | 27.54s | 85.015 | 0.000 | 0.101 | 0.1917 | -1.455 |
| 0.631 | 0.58a | 29.71s | 85.017 | 0.000 | -0.000 | 0.1936 | -1.597 |
| 0.631 | 0.59a | 30.04s | 85.017 | 0.000 | -0.016 | 0.1936 | -1.619 |
| 0.627 | 0.64a | 32.54s | 85.022 | 0.000 | -0.136 | 0.1903 | -1.780 |
| 0.622 | 0.69a | 35.04s | 85.024 | 0.000 | -0.257 | 0.1817 | -1.938 |
| 0.616 | 0.74a | 37.54s | 85.025 | 0.000 | -0.378 | 0.1679 | -2.093 |
| 0.608 | 0.79a | 40.04s | 85.010 | 0.000 | -0.500 | 0.1487 | -2.244 |
| 0.600 | 0.83a | 42.54s | 85.025 | 0.000 | -0.622 | 0.1243 | -2.391 |
| 0.590 | 0.88a | 45.04s | 85.010 | 0.000 | -0.743 | 0.0945 | -2.533 |
| 0.580 | 0.92a | 47.54s | 85.025 | 0.000 | -0.863 | 0.0594 | -2.671 |
| 0.568 | 0.96a | 50.04s | 85.025 | 0.000 | -0.982 | 0.0192 | -2.804 |
| 0.555 | 1.00a | 52.54s | 85.024 | 0.000 | -1.099 | -0.0262 | -2.931 |
| 0.541 | 1.03a | 55.04s | 85.024 | 0.000 | -1.215 | -0.0767 | -3.052 |
| 0.525 | 1.07a | 57.54s | 85.023 | 0.000 | -1.328 | -0.1322 | -3.168 |
| 0.509 | 1.10a | 60.04s | 85.022 | 0.000 | -1.439 | -0.1926 | -3.278 |

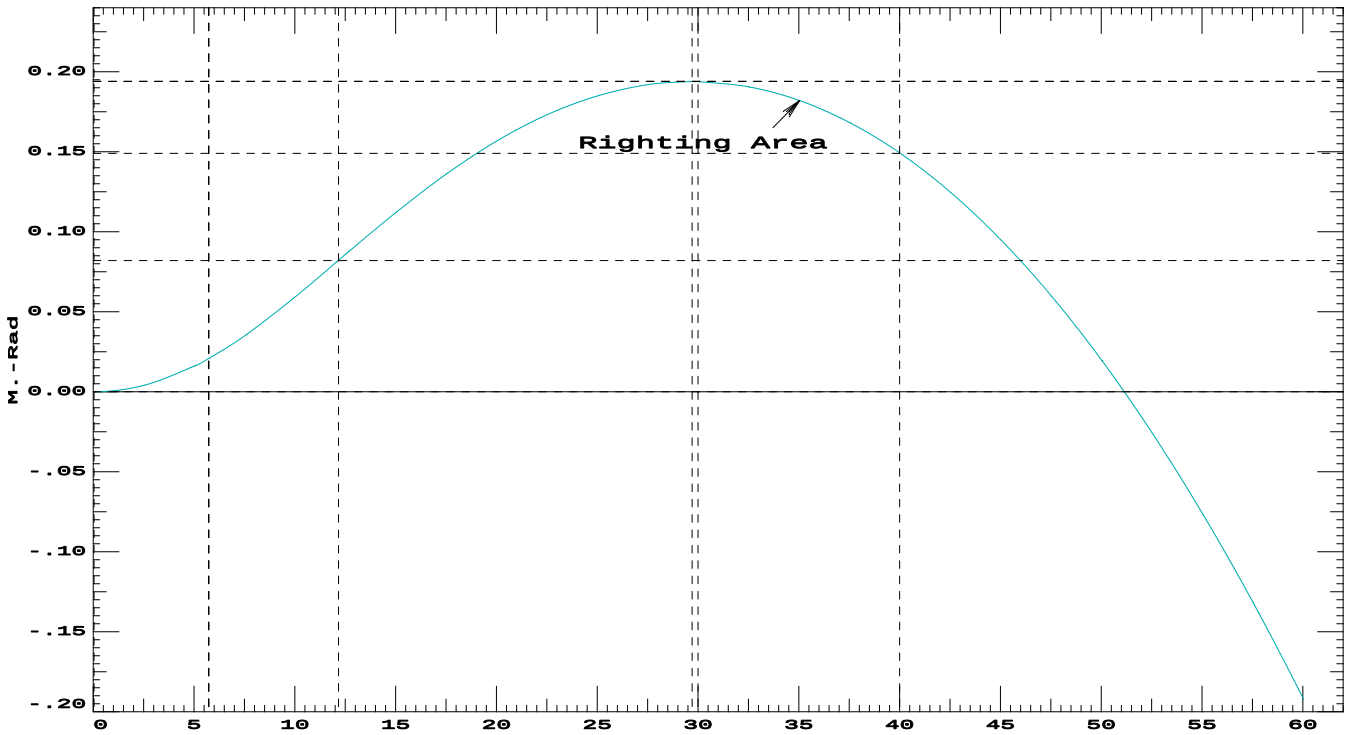
Distances in METERS.----Specific Gravity = 1.000.---------Area in m.-Rad.

| LIM STABILITY CRITERION | Min/Max | | Attained |
|---|---|---|---|
| (1) Area from abs 0.042 deg to MaxRA or Flood | > | 0.0800 m.-Rad | 0.0819 P |
| (2) Absolute Angle at RAzero | > | 20.00 deg | 29.71 P |

----------Relative angles measured from 0.042 ----------

No 4: 20 ton, Besaettning och foerraad



GHS 19.00 GOTA CARRIER
No 5: 30 ton, Besaettning och foerraad

WEIGHT and DISPLACEMENT and WATERPLANE and FREEBOARD STATUS
Baseline draft: 0.720 @ Origin
Trim: Aft 0.039/22.000, Heel: Stbd 0.28 deg.

| Part | Weight(MT) | LCG | TCG | VCG | FSM |
|---|---|---|---|---|---|
| LIGHT SHIP | 63.71 | 0.402a | 0.058p | 1.100 | |
| Besaettning | 0.30 | 3.100f | 0.000 | 5.300 | |
| Foerraad | 1.00 | 2.000a | 0.000 | 2.400 | |
| Daeckslast | 30.00 | 0.500f | 0.200s | 5.000 | |
| Total Weight--------> | 95.01 | 0.123a | 0.024s | 2.358 | |
| Total Tanks---------> | 0.00 | | | | 0.00 |

| | SpGr | Displ(MT) | LCB | TCB | VCB | RefHt |
|---|---|---|---|---|---|---|
| HULL | 1.000 | 95.01 | 0.126a | 0.034s | 0.386 | -0.720 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Righting Arms: | | 0.000 | 0.000s | | | |
| Part | SpGr | WPA | LCF | TCF | BML | BMT |
| Total Waterplane----> | 1.000 | 157.2 | 0.033a | 0.028s | 69.63 | 6.703 |
| | | MT/cm | m.- | MT/cm | GML | GMT |
| | | 1.57 | | 2.92 | 67.66 | 4.731 |

Distances in METERS. Moments in m.-MT.

Least freeboard is 0.343 m. located at 10.995a
Least extra freeboard (to margin line) is 0.268 m. located at 10.995a

MAXIMUM VCG vs. DISPLACEMENT
Trim = Aft 0.039/22.000 at zero heel (trim righting arm held at zero)

| Displacement | Margins | | |
|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 |
| 95.01 | 2.477 | 0% | 14d |

Distances in METERS.---Specific Gravity = 1.000.---d = degrees.

| LIM | STABILITY CRITERION | Min/Max |
|---|---|---|
| (1) | Area from 0 deg to MaxRA or Flood | > 0.0800 m.-Rad |
| (2) | Absolute Angle at RAzero | > 20.00 deg |

No 5: 30 ton, Besaettning och foerraad

RIGHTING ARMS vs HEEL ANGLE
LCG = 0.123a TCG = 0.024s VCG = 2.358

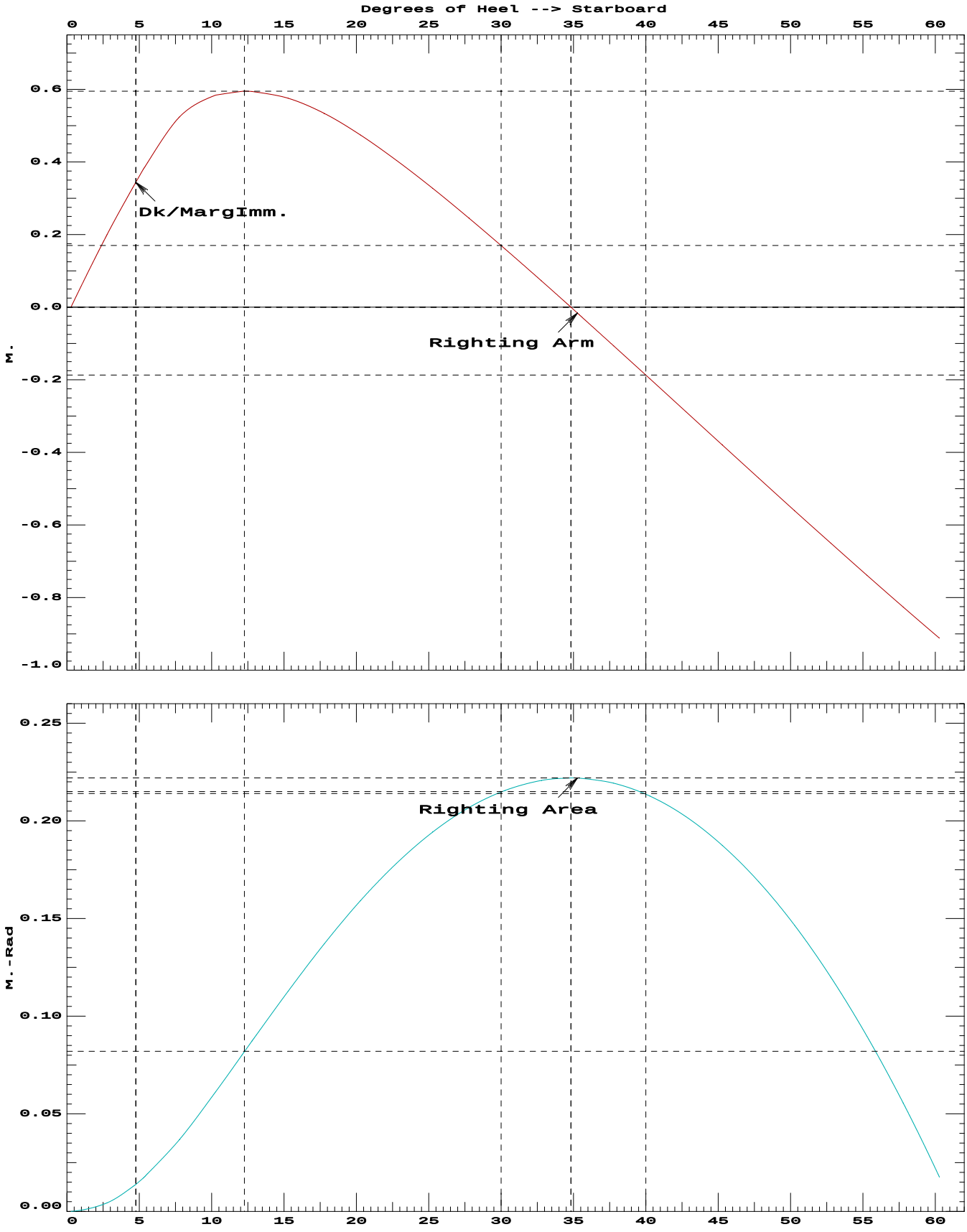
| Origin Depth | Degrees of Trim | Heel | Displacement Weight(MT) | Righting Arms in Trim | in Heel | Area | Freebd (Extra) |
|---|---|---|---|---|---|---|---|
| 0.720 | 0.10a | 0.28s | 95.005 | 0.000 | 0.000 | 0.0000 | 0.269 |
| 0.716 | 0.11a | 2.78s | 95.009 | 0.000 | 0.200 | 0.0044 | 0.118 |
| 0.710 | 0.11a | 4.76s | 95.009 | 0.000 | 0.344 | 0.0138 | -0.000 |
| 0.708 | 0.11a | 5.28s | 95.009 | 0.000 | 0.380 | 0.0171 | -0.031 |
| 0.699 | 0.13a | 7.78s | 95.007 | 0.000 | 0.524 | 0.0369 | -0.182 |
| 0.703 | 0.15a | 10.28s | 95.001 | 0.000 | 0.584 | 0.0613 | -0.349 |
| 0.713 | 0.17a | 12.26s | 94.998 | 0.000 | 0.595 | 0.0818 | -0.489 |
| 0.717 | 0.18a | 12.78s | 95.009 | 0.000 | 0.594 | 0.0871 | -0.527 |
| 0.736 | 0.20a | 15.28s | 95.009 | 0.000 | 0.576 | 0.1126 | -0.711 |
| 0.757 | 0.23a | 17.78s | 94.996 | 0.000 | 0.534 | 0.1369 | -0.898 |
| 0.776 | 0.27a | 20.28s | 95.000 | 0.000 | 0.475 | 0.1590 | -1.084 |
| 0.794 | 0.30a | 22.78s | 95.010 | 0.000 | 0.404 | 0.1782 | -1.268 |
| 0.810 | 0.33a | 25.28s | 95.010 | 0.000 | 0.327 | 0.1942 | -1.450 |
| 0.825 | 0.37a | 27.78s | 95.010 | 0.000 | 0.245 | 0.2067 | -1.629 |
| 0.838 | 0.40a | 30.28s | 95.010 | 0.000 | 0.160 | 0.2155 | -1.805 |
| 0.849 | 0.44a | 32.78s | 95.010 | 0.000 | 0.073 | 0.2206 | -1.978 |
| 0.857 | 0.46a | 34.82s | 95.010 | 0.000 | 0.000 | 0.2219 | -2.116 |
| 0.859 | 0.47a | 35.28s | 95.010 | 0.000 | -0.016 | 0.2219 | -2.147 |
| 0.867 | 0.50a | 37.78s | 95.010 | 0.000 | -0.107 | 0.2192 | -2.313 |
| 0.872 | 0.53a | 40.28s | 94.998 | 0.000 | -0.197 | 0.2125 | -2.473 |
| 0.877 | 0.57a | 42.78s | 95.002 | 0.000 | -0.288 | 0.2020 | -2.630 |
| 0.880 | 0.60a | 45.28s | 95.005 | 0.000 | -0.379 | 0.1874 | -2.782 |
| 0.882 | 0.62a | 47.78s | 95.008 | 0.000 | -0.470 | 0.1688 | -2.929 |
| 0.882 | 0.65a | 50.28s | 95.020 | 0.000 | -0.561 | 0.1464 | -3.071 |
| 0.879 | 0.68a | 52.78s | 95.013 | 0.000 | -0.650 | 0.1199 | -3.206 |
| 0.876 | 0.70a | 55.28s | 95.014 | 0.000 | -0.739 | 0.0896 | -3.336 |
| 0.870 | 0.73a | 57.78s | 95.015 | 0.000 | -0.826 | 0.0555 | -3.459 |
| 0.863 | 0.75a | 60.28s | 95.015 | 0.000 | -0.912 | 0.0176 | -3.576 |

Distances in METERS.----Specific Gravity = 1.000.---------Area in m.-Rad.

| LIM STABILITY CRITERION | Min/Max | | Attained |
|---|---|---|---|
| (1) Area from abs 0.279 deg to MaxRA or Flood | > | 0.0800 m.-Rad | 0.0818 P |
| (2) Absolute Angle at RAzero | > | 20.00 deg | 34.82 P |

----------Relative angles measured from 0.279s----------

No 5: 30 ton, Besaettning och foerraad



No 6: 40 ton, Besaettning och foerraad

WEIGHT and DISPLACEMENT and WATERPLANE and FREEBOARD STATUS
Baseline draft: 0.783 @ Origin
Trim: Aft 0.022/22.000, Heel: Stbd 0.01 deg.

| Part | Weight(MT) | LCG | TCG | VCG | FSM |
|---|---|---|---|---|---|
| LIGHT SHIP | 63.71 | 0.402a | 0.058p | 1.100 | |
| Besaettning | 0.30 | 3.100f | 0.000 | 5.300 | |
| Foerraad | 1.00 | 2.000a | 0.000 | 2.400 | |
| Daeckslast | 40.00 | 0.500f | 0.100s | 3.000 | |
| Total Weight--------> | 105.01 | 0.064a | 0.003s | 1.848 | |
| Total Tanks---------> | 0.00 | | | | 0.00 |

| | SpGr | Displ(MT) | LCB | TCB | VCB | RefHt |
|---|---|---|---|---|---|---|
| HULL | 1.000 | 105.01 | 0.065a | 0.003s | 0.421 | -0.783 |

Righting Arms: 0.000 0.000

| Part | SpGr | WPA | LCF | TCF | BML | BMT |
|---|---|---|---|---|---|---|
| Total Waterplane----> | 1.000 | 158.1 | 0.005a | 0.034s | 64.03 | 6.139 |
| | | MT/cm | | m.-MT/cm | GML | GMT |
| | | 1.58 | | 2.99 | 62.60 | 4.712 |

Distances in METERS.---Moments in m.-MT.

Least freeboard is 0.306 m. located at 10.995a
Least extra freeboard (to margin line) is 0.231 m. located at 10.995a

MAXIMUM VCG vs. DISPLACEMENT
Trim = Aft 0.022/22.000 at zero heel (trim righting arm held at zero)

| Displacement | | Margins | |
|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 |
| 105.01 | 1.882 | 0% | 19d |

Distances in METERS.---Specific Gravity = 1.000.---d = degrees.

| LIM | STABILITY CRITERION | Min/Max |
|---|---|---|
| (1) | Area from 0 deg to MaxRA or Flood | > 0.0800 m.-Rad |
| (2) | Absolute Angle at RAzero | > 20.00 deg |

No 6: 40 ton, Besaettning och foerraad

RIGHTING ARMS vs HEEL ANGLE
LCG = 0.064a TCG = 0.003s VCG = 1.848

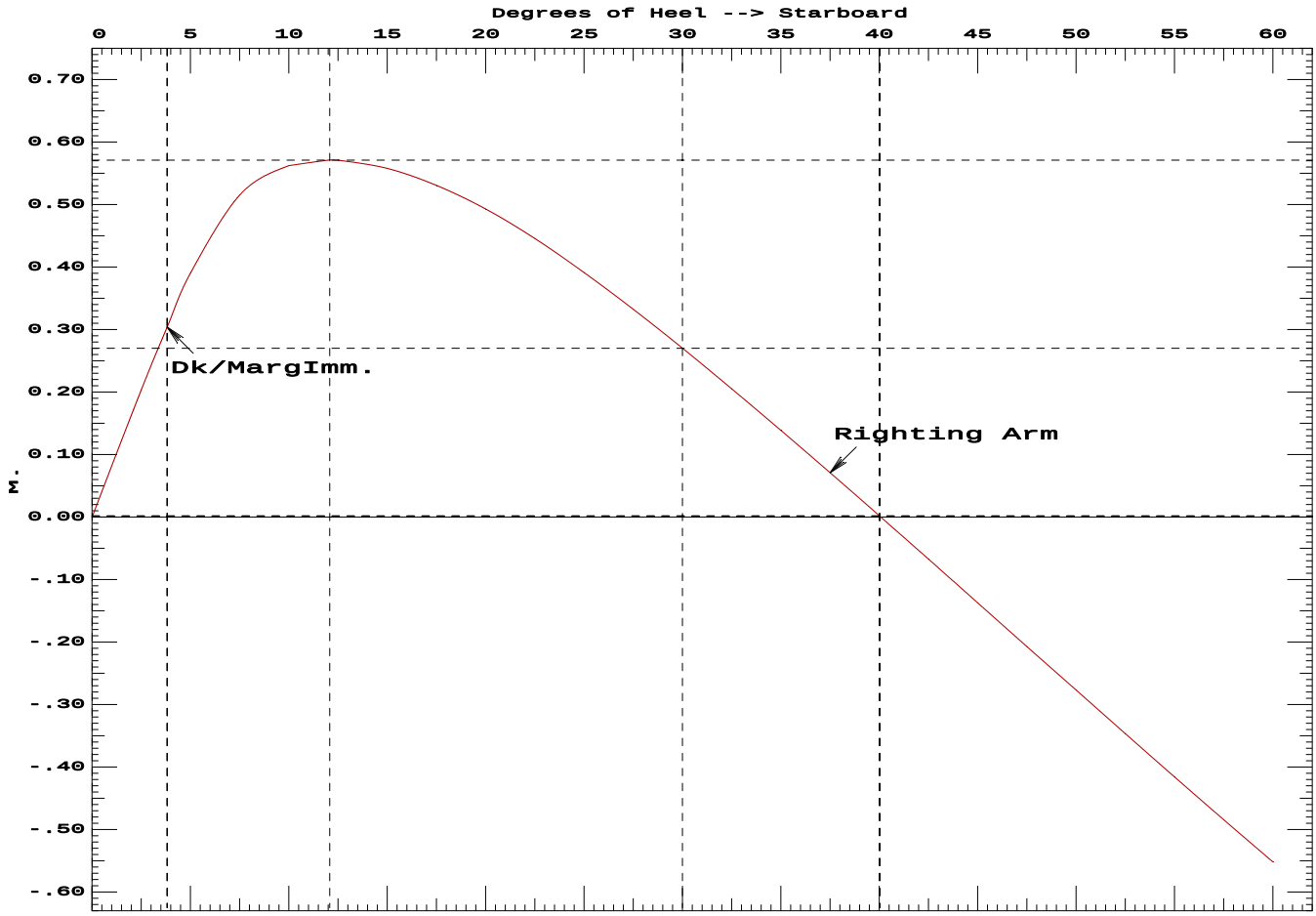
| Origin Depth | Degrees of Trim | Heel | Displacement Weight(MT) | Righting Arms in Trim | in Heel | --> Area | Freebd (Extra) |
|---|---|---|---|---|---|---|---|
| 0.783 | 0.06a | 0.01s | 105.00 | 0.000 | 0.000 | 0.0000 | 0.231 |
| 0.781 | 0.06a | 2.51s | 105.01 | 0.000 | 0.204 | 0.0044 | 0.079 |
| 0.778 | 0.06a | 3.82s | 105.01 | 0.000 | 0.304 | 0.0102 | -0.000 |
| 0.775 | 0.06a | 5.01s | 105.01 | 0.000 | 0.391 | 0.0175 | -0.072 |
| 0.775 | 0.08a | 7.51s | 105.01 | 0.000 | 0.515 | 0.0374 | -0.232 |
| 0.791 | 0.09a | 10.01s | 105.01 | 0.000 | 0.562 | 0.0611 | -0.408 |
| 0.811 | 0.10a | 12.08s | 105.01 | 0.000 | 0.571 | 0.0816 | -0.562 |
| 0.815 | 0.10a | 12.51s | 105.01 | 0.000 | 0.571 | 0.0859 | -0.594 |
| 0.846 | 0.12a | 15.01s | 105.01 | 0.000 | 0.558 | 0.1105 | -0.787 |
| 0.880 | 0.13a | 17.51s | 105.01 | 0.000 | 0.530 | 0.1343 | -0.984 |
| 0.915 | 0.15a | 20.01s | 105.01 | 0.000 | 0.493 | 0.1567 | -1.183 |
| 0.950 | 0.17a | 22.51s | 105.01 | 0.000 | 0.445 | 0.1772 | -1.380 |
| 0.982 | 0.19a | 25.01s | 105.01 | 0.000 | 0.391 | 0.1954 | -1.575 |
| 1.013 | 0.20a | 27.51s | 105.01 | 0.000 | 0.332 | 0.2112 | -1.768 |
| 1.041 | 0.22a | 30.01s | 105.01 | 0.000 | 0.270 | 0.2244 | -1.957 |
| 1.068 | 0.24a | 32.51s | 105.01 | 0.000 | 0.205 | 0.2347 | -2.143 |
| 1.093 | 0.26a | 35.01s | 105.01 | 0.000 | 0.139 | 0.2422 | -2.325 |
| 1.115 | 0.28a | 37.51s | 105.01 | 0.000 | 0.071 | 0.2468 | -2.502 |
| 1.136 | 0.30a | 40.01s | 105.01 | 0.000 | 0.002 | 0.2484 | -2.675 |
| 1.136 | 0.30a | 40.07s | 105.01 | 0.000 | 0.000 | 0.2484 | -2.680 |
| 1.154 | 0.31a | 42.51s | 105.01 | 0.000 | -0.068 | 0.2470 | -2.843 |
| 1.170 | 0.33a | 45.01s | 105.01 | 0.000 | -0.137 | 0.2425 | -3.006 |
| 1.184 | 0.35a | 47.51s | 105.01 | 0.000 | -0.207 | 0.2350 | -3.164 |
| 1.196 | 0.36a | 50.01s | 105.00 | 0.000 | -0.277 | 0.2244 | -3.315 |
| 1.205 | 0.38a | 52.51s | 105.00 | 0.000 | -0.347 | 0.2108 | -3.460 |
| 1.213 | 0.39a | 55.01s | 105.02 | 0.000 | -0.416 | 0.1942 | -3.600 |
| 1.218 | 0.41a | 57.51s | 105.01 | 0.000 | -0.485 | 0.1745 | -3.731 |
| 1.220 | 0.42a | 60.01s | 105.00 | 0.000 | -0.552 | 0.1519 | -3.856 |

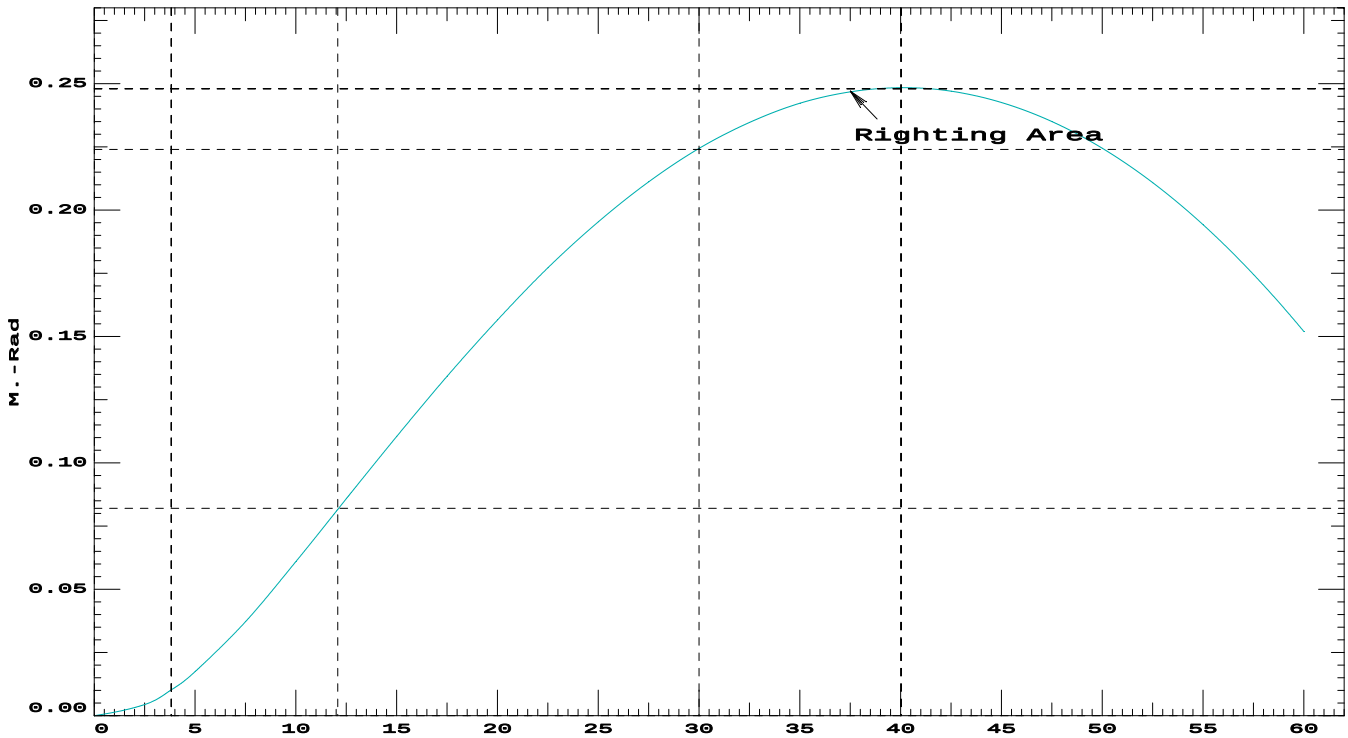
Distances in METERS.----Specific Gravity = 1.000.---------Area in m.-Rad.

| LIM STABILITY CRITERION | Min/Max | | Attained |
|---|---|---|---|
| (1) Area from abs 0.007 deg to MaxRA or Flood | > | 0.0800 m.-Rad | 0.0816 P |
| (2) Absolute Angle at RAzero | > | 20.00 deg | 40.07 P |

----------Relative angles measured from 0.007 ----------

No 6: 40 ton, Besaettning och foerraad



GHS 19.00 GOTA CARRIER

No 7: 50 ton, Besaettning och foerraad

WEIGHT and DISPLACEMENT and WATERPLANE and FREEBOARD STATUS

Baseline draft: 0.845 @ Origin

Trim: Aft 0.005/22.000, Heel: Port 0.02 deg.

| Part | Weight(MT) | LCG | TCG | VCG | FSM |
|---|---|---|---|---|---|
| LIGHT SHIP | 63.71 | 0.402a | 0.058p | 1.100 | |
| Besaettning | 0.30 | 3.100f | 0.000 | 5.300 | |
| Foerraad | 1.00 | 2.000a | 0.000 | 2.400 | |
| Daeckslast | 50.00 | 0.500f | 0.070s | 1.700 | |
| Total Weight--------> | 115.01 | 0.015a | 0.002p | 1.383 | |
| Total Tanks---------> | 0.00 | | | | 0.00 |

| | SpGr | Displ(MT) | LCB | TCB | VCB | RefHt |
|---|---|---|---|---|---|---|
| HULL | 1.000 | 115.01 | 0.015a | 0.002p | 0.455 | -0.845 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Righting Arms: | | | 0.000 | 0.000 | | |
| Part | SpGr | WPA | LCF | TCF | BML | BMT |
| Total Waterplane----> | 1.000 | 161.0 | 0.000 | 0.000 | 61.71 | 5.716 |
| | | MT/cm | -------m.- | MT/cm | GML | GMT |
| | | 1.61 | | 3.18 | 60.78 | 4.788 |

Distances in METERS.----------Moments in m.-MT.

Least freeboard is 0.251 m. located at 10.995a

Least extra freeboard (to margin line) is 0.176 m. located at 10.995a

MAXIMUM VCG vs. DISPLACEMENT

Trim = Aft 0.005/22.000 at zero heel (trim righting arm held at zero)

| Displacement | Margins | | |
|---|---|---|---|
| METRIC TONS | Max VCG | LIM1 | LIM2 |
| 115.01 | 1.408 | 1% | 27d |

Distances in METERS.---Specific Gravity = 1.000.---d = degrees.

| LIM | STABILITY CRITERION | Min/Max | |
|---|---|---|---|
| (1) | Area from 0 deg to MaxRA or Flood | > | 0.0800 m.-Rad |
| (2) | Absolute Angle at RAzero | > | 20.00 deg |

No 7: 50 ton, Besaettning och foerraad

RIGHTING ARMS vs HEEL ANGLE

LCG = 0.015a TCG = 0.002p VCG = 1.383

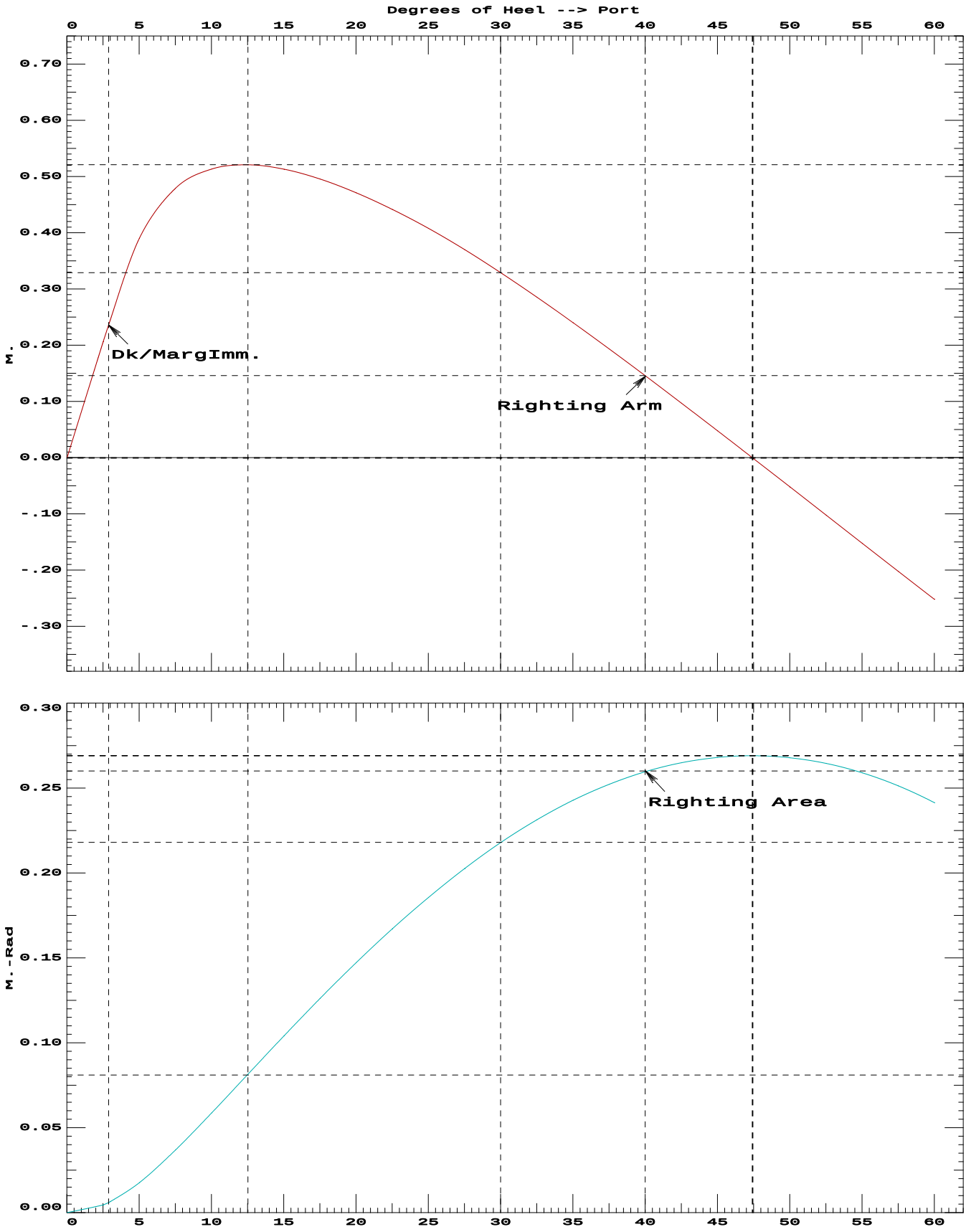
| Origin Depth | Degrees of Trim | Heel | Displacement Weight(MT) | Righting Arms in Trim | in Heel | Area | Freebd (Extra) |
|---|---|---|---|---|---|---|---|
| 0.845 | 0.01a | 0.02p | 115.00 | 0.000 | 0.000 | 0.0000 | 0.176 |
| 0.845 | 0.01a | 2.52p | 115.00 | 0.000 | 0.207 | 0.0045 | 0.023 |
| 0.844 | 0.01a | 2.89p | 115.01 | 0.000 | 0.236 | 0.0059 | 0.000 |
| 0.843 | 0.02a | 5.02p | 115.02 | 0.000 | 0.390 | 0.0176 | -0.131 |
| 0.858 | 0.02a | 7.52p | 115.01 | 0.000 | 0.479 | 0.0369 | -0.304 |
| 0.887 | 0.02a | 10.02p | 115.01 | 0.000 | 0.513 | 0.0587 | -0.492 |
| 0.924 | 0.03a | 12.52p | 115.01 | 0.000 | 0.521 | 0.0813 | -0.690 |
| 0.966 | 0.03a | 15.02p | 115.01 | 0.000 | 0.513 | 0.1038 | -0.892 |
| 1.012 | 0.03a | 17.52p | 115.01 | 0.000 | 0.496 | 0.1259 | -1.098 |
| 1.059 | 0.04a | 20.02p | 115.01 | 0.000 | 0.471 | 0.1470 | -1.306 |
| 1.107 | 0.04a | 22.52p | 115.01 | 0.000 | 0.441 | 0.1669 | -1.515 |
| 1.156 | 0.05a | 25.02p | 115.01 | 0.000 | 0.408 | 0.1855 | -1.723 |
| 1.202 | 0.05a | 27.52p | 115.01 | 0.000 | 0.370 | 0.2024 | -1.929 |
| 1.247 | 0.06a | 30.02p | 115.01 | 0.000 | 0.329 | 0.2177 | -2.131 |
| 1.289 | 0.06a | 32.52p | 115.01 | 0.000 | 0.285 | 0.2311 | -2.329 |
| 1.329 | 0.06a | 35.02p | 115.01 | 0.000 | 0.240 | 0.2426 | -2.524 |
| 1.366 | 0.07a | 37.52p | 115.01 | 0.000 | 0.193 | 0.2520 | -2.713 |
| 1.401 | 0.07a | 40.02p | 115.01 | 0.000 | 0.145 | 0.2594 | -2.898 |
| 1.433 | 0.08a | 42.52p | 115.01 | 0.000 | 0.097 | 0.2647 | -3.077 |
| 1.462 | 0.08a | 45.02p | 115.01 | 0.000 | 0.048 | 0.2678 | -3.251 |
| 1.487 | 0.08a | 47.40p | 115.02 | 0.000 | 0.000 | 0.2688 | -3.411 |
| 1.489 | 0.09a | 47.52p | 115.02 | 0.000 | -0.002 | 0.2688 | -3.418 |
| 1.512 | 0.09a | 50.02p | 115.00 | 0.000 | -0.052 | 0.2676 | -3.579 |
| 1.533 | 0.09a | 52.52p | 115.01 | 0.000 | -0.102 | 0.2643 | -3.734 |
| 1.551 | 0.10a | 55.02p | 115.01 | 0.000 | -0.152 | 0.2587 | -3.881 |
| 1.566 | 0.10a | 57.52p | 115.01 | 0.000 | -0.202 | 0.2510 | -4.022 |
| 1.578 | 0.10a | 60.02p | 115.01 | 0.000 | -0.252 | 0.2411 | -4.154 |

Distances in METERS.----Specific Gravity = 1.000.---------Area in m.-Rad.

| LIM STABILITY CRITERION | Min/Max | | Attained |
|---|---|---|---|
| (1) Area from abs 0.020 deg to MaxRA or Flood | > | 0.0800 m.-Rad | 0.0813 P |
| (2) Absolute Angle at RAzero | > | 20.00 deg | 47.40 P |

Relative angles measured from 0.020

No 7: 50 ton, Besaettning och foerraad



GOTA CARRIER
Draft is to baseline

HYDROSTATIC PROPERTIES
Trim: Aft 1.000/22.000, No Heel, Fixed VCG = 0.000

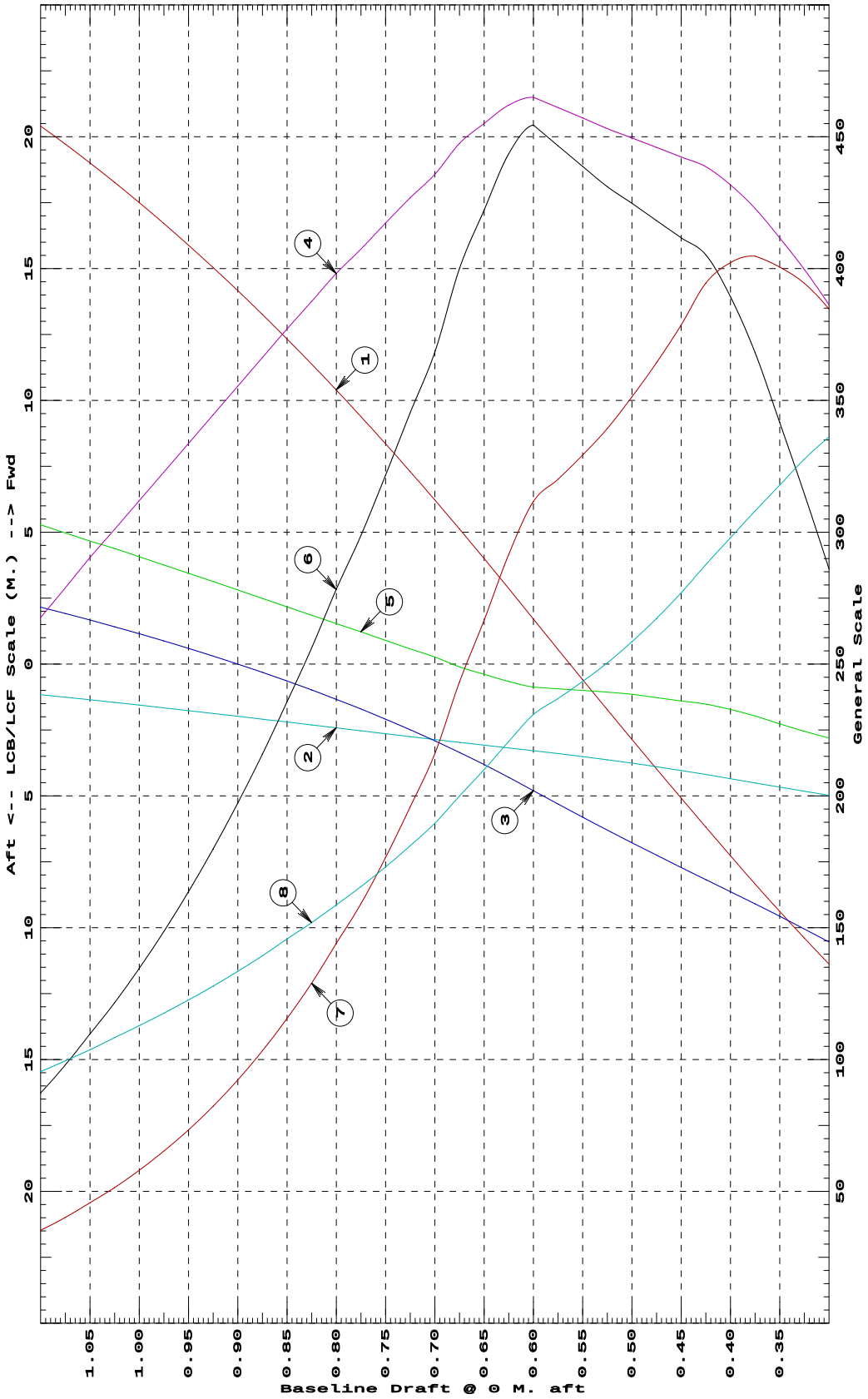
| Draft@ Origin | Displacement Weight(MT) | Buoyancy-Ctr. LCB | VCB | Weight/ cm | Moment/ LCF | cm trim | KML | KMT |
|---|---|---|---|---|---|---|---|---|
| 0.300 | 40.87 | 4.979a | 0.289 | 1.16 | 2.803a | 1.43 | 76.92 | 10.083 |
| 0.325 | 43.81 | 4.825a | 0.299 | 1.20 | 2.552a | 1.57 | 78.87 | 9.833 |
| 0.350 | 46.85 | 4.668a | 0.309 | 1.23 | 2.270a | 1.71 | 80.11 | 9.537 |
| 0.375 | 49.98 | 4.508a | 0.318 | 1.27 | 1.969a | 1.84 | 80.93 | 9.242 |
| 0.400 | 53.18 | 4.347a | 0.327 | 1.30 | 1.721a | 1.95 | 80.45 | 8.938 |
| 0.425 | 56.44 | 4.189a | 0.336 | 1.32 | 1.521a | 2.03 | 78.89 | 8.632 |
| 0.450 | 59.74 | 4.038a | 0.346 | 1.33 | 1.397a | 2.06 | 75.73 | 8.312 |
| 0.475 | 63.06 | 3.895a | 0.355 | 1.34 | 1.272a | 2.09 | 72.87 | 8.020 |
| 0.500 | 66.42 | 3.760a | 0.364 | 1.35 | 1.146a | 2.12 | 70.28 | 7.754 |
| 0.525 | 69.80 | 3.631a | 0.374 | 1.36 | 1.065a | 2.16 | 67.86 | 7.514 |
| 0.550 | 73.21 | 3.510a | 0.384 | 1.37 | 1.002a | 2.19 | 65.86 | 7.304 |
| 0.575 | 76.65 | 3.396a | 0.394 | 1.38 | 0.938a | 2.23 | 64.02 | 7.108 |
| 0.600 | 80.12 | 3.288a | 0.404 | 1.39 | 0.874a | 2.27 | 62.33 | 6.926 |
| 0.625 | 83.59 | 3.183a | 0.414 | 1.39 | 0.663a | 2.22 | 58.32 | 6.620 |
| 0.650 | 87.01 | 3.077a | 0.424 | 1.37 | 0.388a | 2.11 | 53.33 | 6.299 |
| 0.675 | 90.37 | 2.969a | 0.433 | 1.34 | 0.104a | 2.00 | 48.65 | 5.999 |
| 0.700 | 93.67 | 2.861a | 0.442 | 1.31 | 0.269f | 1.84 | 43.21 | 5.689 |
| 0.725 | 96.91 | 2.752a | 0.450 | 1.28 | 0.577f | 1.73 | 39.15 | 5.432 |
| 0.750 | 100.08 | 2.642a | 0.458 | 1.25 | 0.900f | 1.61 | 35.31 | 5.190 |
| 0.775 | 103.17 | 2.532a | 0.466 | 1.22 | 1.225f | 1.49 | 31.81 | 4.967 |
| 0.800 | 106.19 | 2.421a | 0.473 | 1.19 | 1.534f | 1.39 | 28.80 | 4.760 |
| 0.825 | 109.14 | 2.310a | 0.480 | 1.16 | 1.853f | 1.28 | 25.79 | 4.557 |
| 0.850 | 112.00 | 2.199a | 0.487 | 1.13 | 2.169f | 1.18 | 23.11 | 4.372 |
| 0.875 | 114.79 | 2.090a | 0.494 | 1.10 | 2.491f | 1.08 | 20.66 | 4.181 |
| 0.900 | 117.49 | 1.981a | 0.500 | 1.07 | 2.811f | 0.99 | 18.45 | 4.002 |
| 0.925 | 120.12 | 1.873a | 0.506 | 1.03 | 3.129f | 0.90 | 16.45 | 3.835 |
| 0.950 | 122.66 | 1.766a | 0.512 | 1.00 | 3.446f | 0.82 | 14.66 | 3.677 |
| 0.975 | 125.13 | 1.661a | 0.518 | 0.97 | 3.760f | 0.74 | 13.05 | 3.527 |
| 1.000 | 127.51 | 1.557a | 0.523 | 0.94 | 4.072f | 0.67 | 11.59 | 3.385 |
| 1.025 | 129.81 | 1.454a | 0.528 | 0.90 | 4.382f | 0.61 | 10.29 | 3.249 |
| 1.050 | 132.03 | 1.354a | 0.533 | 0.87 | 4.667f | 0.55 | 9.13 | 3.111 |
| 1.075 | 134.16 | 1.256a | 0.538 | 0.84 | 4.976f | 0.49 | 8.02 | 2.984 |
| 1.100 | 136.21 | 1.160a | 0.543 | 0.80 | 5.281f | 0.44 | 7.05 | 2.863 |

Distances in METERS.-----Specific Gravity = 1.000.-----------Moment in m.-MT.
Trim is per 22.00m.
Draft is from Baseline.

# LIGHT CRAFT DESIGN
## GOTA CARRIER
Draft is to baseline



HYDROSTATIC PROPERTIES at 1 M. AFT TRIM




(1) Displacement 1=.3 MT
(2) LCB (use top scale)
(3) VCB (KB) 1=.002 M.
(4) (4) Immersion 1=.003 MT/cm
(4) WPA 1=.3 Sq.M.
(5) LCF (use top scale)
(6) (7) (8) Moment/Trim 1=.005 M.-MT/cm
(6) KML 1=.2 M.
(8) KMT 1=.03 M.

Specific Gravity = 1.000  Assumed KG = 0.00 M.
Trim is per 22 M.  "K" = BPL

Draft is to baseline

HYDROSTATIC PROPERTIES
Trim: Aft 0.750/22.000, No Heel, Fixed VCG = 0.000

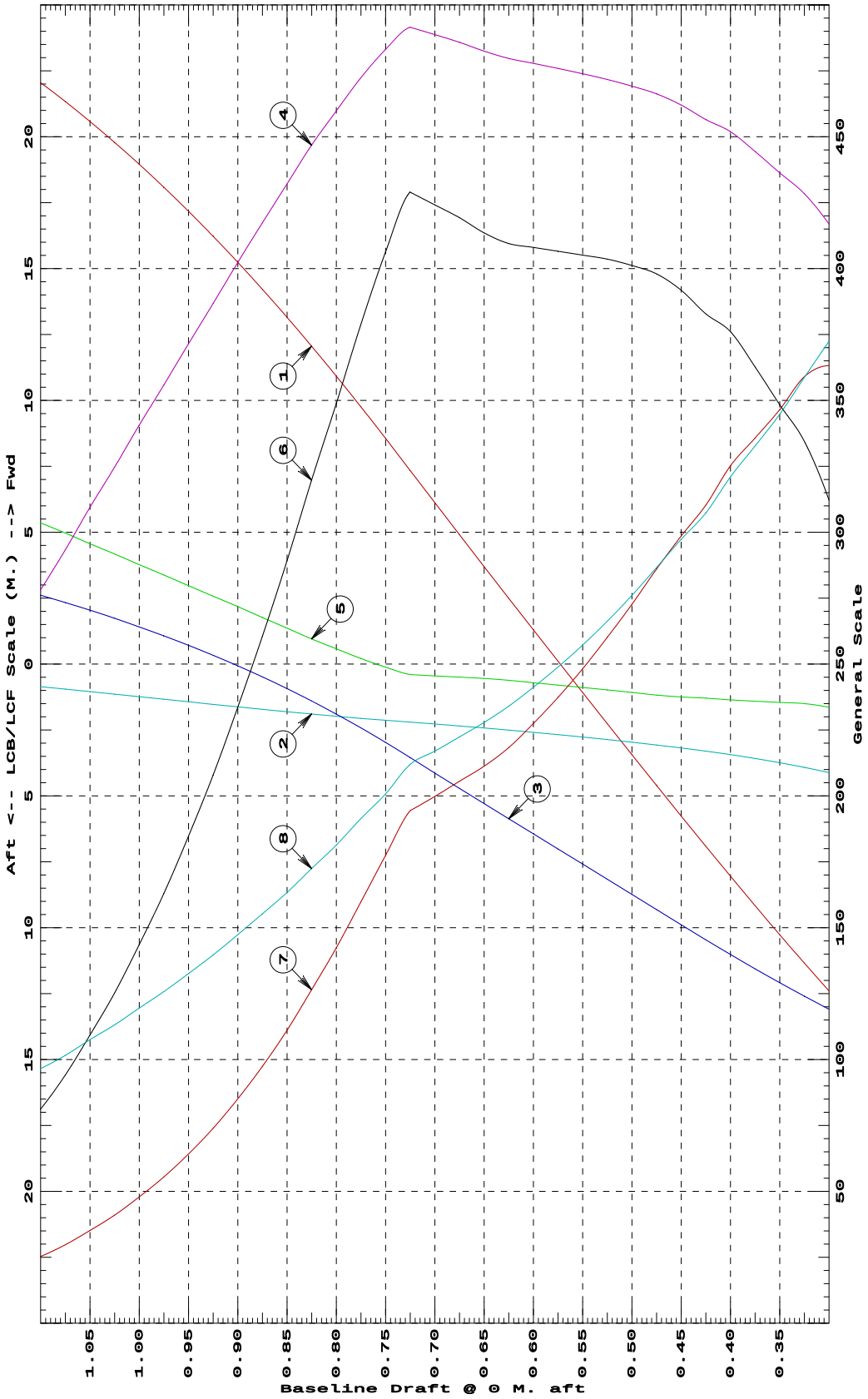
| Draft@ Origin | Displacement Weight(MT) | Buoyancy-Ctr. LCB | VCB | Weight/ cm | LCF | Moment/ cm trim | KML | KMT |
|---|---|---|---|---|---|---|---|---|
| 0.300 | 37.80 | 4.118a | 0.238 | 1.25 | 1.639a | 1.87 | 108.95 | 11.173 |
| 0.325 | 40.96 | 3.920a | 0.248 | 1.29 | 1.502a | 2.01 | 107.70 | 10.762 |
| 0.350 | 44.20 | 3.741a | 0.258 | 1.31 | 1.455a | 2.09 | 103.96 | 10.343 |
| 0.375 | 47.50 | 3.580a | 0.269 | 1.33 | 1.409a | 2.18 | 100.73 | 9.981 |
| 0.400 | 50.86 | 3.434a | 0.280 | 1.36 | 1.360a | 2.26 | 97.56 | 9.630 |
| 0.425 | 54.26 | 3.301a | 0.291 | 1.37 | 1.295a | 2.30 | 93.09 | 9.220 |
| 0.450 | 57.70 | 3.180a | 0.302 | 1.39 | 1.249a | 2.35 | 89.57 | 8.919 |
| 0.475 | 61.18 | 3.069a | 0.314 | 1.40 | 1.177a | 2.39 | 85.82 | 8.598 |
| 0.500 | 64.69 | 2.963a | 0.325 | 1.41 | 1.075a | 2.41 | 81.81 | 8.282 |
| 0.525 | 68.21 | 2.863a | 0.337 | 1.42 | 0.979a | 2.42 | 78.05 | 7.988 |
| 0.550 | 71.76 | 2.767a | 0.348 | 1.42 | 0.889a | 2.43 | 74.48 | 7.717 |
| 0.575 | 75.31 | 2.676a | 0.360 | 1.43 | 0.799a | 2.44 | 71.22 | 7.467 |
| 0.600 | 78.89 | 2.589a | 0.371 | 1.43 | 0.708a | 2.45 | 68.24 | 7.236 |
| 0.625 | 82.47 | 2.505a | 0.383 | 1.44 | 0.617a | 2.46 | 65.50 | 7.021 |
| 0.650 | 86.08 | 2.424a | 0.394 | 1.45 | 0.548a | 2.48 | 63.38 | 6.836 |
| 0.675 | 89.71 | 2.347a | 0.406 | 1.46 | 0.493a | 2.52 | 61.66 | 6.671 |
| 0.700 | 93.36 | 2.274a | 0.417 | 1.47 | 0.447a | 2.54 | 59.93 | 6.508 |
| 0.725 | 97.03 | 2.204a | 0.429 | 1.47 | 0.401a | 2.57 | 58.32 | 6.357 |
| 0.750 | 100.69 | 2.134a | 0.441 | 1.45 | 0.118a | 2.44 | 53.22 | 6.022 |
| 0.775 | 104.27 | 2.059a | 0.452 | 1.42 | 0.214f | 2.27 | 47.92 | 5.740 |
| 0.800 | 107.77 | 1.979a | 0.462 | 1.38 | 0.582f | 2.09 | 42.69 | 5.439 |
| 0.825 | 111.17 | 1.896a | 0.472 | 1.34 | 0.955f | 1.92 | 37.95 | 5.173 |
| 0.850 | 114.47 | 1.808a | 0.481 | 1.30 | 1.364f | 1.73 | 33.32 | 4.900 |
| 0.875 | 117.65 | 1.717a | 0.490 | 1.25 | 1.770f | 1.56 | 29.21 | 4.658 |
| 0.900 | 120.73 | 1.623a | 0.499 | 1.21 | 2.179f | 1.40 | 25.52 | 4.420 |
| 0.925 | 123.69 | 1.528a | 0.507 | 1.16 | 2.577f | 1.25 | 22.17 | 4.190 |
| 0.950 | 126.53 | 1.431a | 0.514 | 1.11 | 2.975f | 1.11 | 19.25 | 3.978 |
| 0.975 | 129.26 | 1.334a | 0.521 | 1.07 | 3.378f | 0.98 | 16.63 | 3.773 |
| 1.000 | 131.87 | 1.237a | 0.528 | 1.02 | 3.772f | 0.86 | 14.36 | 3.585 |
| 1.025 | 134.37 | 1.141a | 0.535 | 0.97 | 4.176f | 0.75 | 12.29 | 3.394 |
| 1.050 | 136.75 | 1.045a | 0.541 | 0.93 | 4.564f | 0.66 | 10.54 | 3.226 |
| 1.075 | 139.01 | 0.951a | 0.547 | 0.88 | 4.970f | 0.56 | 8.93 | 3.046 |
| 1.100 | 141.15 | 0.858a | 0.552 | 0.83 | 5.355f | 0.49 | 7.59 | 2.897 |

Distances in METERS.-----Specific Gravity = 1.000.-----------Moment in m.-MT.
Trim is per 22.00m.
Draft is from Baseline.

# LIGHT CRAFT DESIGN
## GOTA CARRIER
Draft is to baseline



HYDROSTATIC PROPERTIES at 0.75 M. AFT TRIM




(1) Displacement 1=.3 MT
(2) LCB (use top scale)
(3) VCB (KB) 1=.002 M.
(4) (4) Immersion 1=.003 MT/cm
(4) WPA 1=.3 Sq.M.
(5) LCF (use top scale)
(6) (7) (8) Moment/Trim 1=.006 M.-MT/cm
(7) KML 1=.3 M.
(8) KMT 1=.03 M.

Specific Gravity = 1.000  Assumed KG = 0.00 M.
Trim is per 22 M.  "K" = BPL

Draft is to baseline

HYDROSTATIC PROPERTIES
Trim: Aft 0.500/22.000, No Heel, Fixed VCG = 0.000

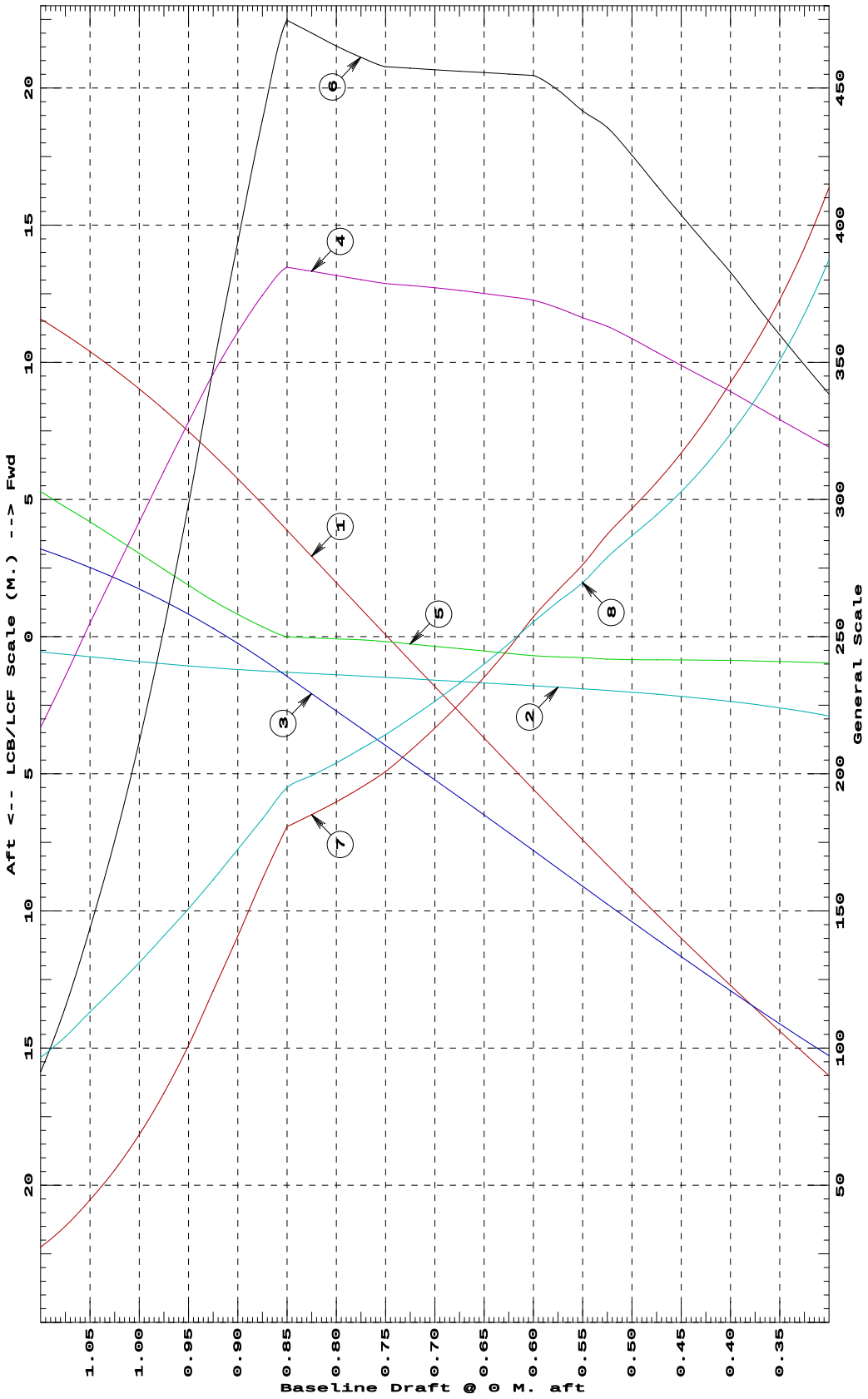
| Draft@ Origin | Displacement Weight(MT) | Buoyancy-Ctr. LCB | VCB | Weight/ cm | LCF | Moment/ cm trim | KML | KMT |
|---|---|---|---|---|---|---|---|---|
| 0.300 | 35.99 | 2.895a | 0.194 | 1.28 | 0.958a | 2.03 | 124.11 | 11.622 |
| 0.325 | 39.20 | 2.735a | 0.206 | 1.30 | 0.934a | 2.09 | 117.51 | 11.028 |
| 0.350 | 42.47 | 2.596a | 0.218 | 1.32 | 0.910a | 2.16 | 111.87 | 10.523 |
| 0.375 | 45.78 | 2.473a | 0.230 | 1.34 | 0.887a | 2.23 | 107.01 | 10.090 |
| 0.400 | 49.15 | 2.363a | 0.242 | 1.36 | 0.865a | 2.30 | 102.79 | 9.716 |
| 0.425 | 52.56 | 2.265a | 0.254 | 1.38 | 0.857a | 2.36 | 98.70 | 9.378 |
| 0.450 | 56.03 | 2.178a | 0.267 | 1.40 | 0.851a | 2.42 | 95.08 | 9.086 |
| 0.475 | 59.54 | 2.099a | 0.279 | 1.42 | 0.846a | 2.49 | 91.87 | 8.831 |
| 0.500 | 63.09 | 2.028a | 0.292 | 1.43 | 0.840a | 2.55 | 88.99 | 8.603 |
| 0.525 | 66.70 | 1.962a | 0.305 | 1.45 | 0.822a | 2.61 | 86.18 | 8.368 |
| 0.550 | 70.34 | 1.902a | 0.318 | 1.47 | 0.769a | 2.65 | 82.86 | 8.090 |
| 0.575 | 74.02 | 1.845a | 0.331 | 1.48 | 0.739a | 2.70 | 80.09 | 7.882 |
| 0.600 | 77.74 | 1.791a | 0.344 | 1.49 | 0.695a | 2.73 | 77.17 | 7.660 |
| 0.625 | 81.47 | 1.739a | 0.357 | 1.50 | 0.610a | 2.73 | 73.72 | 7.422 |
| 0.650 | 85.21 | 1.687a | 0.370 | 1.50 | 0.525a | 2.73 | 70.56 | 7.199 |
| 0.675 | 88.96 | 1.636a | 0.383 | 1.50 | 0.439a | 2.74 | 67.66 | 6.990 |
| 0.700 | 92.73 | 1.585a | 0.396 | 1.51 | 0.352a | 2.74 | 64.99 | 6.793 |
| 0.725 | 96.50 | 1.535a | 0.408 | 1.51 | 0.266a | 2.74 | 62.52 | 6.606 |
| 0.750 | 100.28 | 1.486a | 0.421 | 1.51 | 0.180a | 2.75 | 60.24 | 6.428 |
| 0.775 | 104.07 | 1.437a | 0.433 | 1.52 | 0.118a | 2.77 | 58.49 | 6.272 |
| 0.800 | 107.88 | 1.390a | 0.446 | 1.53 | 0.081a | 2.79 | 56.92 | 6.119 |
| 0.825 | 111.70 | 1.344a | 0.458 | 1.53 | 0.041a | 2.82 | 55.53 | 5.980 |
| 0.850 | 115.54 | 1.300a | 0.471 | 1.54 | 0.003a | 2.85 | 54.22 | 5.846 |
| 0.875 | 119.35 | 1.254a | 0.483 | 1.50 | 0.365f | 2.63 | 48.45 | 5.505 |
| 0.900 | 123.03 | 1.199a | 0.495 | 1.44 | 0.816f | 2.36 | 42.23 | 5.172 |
| 0.925 | 126.56 | 1.137a | 0.506 | 1.38 | 1.312f | 2.08 | 36.23 | 4.841 |
| 0.950 | 129.93 | 1.066a | 0.516 | 1.31 | 1.880f | 1.79 | 30.27 | 4.523 |
| 0.975 | 133.12 | 0.989a | 0.526 | 1.24 | 2.455f | 1.52 | 25.05 | 4.226 |
| 1.000 | 136.13 | 0.907a | 0.535 | 1.17 | 3.039f | 1.27 | 20.52 | 3.934 |
| 1.025 | 138.95 | 0.821a | 0.543 | 1.09 | 3.617f | 1.05 | 16.65 | 3.657 |
| 1.050 | 141.59 | 0.734a | 0.550 | 1.02 | 4.189f | 0.86 | 13.38 | 3.394 |
| 1.075 | 144.04 | 0.645a | 0.557 | 0.94 | 4.730f | 0.69 | 10.52 | 3.123 |
| 1.100 | 146.31 | 0.558a | 0.564 | 0.87 | 5.289f | 0.55 | 8.24 | 2.898 |

Distances in METERS.-----Specific Gravity = 1.000.-----------Moment in m.-MT.
Trim is per 22.00m.
Draft is from Baseline.

# LIGHT CRAFT DESIGN
## GOTA CARRIER
Draft is to baseline



HYDROSTATIC PROPERTIES at 0.5 M. AFT TRIM




(1) Displacement 1=.4 MT
(2) LCB (use top scale)
(3) VCB (KB) 1=.002 M.

(4) Immersion 1=.004 MT/cm
(4) WPA 1=.4 Sq.M.
(5) LCF (use top scale)

(6) Moment/Trim 1=.006 M.-MT/cm
(7) KML 1=.3 M.
(8) KMT 1=.03 M.

Specific Gravity = 1.000  Assumed KG = 0.00 M.
Trim is per 22 M.  "K" = BPL

Draft is to baseline

HYDROSTATIC PROPERTIES
Trim: Aft 0.250/22.000, No Heel, Fixed VCG = 0.000

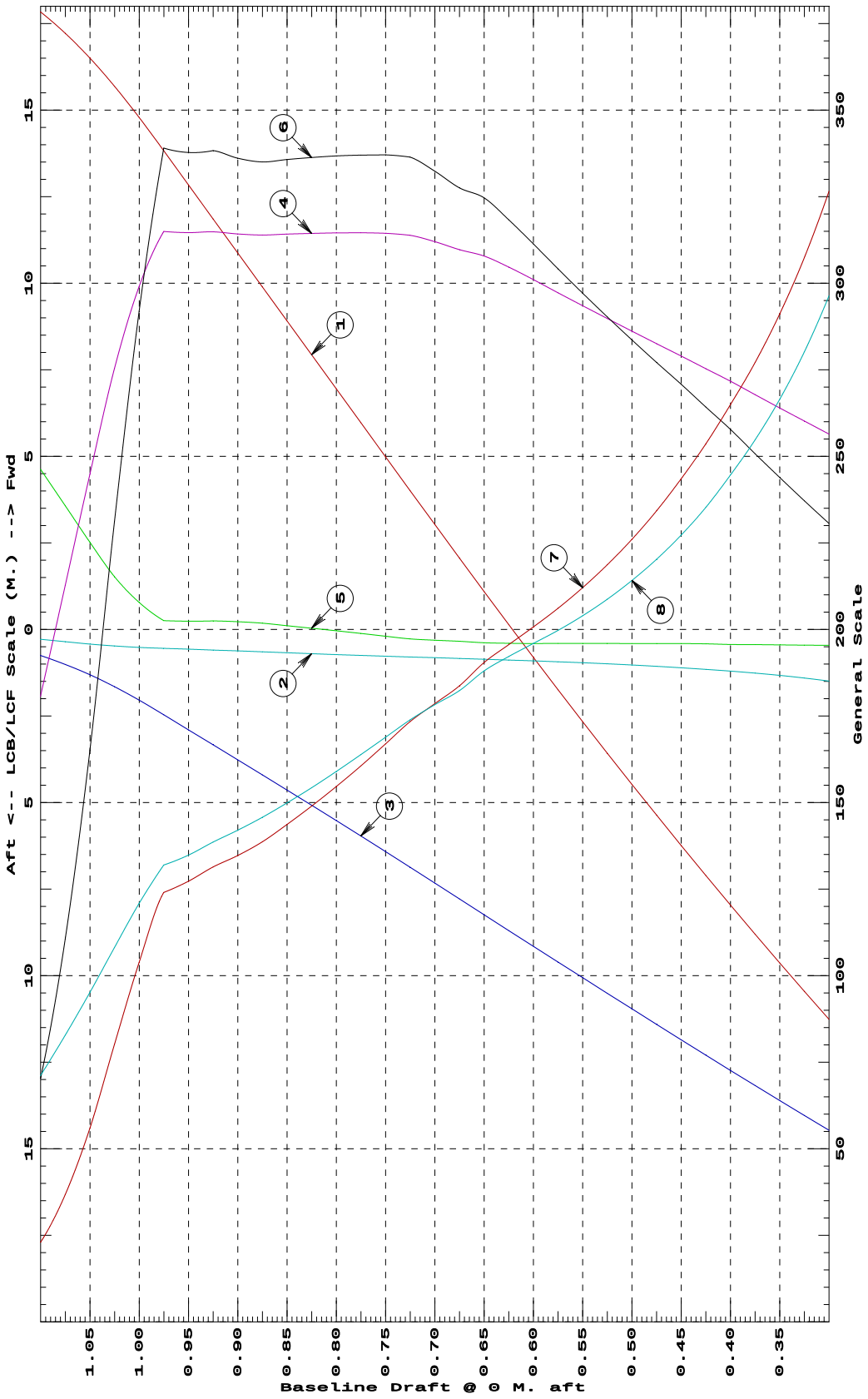
| Draft@ Origin | Displacement Weight(MT) | Buoyancy-Ctr. LCB | VCB | Weight/ cm | LCF | Moment/ cm trim | KML | KMT |
|---|---|---|---|---|---|---|---|---|
| 0.300 | 34.96 | 1.492a | 0.166 | 1.28 | 0.459a | 2.08 | 130.62 | 11.856 |
| 0.325 | 38.18 | 1.404a | 0.179 | 1.30 | 0.452a | 2.13 | 122.97 | 11.208 |
| 0.350 | 41.46 | 1.329a | 0.192 | 1.32 | 0.446a | 2.19 | 116.46 | 10.660 |
| 0.375 | 44.78 | 1.263a | 0.205 | 1.34 | 0.439a | 2.26 | 110.85 | 10.190 |
| 0.400 | 48.15 | 1.205a | 0.218 | 1.36 | 0.433a | 2.32 | 105.99 | 9.785 |
| 0.425 | 51.57 | 1.153a | 0.231 | 1.38 | 0.416a | 2.38 | 101.44 | 9.411 |
| 0.450 | 55.04 | 1.106a | 0.244 | 1.39 | 0.408a | 2.44 | 97.42 | 9.091 |
| 0.475 | 58.55 | 1.064a | 0.258 | 1.41 | 0.407a | 2.49 | 93.71 | 8.811 |
| 0.500 | 62.10 | 1.027a | 0.271 | 1.43 | 0.406a | 2.55 | 90.42 | 8.566 |
| 0.525 | 65.70 | 0.992a | 0.285 | 1.45 | 0.405a | 2.61 | 87.47 | 8.349 |
| 0.550 | 69.34 | 0.961a | 0.298 | 1.47 | 0.405a | 2.67 | 84.83 | 8.158 |
| 0.575 | 73.03 | 0.933a | 0.312 | 1.49 | 0.406a | 2.74 | 82.45 | 7.989 |
| 0.600 | 76.77 | 0.907a | 0.325 | 1.51 | 0.406a | 2.80 | 80.30 | 7.839 |
| 0.625 | 80.55 | 0.883a | 0.339 | 1.52 | 0.400a | 2.86 | 78.24 | 7.688 |
| 0.650 | 84.38 | 0.860a | 0.353 | 1.54 | 0.383a | 2.92 | 76.18 | 7.521 |
| 0.675 | 88.23 | 0.839a | 0.366 | 1.55 | 0.342a | 2.95 | 73.50 | 7.294 |
| 0.700 | 92.12 | 0.817a | 0.380 | 1.56 | 0.313a | 2.99 | 71.43 | 7.131 |
| 0.725 | 96.03 | 0.796a | 0.394 | 1.57 | 0.274a | 3.03 | 69.36 | 6.955 |
| 0.750 | 99.96 | 0.774a | 0.408 | 1.57 | 0.197a | 3.03 | 66.76 | 6.754 |
| 0.775 | 103.89 | 0.750a | 0.421 | 1.57 | 0.116a | 3.03 | 64.23 | 6.554 |
| 0.800 | 107.82 | 0.726a | 0.434 | 1.57 | 0.038a | 3.03 | 61.84 | 6.359 |
| 0.825 | 111.74 | 0.700a | 0.448 | 1.57 | 0.036f | 3.03 | 59.59 | 6.171 |
| 0.850 | 115.67 | 0.674a | 0.461 | 1.57 | 0.108f | 3.02 | 57.47 | 5.995 |
| 0.875 | 119.59 | 0.648a | 0.474 | 1.57 | 0.179f | 3.02 | 55.47 | 5.830 |
| 0.900 | 123.51 | 0.621a | 0.487 | 1.57 | 0.222f | 3.02 | 53.88 | 5.681 |
| 0.925 | 127.44 | 0.595a | 0.500 | 1.57 | 0.246f | 3.04 | 52.56 | 5.544 |
| 0.950 | 131.37 | 0.570a | 0.513 | 1.57 | 0.239f | 3.04 | 50.91 | 5.392 |
| 0.975 | 135.30 | 0.546a | 0.526 | 1.57 | 0.252f | 3.05 | 49.61 | 5.278 |
| 1.000 | 139.16 | 0.518a | 0.539 | 1.50 | 0.781f | 2.63 | 41.54 | 4.835 |
| 1.025 | 142.76 | 0.477a | 0.550 | 1.38 | 1.523f | 2.08 | 32.07 | 4.326 |
| 1.050 | 146.01 | 0.422a | 0.561 | 1.22 | 2.521f | 1.49 | 22.37 | 3.806 |
| 1.075 | 148.87 | 0.356a | 0.570 | 1.06 | 3.574f | 1.00 | 14.71 | 3.312 |
| 1.100 | 151.33 | 0.284a | 0.577 | 0.90 | 4.621f | 0.63 | 9.21 | 2.848 |

Distances in METERS.-----Specific Gravity = 1.000.-----------Moment in m.-MT.
Trim is per 22.00m.
Draft is from Baseline.

LIGHT CRAFT DESIGN
GOTA CARRIER
Draft is to baseline



HYDROSTATIC PROPERTIES at 0.25 M. AFT TRIM




(1) Displacement 1=.4 MT
(2) LCB (use top scale)
(3) VCB (KB) 1=.003 M.
(4) Immersion 1=.005 MT/cm
(4) WPA 1=.5 Sq.M.
(5) LCF (use top scale)
(6) Moment/Trim 1=.009 M.-MT/cm
(7) KML 1=.4 M.
(8) KMT 1=.04 M.

Specific Gravity = 1.000  Assumed KG = 0.00 M.
Trim is per 22 M.  "K" = BPL

Draft is to baseline

HYDROSTATIC PROPERTIES
No Trim, No Heel, Fixed VCG = 0.000

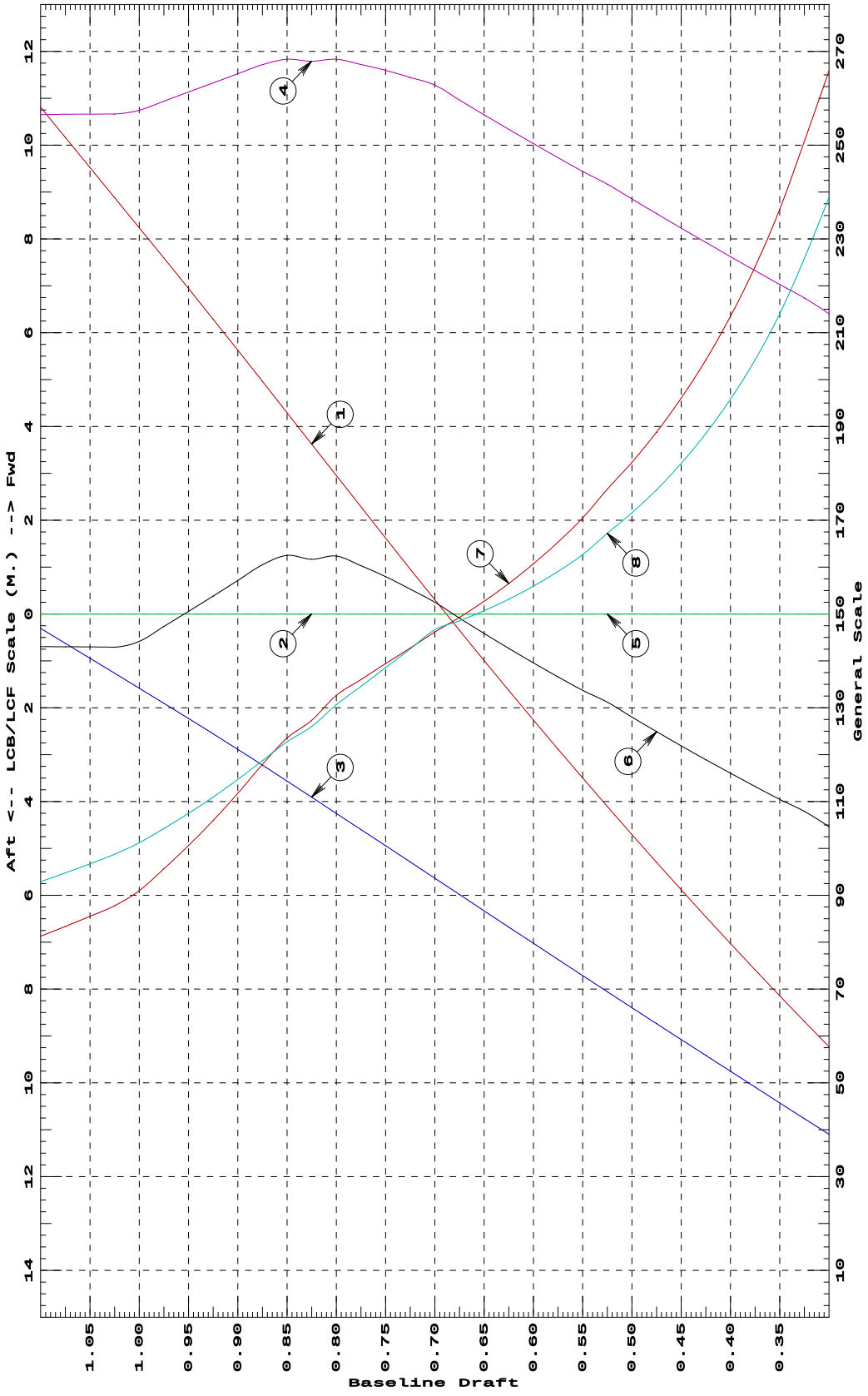
| Draft@ Origin | Displacement Weight(MT) | Buoyancy-Ctr. LCB | VCB | Weight/ cm | LCF | Moment/ cm trim | KML | KMT |
|---|---|---|---|---|---|---|---|---|
| 0.300 | 34.61 | 0.000 | 0.156 | 1.28 | 0.000 | 2.09 | 132.95 | 11.945 |
| 0.325 | 37.85 | 0.000 | 0.169 | 1.30 | 0.000 | 2.16 | 125.43 | 11.293 |
| 0.350 | 41.13 | 0.000 | 0.183 | 1.32 | 0.000 | 2.21 | 118.17 | 10.701 |
| 0.375 | 44.46 | 0.000 | 0.196 | 1.34 | 0.000 | 2.26 | 112.05 | 10.212 |
| 0.400 | 47.83 | 0.000 | 0.210 | 1.36 | 0.000 | 2.32 | 106.75 | 9.791 |
| 0.425 | 51.25 | 0.000 | 0.223 | 1.38 | 0.000 | 2.38 | 102.11 | 9.425 |
| 0.450 | 54.71 | 0.000 | 0.237 | 1.39 | 0.000 | 2.44 | 98.02 | 9.106 |
| 0.475 | 58.22 | 0.000 | 0.250 | 1.41 | 0.000 | 2.50 | 94.40 | 8.826 |
| 0.500 | 61.77 | 0.000 | 0.264 | 1.43 | 0.000 | 2.56 | 91.18 | 8.579 |
| 0.525 | 65.37 | 0.000 | 0.278 | 1.45 | 0.000 | 2.62 | 88.30 | 8.361 |
| 0.550 | 69.01 | 0.000 | 0.291 | 1.47 | 0.000 | 2.67 | 85.25 | 8.133 |
| 0.575 | 72.70 | 0.000 | 0.305 | 1.48 | 0.000 | 2.73 | 82.67 | 7.955 |
| 0.600 | 76.43 | 0.000 | 0.319 | 1.50 | 0.000 | 2.79 | 80.35 | 7.797 |
| 0.625 | 80.21 | 0.000 | 0.333 | 1.52 | 0.000 | 2.85 | 78.26 | 7.658 |
| 0.650 | 84.03 | 0.000 | 0.347 | 1.54 | 0.000 | 2.92 | 76.36 | 7.535 |
| 0.675 | 87.90 | 0.000 | 0.361 | 1.56 | 0.000 | 2.98 | 74.65 | 7.427 |
| 0.700 | 91.82 | 0.000 | 0.375 | 1.58 | 0.000 | 3.05 | 73.09 | 7.332 |
| 0.725 | 95.77 | 0.000 | 0.388 | 1.59 | 0.000 | 3.11 | 71.36 | 7.126 |
| 0.750 | 99.74 | 0.000 | 0.402 | 1.60 | 0.000 | 3.16 | 69.70 | 6.927 |
| 0.775 | 103.73 | 0.000 | 0.416 | 1.60 | 0.000 | 3.21 | 68.00 | 6.728 |
| 0.800 | 107.74 | 0.000 | 0.430 | 1.61 | 0.000 | 3.25 | 66.30 | 6.532 |
| 0.825 | 111.75 | 0.000 | 0.444 | 1.61 | 0.000 | 3.23 | 63.65 | 6.299 |
| 0.850 | 115.78 | 0.000 | 0.457 | 1.61 | 0.000 | 3.25 | 61.76 | 6.136 |
| 0.875 | 119.79 | 0.000 | 0.471 | 1.60 | 0.000 | 3.21 | 58.95 | 5.935 |
| 0.900 | 123.78 | 0.000 | 0.485 | 1.59 | 0.000 | 3.14 | 55.85 | 5.734 |
| 0.925 | 127.75 | 0.000 | 0.498 | 1.58 | 0.000 | 3.08 | 52.97 | 5.547 |
| 0.950 | 131.68 | 0.000 | 0.511 | 1.57 | 0.000 | 3.01 | 50.30 | 5.373 |
| 0.975 | 135.58 | 0.000 | 0.524 | 1.56 | 0.000 | 2.95 | 47.81 | 5.211 |
| 1.000 | 139.45 | 0.000 | 0.537 | 1.54 | 0.000 | 2.88 | 45.48 | 5.060 |
| 1.025 | 143.30 | 0.000 | 0.550 | 1.54 | 0.000 | 2.86 | 43.88 | 4.937 |
| 1.050 | 147.15 | 0.000 | 0.562 | 1.54 | 0.000 | 2.86 | 42.75 | 4.835 |
| 1.075 | 151.00 | 0.000 | 0.575 | 1.54 | 0.000 | 2.86 | 41.67 | 4.738 |
| 1.100 | 154.85 | 0.000 | 0.588 | 1.54 | 0.000 | 2.86 | 40.64 | 4.645 |

Distances in METERS.-----Specific Gravity = 1.000.-----------Moment in m.-MT.
Trim is per 22.00m.
Draft is from Baseline.

LIGHT CRAFT DESIGN
GOTA CARRIER
Draft is to baseline



HYDROSTATIC PROPERTIES at LEVEL TRIM




(1) Displacement 1=.6 MT
(2) LCB (use top scale)
(3) VCB (KB) 1=.004 M.
(4) Immersion 1=.006 MT/cm
(4) WPA 1=.6 Sq.M.
(5) LCF (use top scale)
(6) Moment/Trim 1=.02 M.-MT/cm
(7) KML 1=.5 M.
(8) KMT 1=.05 M.

Specific Gravity = 1.000  Assumed KG = 0.00 M.
Trim is per 22 M.  "K" = BPL

Draft is to baseline

HYDROSTATIC PROPERTIES
Trim: Fwd 0.250/22.000, No Heel, Fixed VCG = 0.000

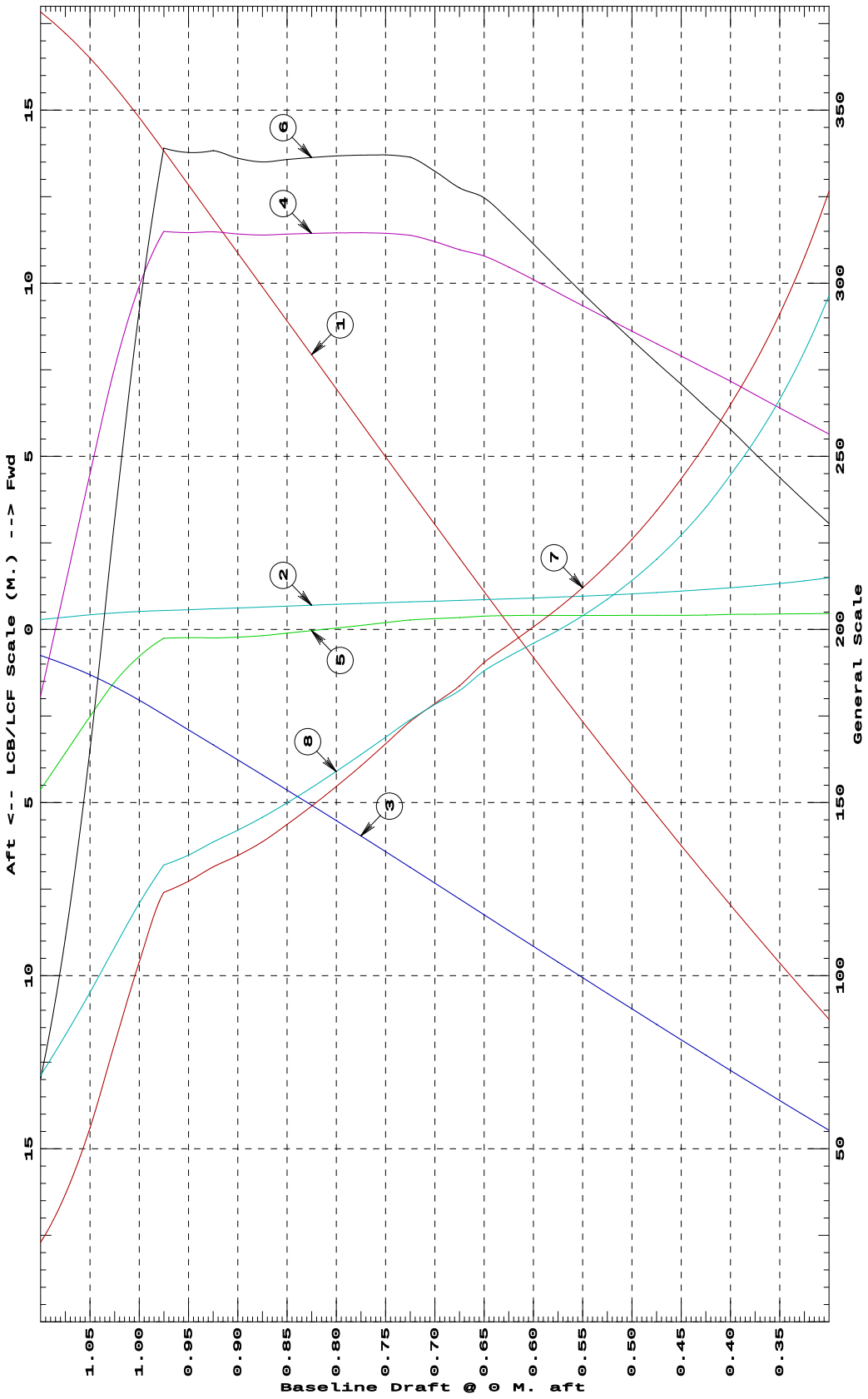
| Draft@ Origin | Displacement Weight(MT) | Buoyancy-Ctr. LCB | VCB | Weight/ cm | LCF | Moment/ cm trim | KML | KMT |
|---|---|---|---|---|---|---|---|---|
| 0.300 | 34.96 | 1.492f | 0.166 | 1.28 | 0.459f | 2.08 | 130.62 | 11.856 |
| 0.325 | 38.18 | 1.404f | 0.179 | 1.30 | 0.452f | 2.13 | 122.97 | 11.209 |
| 0.350 | 41.46 | 1.329f | 0.192 | 1.32 | 0.446f | 2.19 | 116.46 | 10.660 |
| 0.375 | 44.78 | 1.263f | 0.205 | 1.34 | 0.439f | 2.26 | 110.85 | 10.190 |
| 0.400 | 48.15 | 1.205f | 0.218 | 1.36 | 0.433f | 2.32 | 105.99 | 9.785 |
| 0.425 | 51.57 | 1.153f | 0.231 | 1.38 | 0.416f | 2.38 | 101.44 | 9.411 |
| 0.450 | 55.04 | 1.106f | 0.244 | 1.39 | 0.408f | 2.44 | 97.42 | 9.091 |
| 0.475 | 58.55 | 1.064f | 0.258 | 1.41 | 0.407f | 2.49 | 93.71 | 8.812 |
| 0.500 | 62.10 | 1.027f | 0.271 | 1.43 | 0.406f | 2.55 | 90.42 | 8.566 |
| 0.525 | 65.70 | 0.992f | 0.285 | 1.45 | 0.405f | 2.61 | 87.47 | 8.350 |
| 0.550 | 69.34 | 0.961f | 0.298 | 1.47 | 0.405f | 2.67 | 84.83 | 8.158 |
| 0.575 | 73.03 | 0.933f | 0.312 | 1.49 | 0.406f | 2.74 | 82.45 | 7.989 |
| 0.600 | 76.77 | 0.907f | 0.325 | 1.51 | 0.406f | 2.80 | 80.30 | 7.839 |
| 0.625 | 80.55 | 0.883f | 0.339 | 1.52 | 0.400f | 2.86 | 78.24 | 7.688 |
| 0.650 | 84.38 | 0.860f | 0.353 | 1.54 | 0.383f | 2.92 | 76.18 | 7.522 |
| 0.675 | 88.23 | 0.839f | 0.366 | 1.55 | 0.342f | 2.95 | 73.50 | 7.294 |
| 0.700 | 92.12 | 0.817f | 0.380 | 1.56 | 0.313f | 2.99 | 71.43 | 7.132 |
| 0.725 | 96.03 | 0.796f | 0.394 | 1.57 | 0.274f | 3.03 | 69.36 | 6.956 |
| 0.750 | 99.96 | 0.774f | 0.408 | 1.57 | 0.197f | 3.03 | 66.76 | 6.755 |
| 0.775 | 103.89 | 0.750f | 0.421 | 1.57 | 0.116f | 3.03 | 64.23 | 6.554 |
| 0.800 | 107.82 | 0.726f | 0.434 | 1.57 | 0.038f | 3.03 | 61.84 | 6.359 |
| 0.825 | 111.74 | 0.700f | 0.448 | 1.57 | 0.036a | 3.03 | 59.59 | 6.172 |
| 0.850 | 115.67 | 0.674f | 0.461 | 1.57 | 0.108a | 3.02 | 57.47 | 5.995 |
| 0.875 | 119.59 | 0.648f | 0.474 | 1.57 | 0.179a | 3.02 | 55.47 | 5.830 |
| 0.900 | 123.51 | 0.621f | 0.487 | 1.57 | 0.222a | 3.02 | 53.88 | 5.681 |
| 0.925 | 127.44 | 0.595f | 0.500 | 1.57 | 0.246a | 3.04 | 52.56 | 5.544 |
| 0.950 | 131.37 | 0.570f | 0.513 | 1.57 | 0.239a | 3.04 | 50.91 | 5.392 |
| 0.975 | 135.30 | 0.546f | 0.526 | 1.57 | 0.252a | 3.05 | 49.61 | 5.278 |
| 1.000 | 139.16 | 0.518f | 0.539 | 1.50 | 0.781a | 2.63 | 41.54 | 4.834 |
| 1.025 | 142.76 | 0.477f | 0.550 | 1.38 | 1.523a | 2.08 | 32.07 | 4.325 |
| 1.050 | 146.01 | 0.422f | 0.561 | 1.22 | 2.521a | 1.49 | 22.37 | 3.805 |
| 1.075 | 148.87 | 0.356f | 0.570 | 1.06 | 3.574a | 1.00 | 14.71 | 3.311 |
| 1.100 | 151.33 | 0.284f | 0.577 | 0.90 | 4.621a | 0.63 | 9.21 | 2.847 |

Distances in METERS.-----Specific Gravity = 1.000.-----------Moment in m.-MT.
Trim is per 22.00m.
Draft is from Baseline.

# LIGHT CRAFT DESIGN
## GOTA CARRIER
Draft is to baseline



HYDROSTATIC PROPERTIES at 0.25 M. FWD TRIM




(1) Displacement 1=.4 MT
(2) LCB (use top scale)
(3) VCB (KB) 1=.003 M.
(4) (4) Immersion 1=.005 MT/cm
(4) WPA 1=.5 Sq.M.
(5) LCF (use top scale)
(6) (7) (8) Moment/Trim 1=.009 M.-MT/cm
(6) KML 1=.4 M.
(8) KMT 1=.04 M.

Specific Gravity = 1.000  Assumed KG = 0.00 M.
Trim is per 22 M.  "K" = BPL

Draft is to baseline

HYDROSTATIC PROPERTIES
Trim: Fwd 0.500/22.000, No Heel, Fixed VCG = 0.000

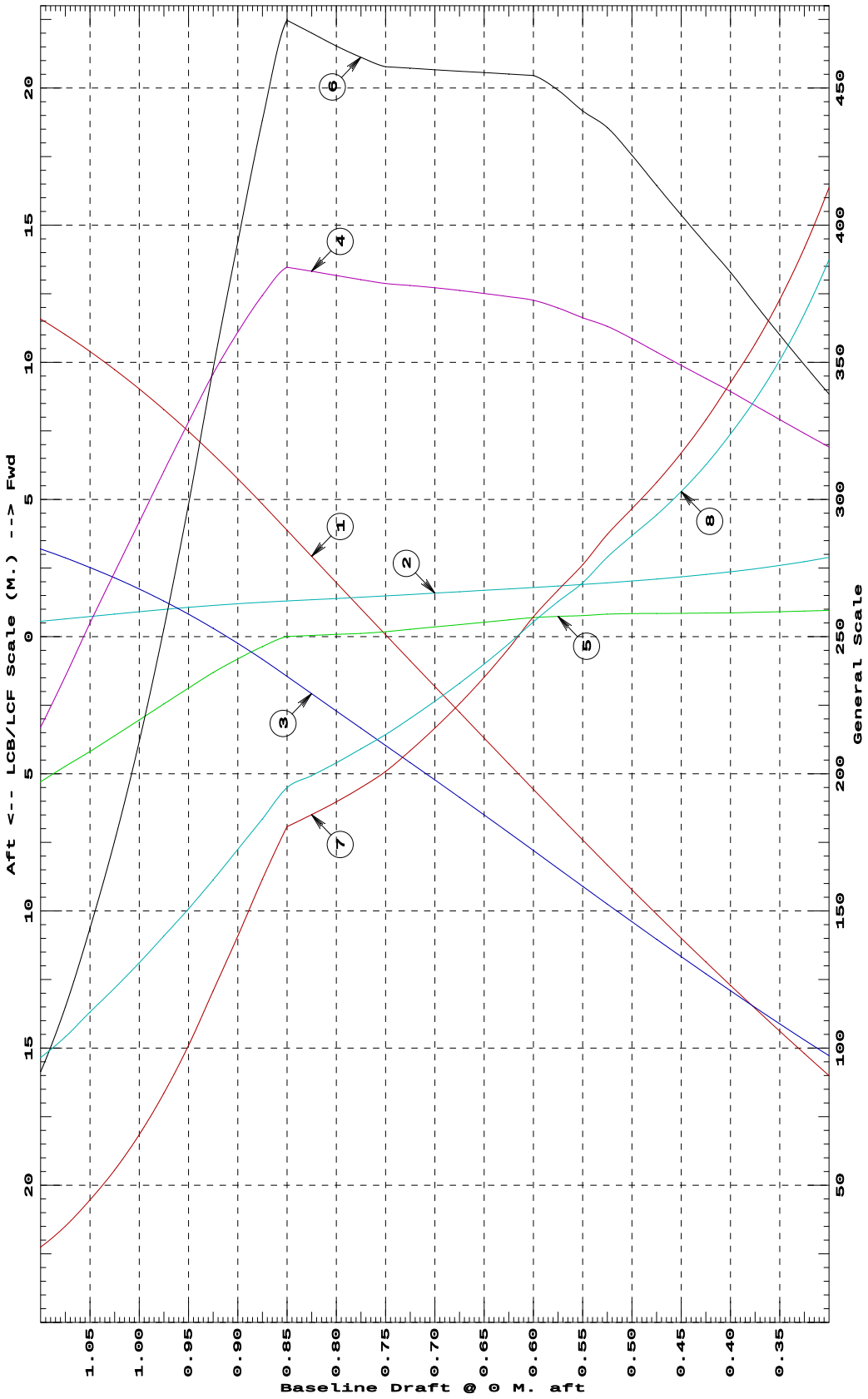
| Draft@ Origin | Displacement Weight(MT) | Buoyancy-Ctr. LCB | VCB | Weight/ cm | LCF | Moment/ cm trim | KML | KMT |
|---|---|---|---|---|---|---|---|---|
| 0.300 | 35.99 | 2.895f | 0.194 | 1.28 | 0.958f | 2.03 | 124.11 | 11.622 |
| 0.325 | 39.20 | 2.735f | 0.206 | 1.30 | 0.934f | 2.09 | 117.51 | 11.028 |
| 0.350 | 42.47 | 2.596f | 0.218 | 1.32 | 0.910f | 2.16 | 111.87 | 10.523 |
| 0.375 | 45.78 | 2.473f | 0.230 | 1.34 | 0.887f | 2.23 | 107.01 | 10.090 |
| 0.400 | 49.15 | 2.363f | 0.242 | 1.36 | 0.865f | 2.30 | 102.79 | 9.716 |
| 0.425 | 52.56 | 2.265f | 0.254 | 1.38 | 0.857f | 2.36 | 98.70 | 9.379 |
| 0.450 | 56.03 | 2.178f | 0.267 | 1.40 | 0.851f | 2.42 | 95.08 | 9.087 |
| 0.475 | 59.54 | 2.099f | 0.279 | 1.42 | 0.846f | 2.49 | 91.87 | 8.831 |
| 0.500 | 63.09 | 2.028f | 0.292 | 1.43 | 0.840f | 2.55 | 88.99 | 8.604 |
| 0.525 | 66.70 | 1.962f | 0.305 | 1.45 | 0.822f | 2.61 | 86.18 | 8.369 |
| 0.550 | 70.34 | 1.902f | 0.318 | 1.47 | 0.769f | 2.65 | 82.86 | 8.090 |
| 0.575 | 74.02 | 1.845f | 0.331 | 1.48 | 0.739f | 2.70 | 80.09 | 7.883 |
| 0.600 | 77.74 | 1.791f | 0.344 | 1.49 | 0.695f | 2.73 | 77.17 | 7.661 |
| 0.625 | 81.47 | 1.739f | 0.357 | 1.50 | 0.610f | 2.73 | 73.72 | 7.423 |
| 0.650 | 85.21 | 1.687f | 0.370 | 1.50 | 0.525f | 2.73 | 70.56 | 7.200 |
| 0.675 | 88.96 | 1.636f | 0.383 | 1.50 | 0.439f | 2.74 | 67.66 | 6.991 |
| 0.700 | 92.73 | 1.585f | 0.396 | 1.51 | 0.352f | 2.74 | 64.99 | 6.793 |
| 0.725 | 96.50 | 1.535f | 0.408 | 1.51 | 0.266f | 2.74 | 62.52 | 6.606 |
| 0.750 | 100.28 | 1.486f | 0.421 | 1.51 | 0.180f | 2.75 | 60.24 | 6.429 |
| 0.775 | 104.07 | 1.437f | 0.433 | 1.52 | 0.118f | 2.77 | 58.49 | 6.272 |
| 0.800 | 107.88 | 1.390f | 0.446 | 1.53 | 0.081f | 2.79 | 56.92 | 6.119 |
| 0.825 | 111.70 | 1.344f | 0.458 | 1.53 | 0.041f | 2.82 | 55.53 | 5.980 |
| 0.850 | 115.54 | 1.300f | 0.471 | 1.54 | 0.003f | 2.85 | 54.22 | 5.846 |
| 0.875 | 119.35 | 1.254f | 0.483 | 1.50 | 0.365a | 2.63 | 48.45 | 5.504 |
| 0.900 | 123.02 | 1.199f | 0.495 | 1.44 | 0.816a | 2.36 | 42.23 | 5.171 |
| 0.925 | 126.56 | 1.137f | 0.506 | 1.38 | 1.312a | 2.08 | 36.23 | 4.840 |
| 0.950 | 129.93 | 1.066f | 0.516 | 1.31 | 1.880a | 1.79 | 30.27 | 4.522 |
| 0.975 | 133.12 | 0.989f | 0.526 | 1.24 | 2.455a | 1.52 | 25.05 | 4.225 |
| 1.000 | 136.13 | 0.907f | 0.535 | 1.17 | 3.039a | 1.27 | 20.52 | 3.933 |
| 1.025 | 138.95 | 0.821f | 0.543 | 1.09 | 3.617a | 1.05 | 16.65 | 3.656 |
| 1.050 | 141.59 | 0.734f | 0.550 | 1.02 | 4.189a | 0.86 | 13.38 | 3.393 |
| 1.075 | 144.04 | 0.645f | 0.557 | 0.94 | 4.730a | 0.69 | 10.52 | 3.123 |
| 1.100 | 146.31 | 0.558f | 0.564 | 0.87 | 5.289a | 0.55 | 8.24 | 2.897 |

Distances in METERS.-----Specific Gravity = 1.000.-----------Moment in m.-MT.
Trim is per 22.00m.
Draft is from Baseline.

LIGHT CRAFT DESIGN
GOTA CARRIER
Draft is to baseline



HYDROSTATIC PROPERTIES at 0.5 M. FWD TRIM




(1) Displacement 1=.4 MT
(2) LCB (use top scale)
(3) VCB (KB) 1=.002 M.

(4) Immersion 1=.004 MT/cm
(4) WPA 1=.4 Sq.M.
(5) LCF (use top scale)

(6) Moment/Trim 1=.006 M.-MT/cm
(7) KML 1=.3 M.
(8) KMT 1=.03 M.

Specific Gravity = 1.000  Assumed KG = 0.00 M.
Trim is per 22 M.  "K" = BPL

GOTA CARRIER
Draft is to baseline

CROSS CURVES OF STABILITY
Showing righting arms in heel at VCG = 0.00
Trim: Aft 1.000/22.000 at zero heel (trim righting arm held at zero)

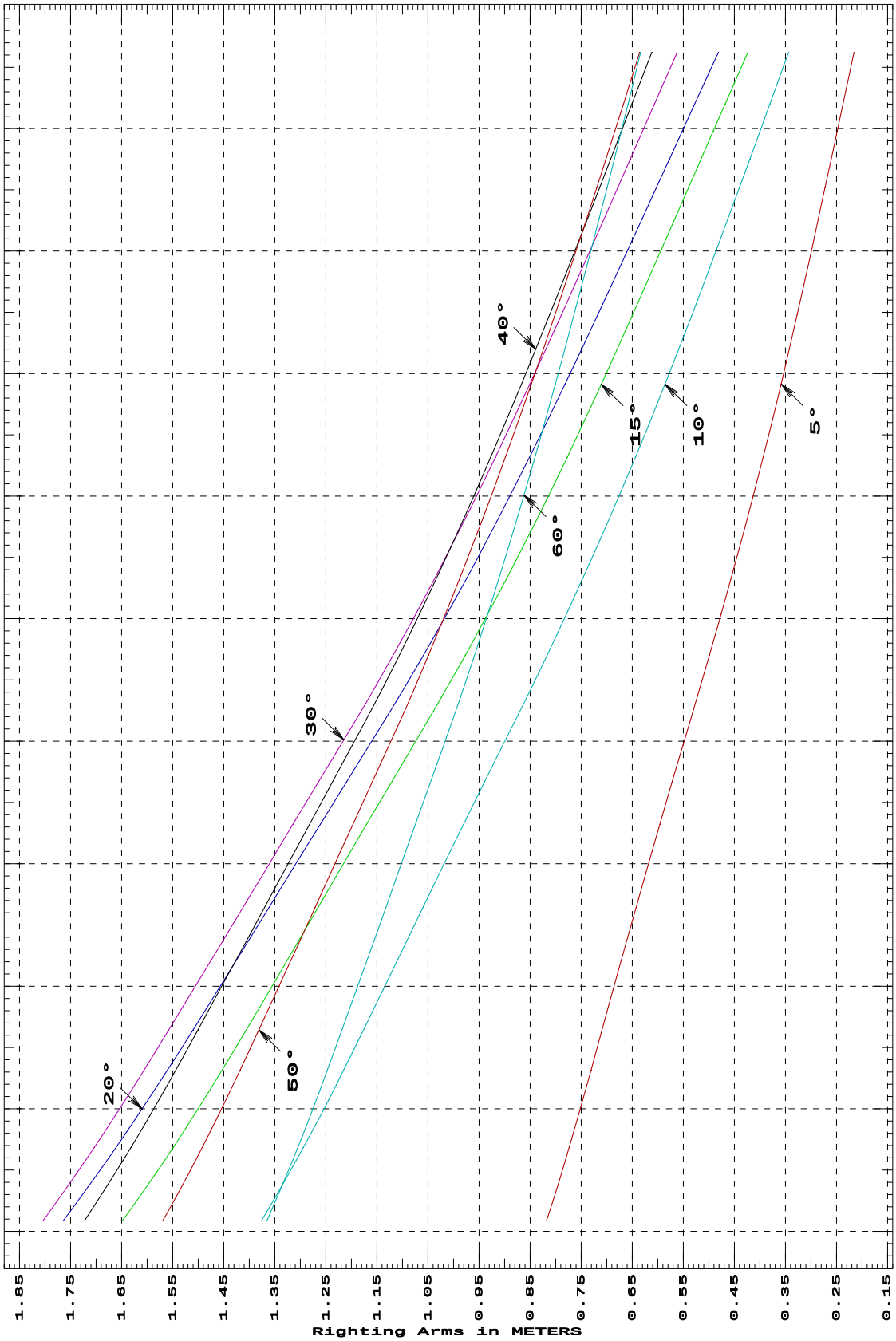
| Displacement | Heel Angles in Degrees | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| METRIC TONS | 5.00s | 10.00s | 15.00s | 20.00s | 30.00s | 40.00s | 50.00s | 60.00s |
| 40.87 | 0.818s | 1.376s | 1.649s | 1.764s | 1.804s | 1.723s | 1.569s | 1.366s |
| 43.81 | 0.795s | 1.335s | 1.598s | 1.712s | 1.754s | 1.677s | 1.530s | 1.335s |
| 46.85 | 0.773s | 1.294s | 1.549s | 1.661s | 1.703s | 1.632s | 1.492s | 1.305s |
| 49.98 | 0.752s | 1.254s | 1.500s | 1.610s | 1.654s | 1.587s | 1.454s | 1.276s |
| 53.18 | 0.731s | 1.215s | 1.453s | 1.560s | 1.606s | 1.544s | 1.418s | 1.247s |
| 56.44 | 0.709s | 1.176s | 1.406s | 1.510s | 1.558s | 1.501s | 1.381s | 1.219s |
| 59.74 | 0.687s | 1.138s | 1.359s | 1.461s | 1.509s | 1.457s | 1.345s | 1.190s |
| 63.06 | 0.665s | 1.099s | 1.313s | 1.411s | 1.461s | 1.414s | 1.308s | 1.161s |
| 66.42 | 0.643s | 1.060s | 1.265s | 1.361s | 1.413s | 1.370s | 1.271s | 1.133s |
| 69.80 | 0.620s | 1.021s | 1.218s | 1.312s | 1.363s | 1.326s | 1.234s | 1.104s |
| 73.21 | 0.596s | 0.981s | 1.170s | 1.261s | 1.315s | 1.282s | 1.197s | 1.075s |
| 76.65 | 0.572s | 0.940s | 1.122s | 1.210s | 1.265s | 1.237s | 1.159s | 1.045s |
| 80.12 | 0.548s | 0.898s | 1.072s | 1.159s | 1.215s | 1.192s | 1.121s | 1.016s |
| 83.59 | 0.523s | 0.857s | 1.024s | 1.107s | 1.165s | 1.148s | 1.084s | 0.986s |
| 87.01 | 0.499s | 0.817s | 0.977s | 1.059s | 1.118s | 1.106s | 1.049s | 0.959s |
| 90.37 | 0.476s | 0.779s | 0.933s | 1.013s | 1.074s | 1.067s | 1.016s | 0.933s |
| 93.67 | 0.454s | 0.743s | 0.891s | 0.969s | 1.032s | 1.029s | 0.984s | 0.908s |
| 96.91 | 0.433s | 0.708s | 0.851s | 0.928s | 0.992s | 0.993s | 0.954s | 0.885s |
| 100.08 | 0.413s | 0.675s | 0.813s | 0.889s | 0.954s | 0.960s | 0.926s | 0.862s |
| 103.17 | 0.394s | 0.644s | 0.777s | 0.851s | 0.918s | 0.927s | 0.898s | 0.841s |
| 106.19 | 0.376s | 0.614s | 0.743s | 0.816s | 0.884s | 0.896s | 0.872s | 0.820s |
| 109.14 | 0.358s | 0.586s | 0.711s | 0.782s | 0.851s | 0.867s | 0.848s | 0.801s |
| 112.00 | 0.342s | 0.559s | 0.679s | 0.749s | 0.819s | 0.839s | 0.824s | 0.782s |
| 114.79 | 0.327s | 0.533s | 0.650s | 0.718s | 0.789s | 0.812s | 0.801s | 0.764s |
| 117.49 | 0.313s | 0.509s | 0.621s | 0.688s | 0.760s | 0.786s | 0.780s | 0.747s |
| 120.12 | 0.299s | 0.485s | 0.593s | 0.658s | 0.732s | 0.761s | 0.759s | 0.730s |
| 122.66 | 0.286s | 0.462s | 0.566s | 0.630s | 0.705s | 0.737s | 0.739s | 0.715s |
| 125.13 | 0.273s | 0.441s | 0.540s | 0.603s | 0.679s | 0.714s | 0.720s | 0.700s |
| 127.51 | 0.260s | 0.420s | 0.515s | 0.577s | 0.654s | 0.692s | 0.701s | 0.685s |
| 129.81 | 0.249s | 0.400s | 0.491s | 0.552s | 0.630s | 0.671s | 0.684s | 0.671s |
| 132.03 | 0.237s | 0.380s | 0.468s | 0.527s | 0.606s | 0.651s | 0.667s | 0.658s |
| 134.16 | 0.226s | 0.362s | 0.445s | 0.504s | 0.584s | 0.631s | 0.651s | 0.646s |
| 136.21 | 0.216s | 0.344s | 0.423s | 0.481s | 0.562s | 0.612s | 0.636s | 0.634s |

Distances in METERS.-----Specific Gravity = 1.000.----------

LIGHT CRAFT DESIGN
GOTA CARRIER
Draft is to baseline



CROSS CURVES OF STABILITY - Stbd Heel
at 1 M. AFT TRIM (initial)




Specific Gravity = 1.000 Assumed KG = 0.00 M.
"K" = BPL

Draft is to baseline

CROSS CURVES OF STABILITY
Showing righting arms in heel at VCG = 0.00
Trim: Aft 0.750/22.000 at zero heel (trim righting arm held at zero)

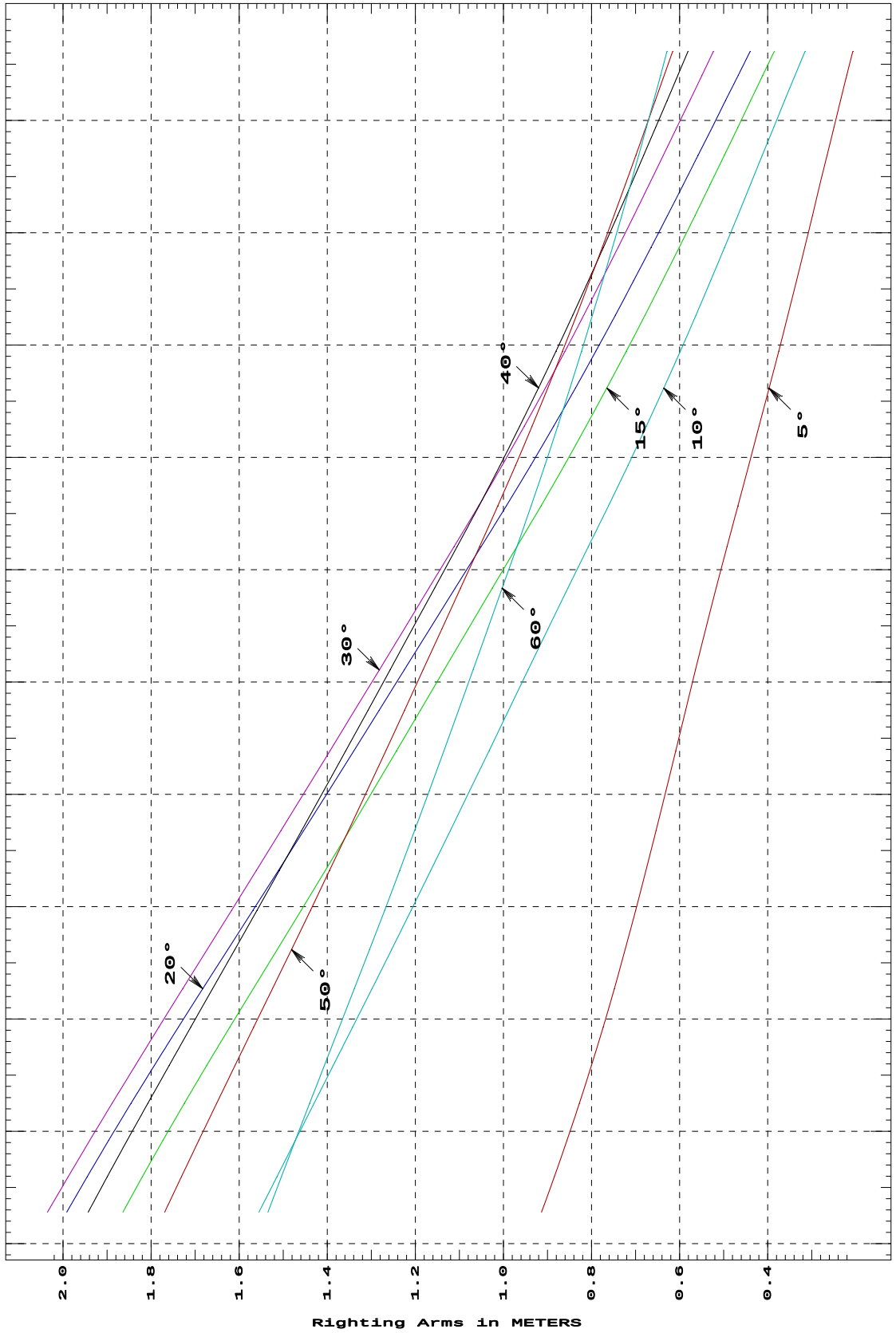
| Displacement | Heel Angles in Degrees | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| METRIC TONS | 5.00s | 10.00s | 15.00s | 20.00s | 30.00s | 40.00s | 50.00s | 60.00s |
| 37.80 | 0.914s | 1.555s | 1.864s | 1.991s | 2.035s | 1.943s | 1.769s | 1.535s |
| 40.96 | 0.884s | 1.514s | 1.820s | 1.945s | 1.988s | 1.899s | 1.731s | 1.504s |
| 44.20 | 0.856s | 1.472s | 1.773s | 1.896s | 1.939s | 1.854s | 1.691s | 1.472s |
| 47.50 | 0.827s | 1.430s | 1.724s | 1.845s | 1.888s | 1.807s | 1.651s | 1.440s |
| 50.86 | 0.800s | 1.387s | 1.674s | 1.793s | 1.836s | 1.759s | 1.609s | 1.406s |
| 54.26 | 0.774s | 1.342s | 1.621s | 1.738s | 1.783s | 1.710s | 1.567s | 1.373s |
| 57.70 | 0.748s | 1.298s | 1.568s | 1.683s | 1.728s | 1.660s | 1.524s | 1.338s |
| 61.18 | 0.724s | 1.254s | 1.514s | 1.626s | 1.673s | 1.610s | 1.481s | 1.304s |
| 64.69 | 0.700s | 1.209s | 1.459s | 1.569s | 1.617s | 1.559s | 1.438s | 1.270s |
| 68.21 | 0.676s | 1.165s | 1.405s | 1.511s | 1.561s | 1.509s | 1.395s | 1.236s |
| 71.76 | 0.654s | 1.121s | 1.350s | 1.454s | 1.505s | 1.458s | 1.352s | 1.202s |
| 75.31 | 0.631s | 1.077s | 1.296s | 1.396s | 1.449s | 1.408s | 1.309s | 1.168s |
| 78.89 | 0.609s | 1.033s | 1.242s | 1.339s | 1.394s | 1.358s | 1.267s | 1.135s |
| 82.47 | 0.586s | 0.988s | 1.189s | 1.282s | 1.338s | 1.308s | 1.225s | 1.102s |
| 86.08 | 0.564s | 0.944s | 1.135s | 1.225s | 1.282s | 1.257s | 1.182s | 1.069s |
| 89.71 | 0.541s | 0.899s | 1.080s | 1.168s | 1.225s | 1.207s | 1.140s | 1.036s |
| 93.36 | 0.517s | 0.854s | 1.025s | 1.110s | 1.169s | 1.156s | 1.097s | 1.003s |
| 97.03 | 0.492s | 0.807s | 0.970s | 1.051s | 1.112s | 1.105s | 1.055s | 0.970s |
| 100.69 | 0.468s | 0.762s | 0.914s | 0.993s | 1.056s | 1.055s | 1.013s | 0.937s |
| 104.27 | 0.443s | 0.717s | 0.862s | 0.938s | 1.003s | 1.008s | 0.973s | 0.906s |
| 107.77 | 0.420s | 0.676s | 0.812s | 0.886s | 0.953s | 0.963s | 0.935s | 0.877s |
| 111.17 | 0.397s | 0.636s | 0.765s | 0.837s | 0.905s | 0.920s | 0.899s | 0.849s |
| 114.47 | 0.375s | 0.598s | 0.721s | 0.790s | 0.860s | 0.880s | 0.866s | 0.823s |
| 117.65 | 0.354s | 0.563s | 0.679s | 0.746s | 0.818s | 0.843s | 0.834s | 0.798s |
| 120.73 | 0.335s | 0.529s | 0.639s | 0.704s | 0.778s | 0.807s | 0.804s | 0.774s |
| 123.69 | 0.316s | 0.498s | 0.601s | 0.665s | 0.740s | 0.773s | 0.776s | 0.752s |
| 126.53 | 0.298s | 0.468s | 0.565s | 0.627s | 0.704s | 0.741s | 0.749s | 0.731s |
| 129.26 | 0.282s | 0.439s | 0.531s | 0.592s | 0.669s | 0.711s | 0.723s | 0.712s |
| 131.87 | 0.265s | 0.412s | 0.499s | 0.558s | 0.637s | 0.682s | 0.699s | 0.693s |
| 134.37 | 0.250s | 0.386s | 0.468s | 0.526s | 0.606s | 0.654s | 0.677s | 0.675s |
| 136.75 | 0.235s | 0.362s | 0.439s | 0.496s | 0.577s | 0.629s | 0.655s | 0.659s |
| 139.01 | 0.220s | 0.338s | 0.411s | 0.467s | 0.549s | 0.604s | 0.635s | 0.643s |
| 141.15 | 0.207s | 0.315s | 0.385s | 0.440s | 0.523s | 0.581s | 0.616s | 0.629s |

Distances in METERS.-----Specific Gravity = 1.000.----------

LIGHT CRAFT DESIGN
GOTA CARRIER
Draft is to baseline



CROSS CURVES OF STABILITY - Stbd Heel
at 0.75 M. AFT TRIM (initial)




Specific Gravity = 1.000 Assumed KG = 0.00 M.
"K" = BPL

Draft is to baseline

## CROSS CURVES OF STABILITY

Showing righting arms in heel at VCG = 0.00

Trim: Aft 0.500/22.000 at zero heel (trim righting arm held at zero)

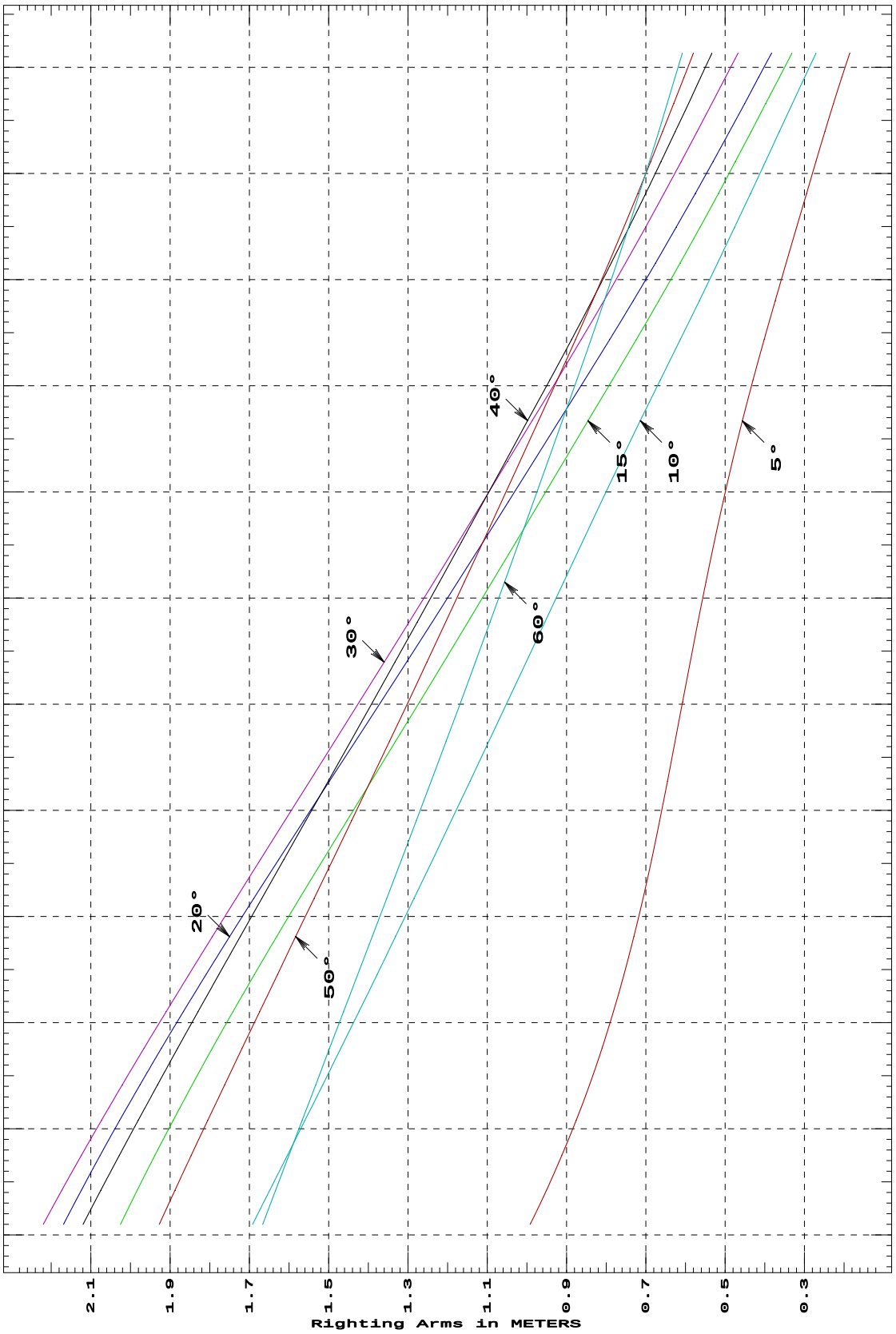
| Displacement | Heel Angles in Degrees | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| METRIC TONS | 5.00s | 10.00s | 15.00s | 20.00s | 30.00s | 40.00s | 50.00s | 60.00s |
| 35.99 | 0.992s | 1.692s | 2.025s | 2.169s | 2.220s | 2.120s | 1.928s | 1.666s |
| 39.20 | 0.951s | 1.649s | 1.983s | 2.124s | 2.173s | 2.075s | 1.888s | 1.634s |
| 42.47 | 0.912s | 1.605s | 1.939s | 2.077s | 2.124s | 2.028s | 1.847s | 1.601s |
| 45.78 | 0.876s | 1.560s | 1.892s | 2.027s | 2.073s | 1.981s | 1.805s | 1.567s |
| 49.15 | 0.842s | 1.515s | 1.844s | 1.976s | 2.021s | 1.932s | 1.762s | 1.533s |
| 52.56 | 0.811s | 1.470s | 1.794s | 1.922s | 1.966s | 1.881s | 1.719s | 1.498s |
| 56.03 | 0.782s | 1.424s | 1.742s | 1.867s | 1.910s | 1.830s | 1.674s | 1.463s |
| 59.54 | 0.755s | 1.378s | 1.687s | 1.809s | 1.853s | 1.777s | 1.629s | 1.427s |
| 63.09 | 0.730s | 1.332s | 1.631s | 1.750s | 1.794s | 1.723s | 1.583s | 1.390s |
| 66.70 | 0.707s | 1.285s | 1.573s | 1.689s | 1.734s | 1.669s | 1.537s | 1.353s |
| 70.34 | 0.686s | 1.238s | 1.514s | 1.627s | 1.673s | 1.613s | 1.490s | 1.316s |
| 74.02 | 0.665s | 1.191s | 1.454s | 1.563s | 1.611s | 1.558s | 1.442s | 1.279s |
| 77.74 | 0.646s | 1.144s | 1.393s | 1.498s | 1.548s | 1.501s | 1.395s | 1.242s |
| 81.47 | 0.626s | 1.096s | 1.332s | 1.433s | 1.486s | 1.445s | 1.347s | 1.204s |
| 85.21 | 0.607s | 1.049s | 1.271s | 1.368s | 1.423s | 1.389s | 1.299s | 1.167s |
| 88.96 | 0.588s | 1.002s | 1.210s | 1.304s | 1.360s | 1.333s | 1.252s | 1.130s |
| 92.73 | 0.569s | 0.955s | 1.149s | 1.239s | 1.297s | 1.277s | 1.205s | 1.093s |
| 96.50 | 0.548s | 0.907s | 1.088s | 1.175s | 1.235s | 1.221s | 1.158s | 1.056s |
| 100.28 | 0.527s | 0.860s | 1.028s | 1.111s | 1.173s | 1.165s | 1.111s | 1.020s |
| 104.07 | 0.505s | 0.812s | 0.968s | 1.047s | 1.111s | 1.110s | 1.064s | 0.984s |
| 107.88 | 0.482s | 0.764s | 0.907s | 0.983s | 1.049s | 1.054s | 1.018s | 0.947s |
| 111.70 | 0.457s | 0.714s | 0.846s | 0.919s | 0.987s | 0.998s | 0.971s | 0.911s |
| 115.54 | 0.430s | 0.664s | 0.785s | 0.854s | 0.924s | 0.942s | 0.924s | 0.874s |
| 119.35 | 0.401s | 0.613s | 0.724s | 0.791s | 0.863s | 0.887s | 0.878s | 0.838s |
| 123.03 | 0.373s | 0.565s | 0.667s | 0.732s | 0.805s | 0.836s | 0.834s | 0.805s |
| 126.56 | 0.346s | 0.519s | 0.614s | 0.676s | 0.751s | 0.787s | 0.793s | 0.773s |
| 129.93 | 0.320s | 0.476s | 0.563s | 0.624s | 0.701s | 0.742s | 0.755s | 0.744s |
| 133.12 | 0.294s | 0.436s | 0.517s | 0.575s | 0.654s | 0.700s | 0.720s | 0.716s |
| 136.13 | 0.271s | 0.398s | 0.474s | 0.530s | 0.611s | 0.662s | 0.688s | 0.691s |
| 138.95 | 0.248s | 0.363s | 0.434s | 0.489s | 0.571s | 0.626s | 0.658s | 0.668s |
| 141.59 | 0.227s | 0.330s | 0.398s | 0.451s | 0.534s | 0.592s | 0.630s | 0.646s |
| 144.04 | 0.206s | 0.300s | 0.363s | 0.416s | 0.499s | 0.562s | 0.604s | 0.626s |
| 146.31 | 0.186s | 0.271s | 0.332s | 0.383s | 0.468s | 0.533s | 0.580s | 0.608s |

Distances in METERS.-----Specific Gravity = 1.000.----------

LIGHT CRAFT DESIGN
GOTA CARRIER
Draft is to baseline



CROSS CURVES OF STABILITY - Stbd Heel
at 0.5 M. AFT TRIM (initial)




Specific Gravity = 1.000 Assumed KG = 0.00 M.
"K" = BPL

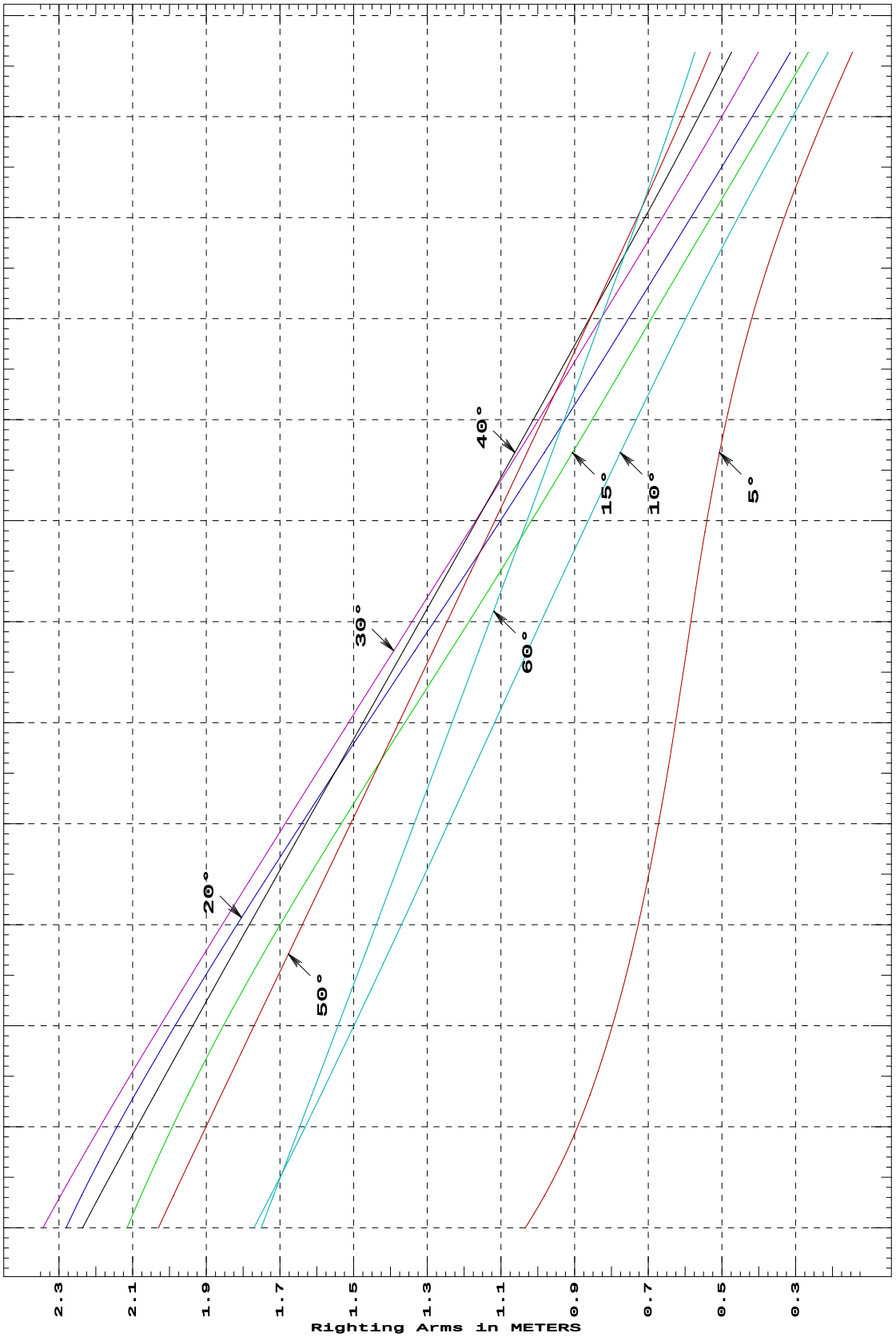
Draft is to baseline

CROSS CURVES OF STABILITY
Showing righting arms in heel at VCG = 0.00
Trim: Aft 0.250/22.000 at zero heel (trim righting arm held at zero)

| Displacement | Heel Angles in Degrees | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| METRIC TONS | 5.00s | 10.00s | 15.00s | 20.00s | 30.00s | 40.00s | 50.00s | 60.00s |
| 34.96 | 1.035s | 1.772s | 2.116s | 2.281s | 2.344s | 2.236s | 2.031s | 1.751s |
| 38.18 | 0.982s | 1.725s | 2.077s | 2.239s | 2.296s | 2.189s | 1.989s | 1.718s |
| 41.46 | 0.935s | 1.680s | 2.037s | 2.194s | 2.245s | 2.141s | 1.947s | 1.683s |
| 44.78 | 0.894s | 1.634s | 1.995s | 2.145s | 2.192s | 2.092s | 1.904s | 1.649s |
| 48.15 | 0.858s | 1.589s | 1.950s | 2.094s | 2.138s | 2.041s | 1.860s | 1.613s |
| 51.57 | 0.826s | 1.544s | 1.903s | 2.040s | 2.082s | 1.989s | 1.815s | 1.578s |
| 55.04 | 0.797s | 1.499s | 1.853s | 1.984s | 2.024s | 1.936s | 1.770s | 1.542s |
| 58.55 | 0.770s | 1.453s | 1.800s | 1.926s | 1.966s | 1.883s | 1.724s | 1.506s |
| 62.10 | 0.746s | 1.407s | 1.746s | 1.866s | 1.906s | 1.828s | 1.677s | 1.469s |
| 65.70 | 0.723s | 1.361s | 1.688s | 1.804s | 1.845s | 1.773s | 1.630s | 1.432s |
| 69.34 | 0.702s | 1.315s | 1.629s | 1.741s | 1.783s | 1.717s | 1.582s | 1.394s |
| 73.03 | 0.682s | 1.268s | 1.567s | 1.676s | 1.720s | 1.660s | 1.534s | 1.356s |
| 76.77 | 0.664s | 1.221s | 1.503s | 1.610s | 1.656s | 1.602s | 1.485s | 1.318s |
| 80.55 | 0.646s | 1.173s | 1.438s | 1.543s | 1.591s | 1.544s | 1.436s | 1.279s |
| 84.38 | 0.629s | 1.125s | 1.371s | 1.474s | 1.525s | 1.484s | 1.385s | 1.239s |
| 88.23 | 0.612s | 1.077s | 1.304s | 1.404s | 1.458s | 1.425s | 1.335s | 1.200s |
| 92.12 | 0.596s | 1.028s | 1.237s | 1.334s | 1.391s | 1.365s | 1.284s | 1.160s |
| 96.03 | 0.580s | 0.978s | 1.169s | 1.262s | 1.324s | 1.304s | 1.233s | 1.120s |
| 99.96 | 0.564s | 0.928s | 1.102s | 1.192s | 1.256s | 1.244s | 1.182s | 1.080s |
| 103.89 | 0.546s | 0.878s | 1.036s | 1.121s | 1.188s | 1.183s | 1.131s | 1.040s |
| 107.82 | 0.527s | 0.827s | 0.970s | 1.051s | 1.120s | 1.123s | 1.080s | 1.001s |
| 111.74 | 0.507s | 0.776s | 0.906s | 0.982s | 1.053s | 1.062s | 1.029s | 0.961s |
| 115.67 | 0.484s | 0.724s | 0.842s | 0.914s | 0.986s | 1.002s | 0.978s | 0.921s |
| 119.59 | 0.459s | 0.672s | 0.778s | 0.846s | 0.919s | 0.942s | 0.928s | 0.882s |
| 123.51 | 0.431s | 0.619s | 0.716s | 0.779s | 0.853s | 0.882s | 0.877s | 0.843s |
| 127.44 | 0.400s | 0.565s | 0.653s | 0.712s | 0.788s | 0.823s | 0.827s | 0.803s |
| 131.37 | 0.365s | 0.509s | 0.589s | 0.646s | 0.722s | 0.764s | 0.777s | 0.764s |
| 135.30 | 0.328s | 0.452s | 0.525s | 0.579s | 0.657s | 0.705s | 0.727s | 0.725s |
| 139.16 | 0.288s | 0.395s | 0.462s | 0.515s | 0.594s | 0.647s | 0.678s | 0.687s |
| 142.76 | 0.248s | 0.341s | 0.404s | 0.455s | 0.536s | 0.595s | 0.634s | 0.652s |
| 146.01 | 0.210s | 0.292s | 0.352s | 0.401s | 0.484s | 0.549s | 0.595s | 0.622s |
| 148.87 | 0.176s | 0.249s | 0.306s | 0.355s | 0.440s | 0.509s | 0.561s | 0.596s |
| 151.33 | 0.146s | 0.212s | 0.266s | 0.315s | 0.402s | 0.475s | 0.532s | 0.573s |

Distances in METERS.-----Specific Gravity = 1.000.----------

CROSS CURVES OF STABILITY - Stbd Heel
at 0.25 M. AFT TRIM (initial)




Specific Gravity = 1.000 Assumed KG = 0.00 M.
"K" = BPL

Draft is to baseline

CROSS CURVES OF STABILITY
Showing righting arms in heel at VCG = 0.00
Trim: zero at zero heel (trim righting arm held at zero)

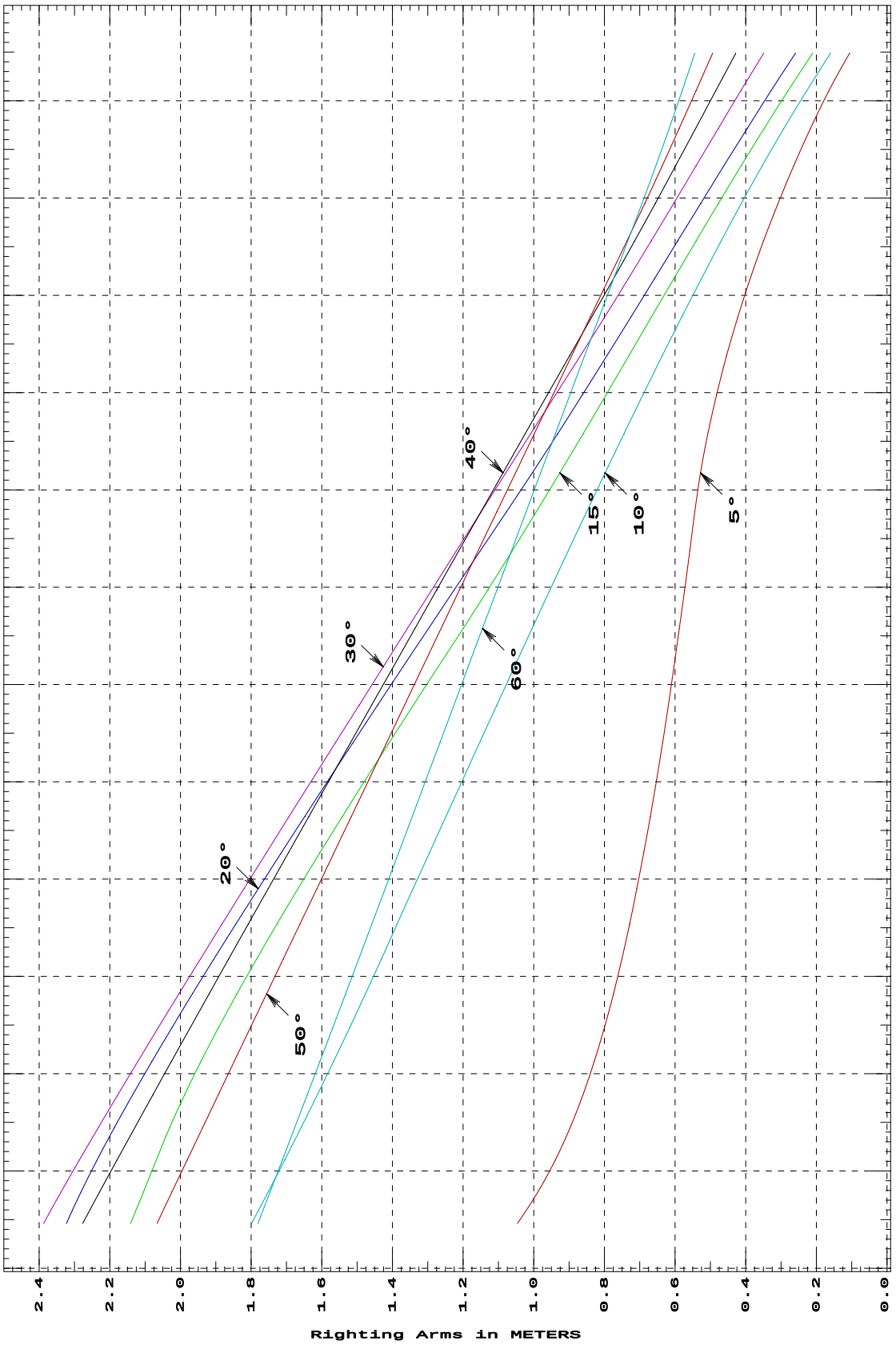
| Displacement | Heel Angles in Degrees | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| METRIC TONS | 5.00s | 10.00s | 15.00s | 20.00s | 30.00s | 40.00s | 50.00s | 60.00s |
| 34.61 | 1.046s | 1.799s | 2.141s | 2.323s | 2.388s | 2.277s | 2.067s | 1.781s |
| 37.85 | 0.989s | 1.752s | 2.105s | 2.281s | 2.338s | 2.229s | 2.024s | 1.747s |
| 41.13 | 0.939s | 1.705s | 2.069s | 2.236s | 2.286s | 2.180s | 1.981s | 1.712s |
| 44.46 | 0.897s | 1.659s | 2.031s | 2.187s | 2.233s | 2.130s | 1.937s | 1.677s |
| 47.83 | 0.861s | 1.613s | 1.989s | 2.135s | 2.178s | 2.078s | 1.893s | 1.641s |
| 51.25 | 0.829s | 1.567s | 1.942s | 2.081s | 2.121s | 2.026s | 1.848s | 1.605s |
| 54.71 | 0.800s | 1.521s | 1.893s | 2.025s | 2.063s | 1.973s | 1.802s | 1.569s |
| 58.22 | 0.774s | 1.476s | 1.840s | 1.966s | 2.004s | 1.919s | 1.756s | 1.533s |
| 61.77 | 0.751s | 1.432s | 1.785s | 1.906s | 1.944s | 1.864s | 1.709s | 1.496s |
| 65.37 | 0.729s | 1.387s | 1.727s | 1.844s | 1.883s | 1.808s | 1.662s | 1.458s |
| 69.01 | 0.708s | 1.342s | 1.667s | 1.780s | 1.820s | 1.752s | 1.614s | 1.421s |
| 72.70 | 0.689s | 1.296s | 1.606s | 1.715s | 1.757s | 1.695s | 1.565s | 1.383s |
| 76.43 | 0.670s | 1.249s | 1.542s | 1.648s | 1.693s | 1.637s | 1.516s | 1.344s |
| 80.21 | 0.652s | 1.201s | 1.476s | 1.581s | 1.627s | 1.578s | 1.467s | 1.305s |
| 84.03 | 0.635s | 1.153s | 1.409s | 1.512s | 1.561s | 1.519s | 1.416s | 1.266s |
| 87.90 | 0.619s | 1.104s | 1.341s | 1.442s | 1.494s | 1.459s | 1.365s | 1.226s |
| 91.82 | 0.603s | 1.055s | 1.271s | 1.370s | 1.426s | 1.398s | 1.314s | 1.186s |
| 95.77 | 0.588s | 1.005s | 1.200s | 1.298s | 1.358s | 1.336s | 1.262s | 1.145s |
| 99.74 | 0.573s | 0.954s | 1.130s | 1.225s | 1.289s | 1.275s | 1.210s | 1.104s |
| 103.73 | 0.559s | 0.903s | 1.061s | 1.152s | 1.219s | 1.212s | 1.158s | 1.063s |
| 107.74 | 0.544s | 0.851s | 0.993s | 1.078s | 1.149s | 1.150s | 1.105s | 1.022s |
| 111.75 | 0.528s | 0.798s | 0.926s | 1.004s | 1.079s | 1.087s | 1.052s | 0.980s |
| 115.78 | 0.507s | 0.745s | 0.860s | 0.932s | 1.009s | 1.024s | 0.999s | 0.939s |
| 119.79 | 0.483s | 0.691s | 0.795s | 0.862s | 0.938s | 0.961s | 0.946s | 0.897s |
| 123.78 | 0.454s | 0.636s | 0.731s | 0.793s | 0.868s | 0.899s | 0.893s | 0.856s |
| 127.75 | 0.423s | 0.581s | 0.667s | 0.725s | 0.800s | 0.836s | 0.840s | 0.815s |
| 131.68 | 0.388s | 0.526s | 0.604s | 0.659s | 0.733s | 0.775s | 0.788s | 0.774s |
| 135.58 | 0.350s | 0.470s | 0.541s | 0.593s | 0.668s | 0.714s | 0.736s | 0.734s |
| 139.45 | 0.308s | 0.413s | 0.477s | 0.527s | 0.604s | 0.656s | 0.686s | 0.694s |
| 143.30 | 0.264s | 0.353s | 0.413s | 0.462s | 0.541s | 0.599s | 0.637s | 0.654s |
| 147.15 | 0.217s | 0.292s | 0.348s | 0.396s | 0.477s | 0.542s | 0.589s | 0.617s |
| 151.00 | 0.165s | 0.228s | 0.280s | 0.329s | 0.414s | 0.485s | 0.541s | 0.580s |
| 154.85 | 0.106s | 0.160s | 0.211s | 0.260s | 0.349s | 0.428s | 0.494s | 0.544s |

Distances in METERS.-----Specific Gravity = 1.000.----------

LIGHT CRAFT DESIGN
GOTA CARRIER
Draft is to baseline



CROSS CURVES OF STABILITY - Stbd Heel
at LEVEL TRIM (initial)




Specific Gravity = 1.000 Assumed KG = 0.00 M.
"K" = BPL

Draft is to baseline

CROSS CURVES OF STABILITY
Showing righting arms in heel at VCG = 0.00
Trim: Fwd 0.250/22.000 at zero heel (trim righting arm held at zero)

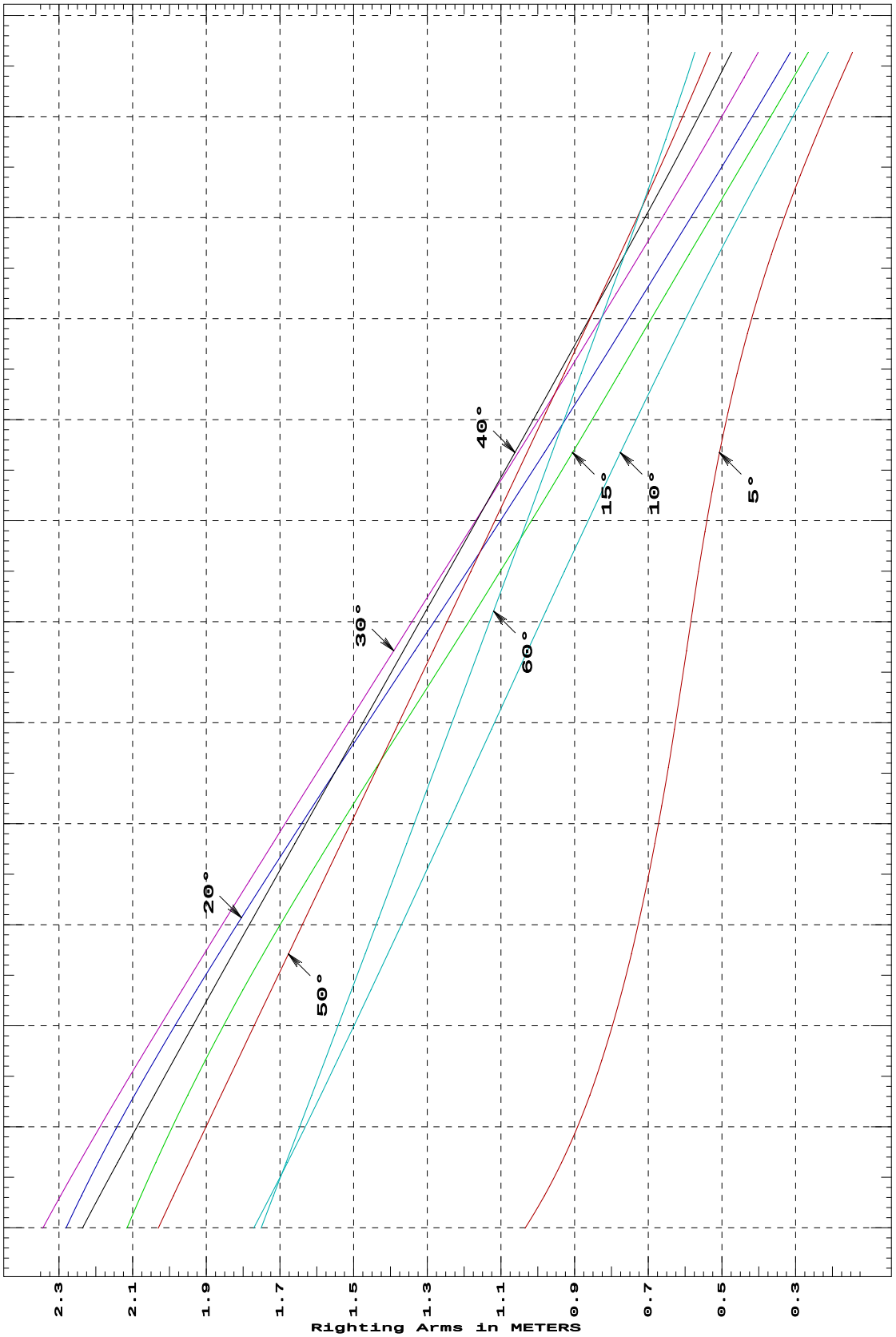
| Displacement | Heel Angles in Degrees | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| METRIC TONS | 5.00s | 10.00s | 15.00s | 20.00s | 30.00s | 40.00s | 50.00s | 60.00s |
| 34.96 | 1.035s | 1.771s | 2.116s | 2.281s | 2.344s | 2.236s | 2.031s | 1.751s |
| 38.18 | 0.982s | 1.725s | 2.077s | 2.239s | 2.296s | 2.189s | 1.989s | 1.718s |
| 41.46 | 0.935s | 1.680s | 2.037s | 2.194s | 2.245s | 2.141s | 1.947s | 1.683s |
| 44.78 | 0.894s | 1.634s | 1.995s | 2.146s | 2.192s | 2.092s | 1.904s | 1.649s |
| 48.15 | 0.858s | 1.589s | 1.950s | 2.094s | 2.138s | 2.041s | 1.860s | 1.613s |
| 51.57 | 0.826s | 1.544s | 1.903s | 2.041s | 2.082s | 1.989s | 1.815s | 1.578s |
| 55.04 | 0.797s | 1.499s | 1.853s | 1.985s | 2.024s | 1.936s | 1.770s | 1.542s |
| 58.55 | 0.770s | 1.453s | 1.801s | 1.926s | 1.966s | 1.883s | 1.724s | 1.506s |
| 62.10 | 0.746s | 1.407s | 1.746s | 1.866s | 1.906s | 1.828s | 1.677s | 1.469s |
| 65.70 | 0.723s | 1.361s | 1.688s | 1.805s | 1.845s | 1.773s | 1.630s | 1.432s |
| 69.34 | 0.702s | 1.315s | 1.628s | 1.741s | 1.783s | 1.717s | 1.582s | 1.394s |
| 73.03 | 0.682s | 1.268s | 1.567s | 1.676s | 1.720s | 1.660s | 1.534s | 1.356s |
| 76.77 | 0.664s | 1.221s | 1.503s | 1.610s | 1.656s | 1.602s | 1.485s | 1.318s |
| 80.55 | 0.646s | 1.173s | 1.438s | 1.543s | 1.591s | 1.544s | 1.435s | 1.279s |
| 84.38 | 0.629s | 1.125s | 1.372s | 1.474s | 1.525s | 1.484s | 1.385s | 1.239s |
| 88.23 | 0.612s | 1.077s | 1.304s | 1.404s | 1.458s | 1.425s | 1.335s | 1.200s |
| 92.12 | 0.596s | 1.028s | 1.237s | 1.334s | 1.391s | 1.365s | 1.284s | 1.160s |
| 96.03 | 0.580s | 0.978s | 1.169s | 1.262s | 1.324s | 1.304s | 1.233s | 1.120s |
| 99.96 | 0.564s | 0.928s | 1.102s | 1.192s | 1.256s | 1.244s | 1.182s | 1.080s |
| 103.89 | 0.546s | 0.878s | 1.036s | 1.121s | 1.188s | 1.183s | 1.131s | 1.040s |
| 107.82 | 0.527s | 0.827s | 0.970s | 1.051s | 1.120s | 1.123s | 1.080s | 1.001s |
| 111.74 | 0.507s | 0.776s | 0.906s | 0.982s | 1.053s | 1.062s | 1.029s | 0.961s |
| 115.67 | 0.484s | 0.724s | 0.842s | 0.914s | 0.986s | 1.002s | 0.978s | 0.921s |
| 119.59 | 0.459s | 0.672s | 0.779s | 0.846s | 0.919s | 0.942s | 0.928s | 0.882s |
| 123.51 | 0.431s | 0.619s | 0.716s | 0.779s | 0.853s | 0.882s | 0.877s | 0.843s |
| 127.44 | 0.400s | 0.565s | 0.653s | 0.712s | 0.788s | 0.823s | 0.827s | 0.803s |
| 131.37 | 0.366s | 0.509s | 0.589s | 0.646s | 0.722s | 0.764s | 0.777s | 0.764s |
| 135.30 | 0.328s | 0.452s | 0.525s | 0.579s | 0.657s | 0.705s | 0.727s | 0.725s |
| 139.16 | 0.288s | 0.395s | 0.463s | 0.515s | 0.594s | 0.647s | 0.678s | 0.687s |
| 142.76 | 0.248s | 0.341s | 0.404s | 0.455s | 0.536s | 0.595s | 0.634s | 0.652s |
| 146.01 | 0.210s | 0.292s | 0.352s | 0.401s | 0.484s | 0.549s | 0.595s | 0.622s |
| 148.87 | 0.176s | 0.249s | 0.306s | 0.355s | 0.440s | 0.509s | 0.561s | 0.596s |
| 151.33 | 0.146s | 0.212s | 0.266s | 0.315s | 0.402s | 0.475s | 0.532s | 0.573s |

Distances in METERS.-----Specific Gravity = 1.000.----------

LIGHT CRAFT DESIGN
GOTA CARRIER
Draft is to baseline



CROSS CURVES OF STABILITY - Stbd Heel
at 0.25 M. FWD TRIM (initial)




Specific Gravity = 1.000 Assumed KG = 0.00 M.
"K" = BPL

Draft is to baseline

CROSS CURVES OF STABILITY
Showing righting arms in heel at VCG = 0.00
Trim: Fwd 0.500/22.000 at zero heel (trim righting arm held at zero)

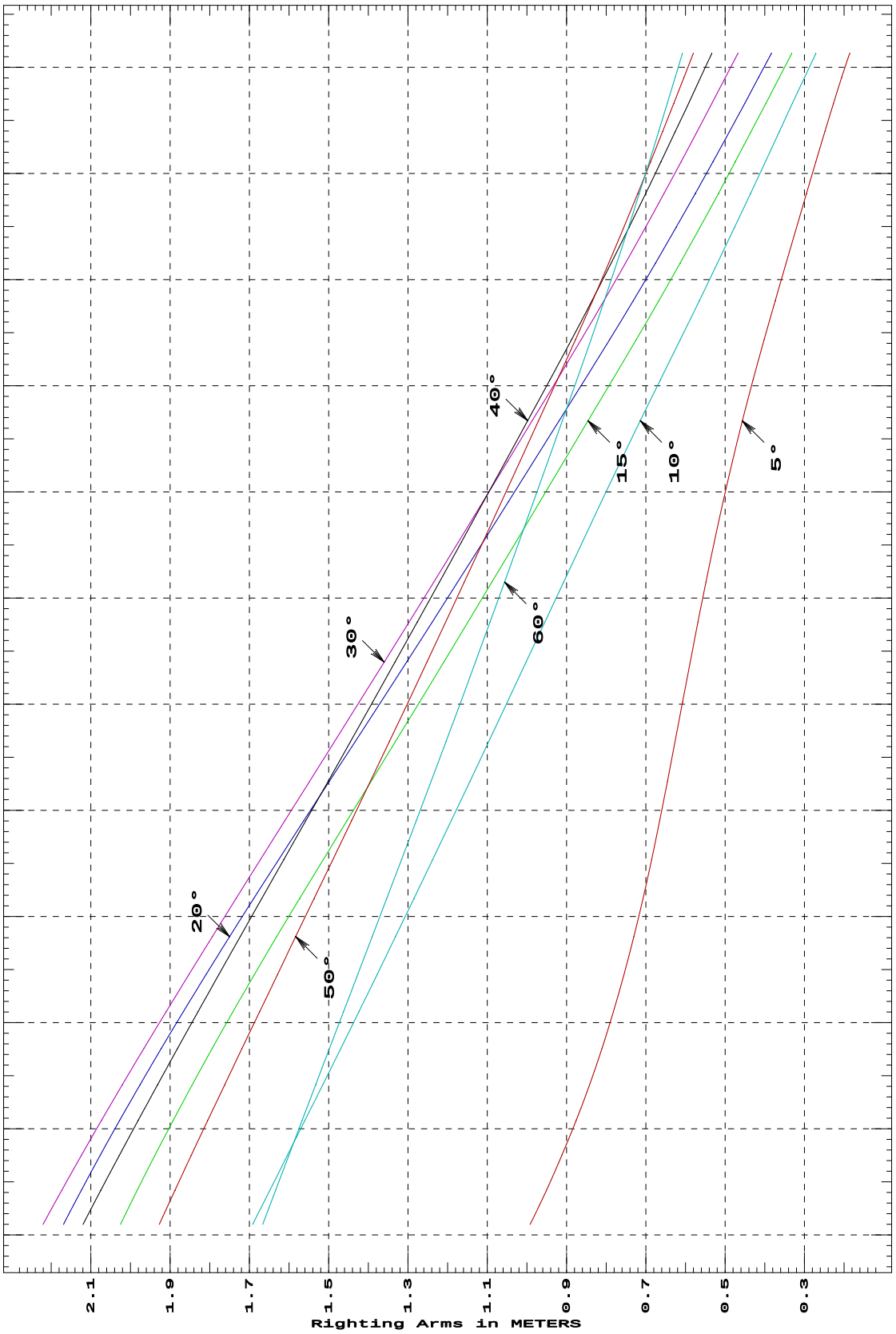
| Displacement | Heel Angles in Degrees | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| METRIC TONS | 5.00s | 10.00s | 15.00s | 20.00s | 30.00s | 40.00s | 50.00s | 60.00s |
| 35.99 | 0.992s | 1.692s | 2.025s | 2.169s | 2.220s | 2.120s | 1.928s | 1.666s |
| 39.20 | 0.951s | 1.648s | 1.983s | 2.124s | 2.173s | 2.075s | 1.888s | 1.634s |
| 42.47 | 0.912s | 1.604s | 1.939s | 2.077s | 2.124s | 2.028s | 1.847s | 1.601s |
| 45.78 | 0.876s | 1.560s | 1.892s | 2.027s | 2.073s | 1.981s | 1.805s | 1.567s |
| 49.15 | 0.842s | 1.515s | 1.844s | 1.976s | 2.021s | 1.932s | 1.762s | 1.533s |
| 52.56 | 0.811s | 1.469s | 1.794s | 1.922s | 1.966s | 1.881s | 1.719s | 1.498s |
| 56.03 | 0.782s | 1.424s | 1.742s | 1.867s | 1.910s | 1.830s | 1.674s | 1.463s |
| 59.54 | 0.755s | 1.378s | 1.688s | 1.809s | 1.853s | 1.777s | 1.629s | 1.427s |
| 63.09 | 0.730s | 1.332s | 1.631s | 1.750s | 1.794s | 1.723s | 1.583s | 1.390s |
| 66.70 | 0.707s | 1.285s | 1.573s | 1.689s | 1.734s | 1.669s | 1.537s | 1.353s |
| 70.34 | 0.686s | 1.238s | 1.514s | 1.627s | 1.673s | 1.613s | 1.490s | 1.316s |
| 74.02 | 0.665s | 1.191s | 1.454s | 1.563s | 1.611s | 1.558s | 1.442s | 1.279s |
| 77.74 | 0.646s | 1.144s | 1.393s | 1.498s | 1.548s | 1.501s | 1.395s | 1.242s |
| 81.47 | 0.626s | 1.097s | 1.332s | 1.433s | 1.486s | 1.445s | 1.347s | 1.204s |
| 85.21 | 0.607s | 1.049s | 1.271s | 1.368s | 1.423s | 1.389s | 1.299s | 1.167s |
| 88.96 | 0.588s | 1.002s | 1.210s | 1.304s | 1.360s | 1.333s | 1.252s | 1.130s |
| 92.73 | 0.569s | 0.955s | 1.149s | 1.239s | 1.297s | 1.277s | 1.205s | 1.093s |
| 96.50 | 0.548s | 0.907s | 1.088s | 1.175s | 1.235s | 1.221s | 1.158s | 1.056s |
| 100.28 | 0.527s | 0.860s | 1.028s | 1.111s | 1.173s | 1.165s | 1.111s | 1.020s |
| 104.07 | 0.505s | 0.812s | 0.967s | 1.047s | 1.111s | 1.110s | 1.064s | 0.984s |
| 107.88 | 0.482s | 0.764s | 0.907s | 0.983s | 1.049s | 1.054s | 1.018s | 0.947s |
| 111.70 | 0.457s | 0.714s | 0.846s | 0.919s | 0.987s | 0.998s | 0.971s | 0.911s |
| 115.54 | 0.430s | 0.664s | 0.785s | 0.854s | 0.924s | 0.942s | 0.924s | 0.874s |
| 119.35 | 0.401s | 0.613s | 0.724s | 0.791s | 0.863s | 0.887s | 0.877s | 0.838s |
| 123.02 | 0.374s | 0.565s | 0.667s | 0.732s | 0.806s | 0.836s | 0.834s | 0.805s |
| 126.56 | 0.346s | 0.519s | 0.613s | 0.676s | 0.751s | 0.788s | 0.793s | 0.773s |
| 129.93 | 0.320s | 0.476s | 0.563s | 0.623s | 0.701s | 0.742s | 0.756s | 0.744s |
| 133.12 | 0.295s | 0.436s | 0.517s | 0.575s | 0.654s | 0.700s | 0.720s | 0.716s |
| 136.13 | 0.271s | 0.398s | 0.474s | 0.530s | 0.611s | 0.662s | 0.688s | 0.691s |
| 138.95 | 0.248s | 0.363s | 0.434s | 0.489s | 0.571s | 0.626s | 0.658s | 0.668s |
| 141.59 | 0.227s | 0.331s | 0.398s | 0.451s | 0.534s | 0.592s | 0.630s | 0.646s |
| 144.04 | 0.206s | 0.300s | 0.363s | 0.416s | 0.499s | 0.562s | 0.604s | 0.626s |
| 146.31 | 0.186s | 0.271s | 0.332s | 0.383s | 0.468s | 0.533s | 0.580s | 0.608s |

Distances in METERS.-----Specific Gravity = 1.000.----------

LIGHT CRAFT DESIGN
GOTA CARRIER
Draft is to baseline



CROSS CURVES OF STABILITY - Stbd Heel
at 0.5 M. FWD TRIM (initial)




Specific Gravity = 1.000 Assumed KG = 0.00 M.
"K" = BPL

# Rapport från vägning

# GÖTA CARRIER

Fartygets egenvikt bestämdes genom fribordsmätning

| | |
|---|---|
| Fartygets namn: | GÖTA CARRIER |
| Fartygets hemmahamn: | Stockholm |
| Signalbokstäver: | |
| Plats för vägning: | Åsättrafladen Ljusterö |
| Datum för vägning: | 2024-04-19 |

Vind

| | | |
|---|---|---|
| Vindhastighet: | ~ 6 | meter per sekund |

Vatten:

| | | |
|---|---|---|
| Våghöjd: | <0,1 | meter |
| Ström: | - | knop |
| Vattentemperatur: | 3 | grader Celsius |
| Vattendensitet: | 1,004 | ton per kubikmeter |

Densiteten är uppskattad.

| | |
|---|---|
| Närvarande personer: | Johan Gerhart, Redare |

## Fartygets flytläge uppmättes enligt följande:

Fribordet mättes fyra punkter.
Koordinaterna är avsatta från geometribeskrivningens origo, positiva förut,åt babord och uppåt.

**Punkt 1:** Förliga däckshörnet BB. Till ovansida däck.

Koordinater:

| | | | | | |
|---|---|---|---|---|---|
| Långskepps: | 11,000 | meter | | - | meter |
| Tvärs: | -3,500 | meter | Fribord | 0,670 | meter |
| Höjd: | 1,100 | meter | Djupgående | 0,430 | meter |

**Punkt 2:** Förliga däckshörnet SB. Till ovansida däck.

Koordinater:

| | | | | | |
|---|---|---|---|---|---|
| Långskepps: | 11,000 | meter | | - | meter |
| Tvärs: | 3,500 | meter | Fribord | 0,710 | meter |
| Höjd: | 1,100 | meter | Djupgående | 0,390 | meter |

**Punkt 3:** Akterliga däckshörnet BB. Till ovansida däck.

Koordinater:

| | | | | | |
|---|---|---|---|---|---|
| Långskepps: | -11,000 | meter | | - | meter |
| Tvärs: | -3,500 | meter | Fribord | 0,550 | meter |
| Höjd: | 1,100 | meter | Djupgående | 0,550 | meter |

**Punkt 4:** Akterliga däckshörnet SB. Till ovansida däck.

Koordinater:

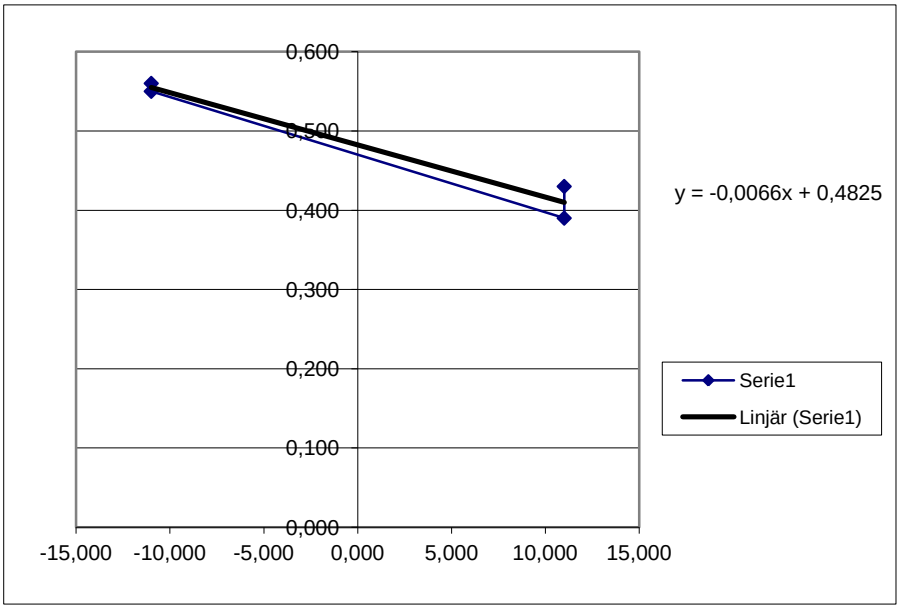
| | | | | | |
|---|---|---|---|---|---|
| Långskepps: | -11,000 | meter | | - | meter |
| Tvärs: | 3,500 | meter | Fribord | 0,540 | meter |
| Höjd: | 1,100 | meter | Djupgående | 0,560 | meter |

Fribord, mätt med instrument, har räknats om till medeldjupgående, trim och slagsida,
allt refererat till geometribeskrivningens origo.

| | | | | | |
|---|---|---|---|---|---|
| **Djupgående vid origo:** | 0,483 | meter | | | |
| **Trim (positivt akterligt) t:** | 0,145 | meter | Över längden: | 22,000 | meter |
| **Slagsida (positivt åt styrbord)** | 0,015 | meter | Över bredden | 7,000 | meter |
| **Slagsida i grader** | 0,12 | | | | |

**Beräkning av medeldjupgående och trim:**

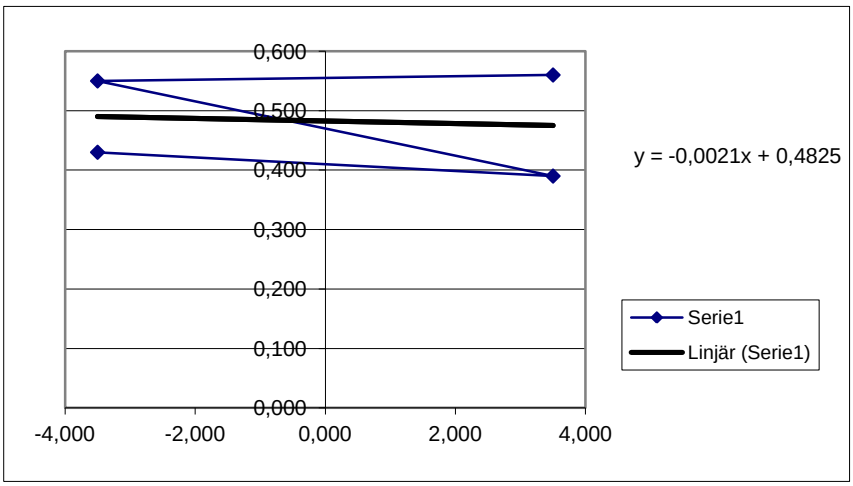
| Lång.pos | Djupg. |
|---|---|
| 11,000 | 0,430 |
| 11,000 | 0,390 |
| -11,000 | 0,550 |
| -11,000 | 0,560 |




Trimmet blir: 0,0066*22,0= 0,1452

**Beräkning av slagsida:**

| Tvär.pos. | Djupg. |
|---|---|
| -3,500 | 0,430 |
| 3,500 | 0,390 |
| -3,500 | 0,550 |
| 3,500 | 0,560 |




Slagsidan blir: 0,0021*7,00 = 0,015

**Tillkommande och avgående vikter**

| Avgående vikter | Volym | Densitet | Vikt ton | LCG m | TCG m |
|---|---|---|---|---|---|
| | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 |
| | | | 0,000 | 0,000 | 0,000 |
| | | | 0,000 | 0,000 | 0,000 |
| | | | 0,000 | 0,000 | 0,000 |
| | | | 0,000 | 0,000 | 0,000 |
| **Summa avgående vikter** | | | **0,000** | **0,000** | **0,000** |

| Tillkommande vikter | Vikt ton | | | LCG m | TCG m |
|---|---|---|---|---|---|
| Tank under motor | 1,2 | | | -9,300 | 2,800 |
| Kran på fördäck | 2,8 | | | 7,900 | -2,900 |
| | 0,00 | | | 0,000 | 0,000 |
| **Summa tillkommande vikter** | **4,00** | | | **2,740** | **-1,190** |

| Beräkning av Light Ship | Vikt ton | | | LCG m | TCG m |
|---|---|---|---|---|---|
| Kondition vid fribordsmätning | 59,71 | | | -0,612 | 0,018 |
| Avgående vikter | 0,00 | | | 0,000 | 0,000 |
| Tillkommande vikter | 4,00 | | | 2,740 | -1,190 |
| **Lätt fartyg** | **63,71** | | | **-0,402** | **-0,058** |

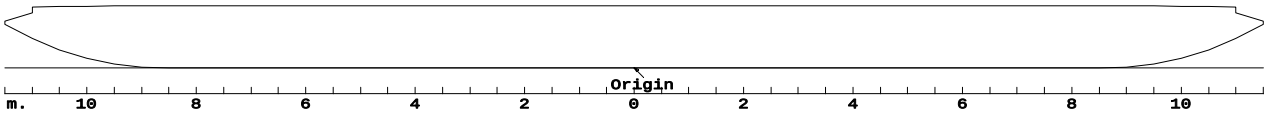
*Positiva koordinater är förut, åt babord och uppåt, räknat från geometribeskrivningens origo.*

## Geometry Information

Geometry File: L:\P2406, GÖTA CARRIER STABILITET\DOCUMENTS\GOTACARRIER.GF1
Geometry File date and time: 24-05-02 17:58:54

## Origin Definition

Longitudinal:
Transverse: CPL
Vertical: BPL

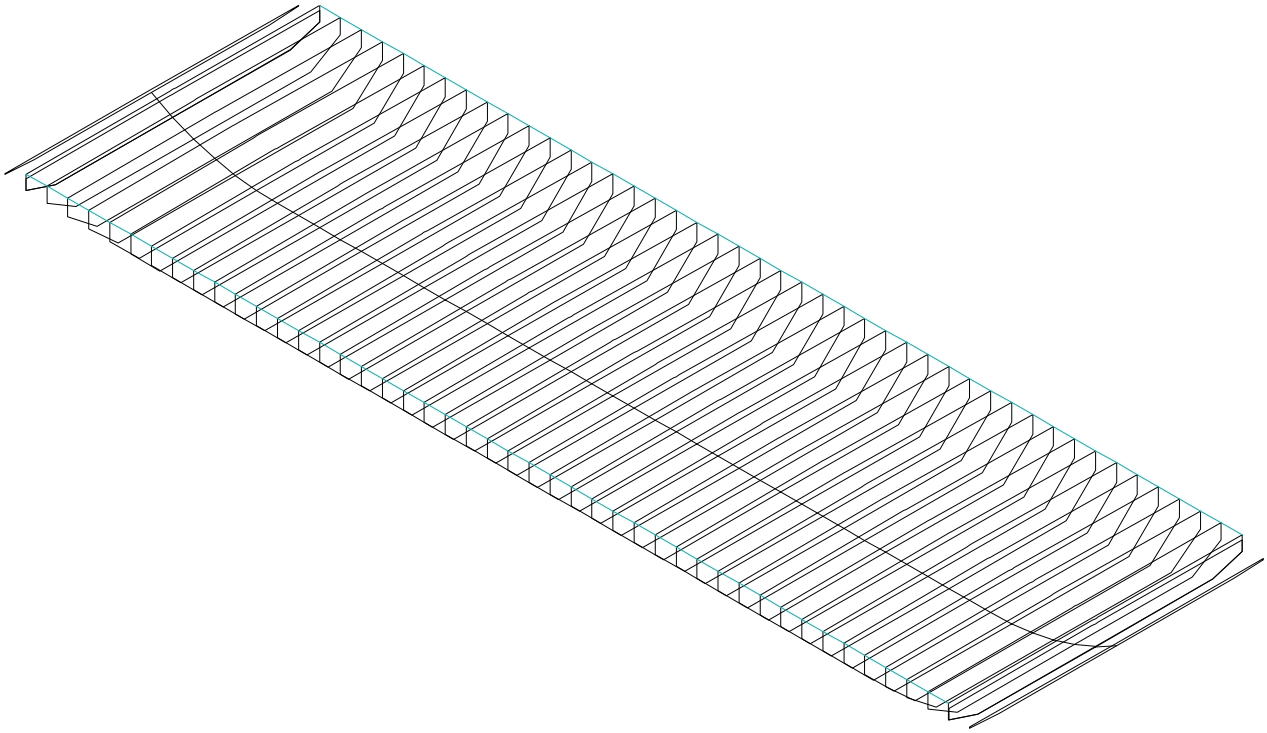



DISPLACER parts

| Name | Description | Fwd | Aft | Volume |
|---|---|---|---|---|
| HULL | | 11.500f | 11.500a | 157.806 |

Locations in m. fwd/aft of the origin. Volumes in cubic m..

HULL Isometric Projection and Body Plan



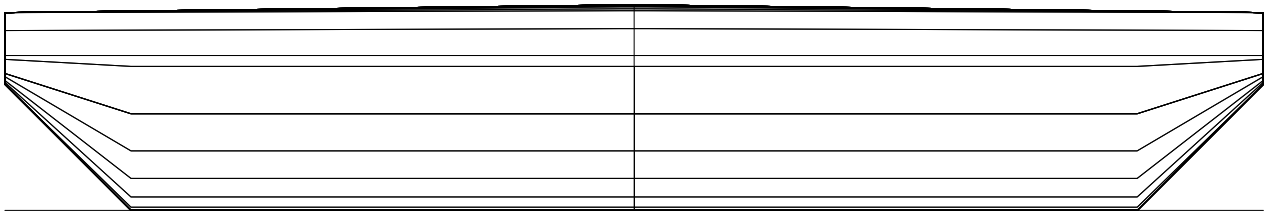


Table of Offsets for HULL
Component: HULL.C Effectiveness: 1.000
Units: meters

Section at 11.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.000 | |
| vert: | 0.800 | 0.800 | 0.840 | 0.860 | 0.860 | |

Section at 11.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.536 | 0.536 | 0.762 | 1.000 | 1.010 | 1.010 |

Section at 10.995 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.536 | 0.536 | 0.762 | 1.100 | 1.110 | 1.110 |
| | | | | DK | | |

Section at 10.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.330 | 0.330 | 0.743 | 1.100 | 1.120 | 1.120 |
| | | | | DK | | |

Section at 10.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.178 | 0.178 | 0.723 | 1.100 | 1.129 | 1.129 |
| | | | | DK | | |

Section at 9.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.073 | 0.073 | 0.710 | 1.100 | 1.135 | 1.135 |
| | | | | DK | | |

Section at 9.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.015 | 0.015 | 0.700 | 1.100 | 1.139 | 1.139 |
| | | | | DK | | |

Section at 8.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |
| | | | | DK | | |

Section at 8.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |
| | | | | DK | | |

Section at 7.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |
| | | | | DK | | |

Section at 7.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 6.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 6.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 5.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 5.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 4.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 4.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 3.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 3.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 2.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 2.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 1.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 1.000 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 0.500 fwd

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 0.000

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 0.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 1.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 1.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 2.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 2.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 3.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 3.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 4.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 4.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 5.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 5.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 6.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 6.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 7.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

Section at 7.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

### Section at 8.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

### Section at 8.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.000 | 0.000 | 0.700 | 1.100 | 1.140 | 1.140 |

DK

### Section at 9.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.015 | 0.015 | 0.700 | 1.100 | 1.139 | 1.139 |

DK

### Section at 9.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.073 | 0.073 | 0.710 | 1.100 | 1.135 | 1.135 |

DK

### Section at 10.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.178 | 0.178 | 0.723 | 1.100 | 1.129 | 1.129 |

DK

### Section at 10.500 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.330 | 0.330 | 0.743 | 1.100 | 1.120 | 1.120 |

DK

### Section at 10.995 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.536 | 0.536 | 0.762 | 1.100 | 1.110 | 1.110 |

DK

### Section at 11.000 aft

| | | | | | | |
|---|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.070 | 0.000 |
| vert: | 0.536 | 0.536 | 0.762 | 1.000 | 1.010 | 1.010 |

### Section at 11.500 aft

| | | | | | |
|---|---|---|---|---|---|
| trans: | 0.000 | 2.800 | 3.500 | 3.500 | 0.000 |
| vert: | 0.800 | 0.800 | 0.840 | 0.860 | 0.860 |