

AMENDED

Rpt. C.11 (Comp.).

Index No. _____
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name DUNERA	Official Number 165552	Nationality and Port of Registry BRITISH LONDON	Gross Tonnage 12615	Date of Build 1937	Port of Survey _____
Moulded Dimensions: Length 490.0 Breadth 63.0 Depth 43.54					Date of Survey 14.2.51
Moulded displacement at moulded draught = 85 per cent. of moulded depth 24225 tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables .742 ✓					Particulars of Classification +100 A1 with freeboard

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	43.54	(a) Where D is greater than Table depth (D-Table depth) R = (43.69-32.67) 3 = + 33.06 ✓		Moulded Breadth (B)	63.00
Stringer plate05	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 11.02		Standard Round of Beam = $\frac{B \times 12}{50}$	= 15.12
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \frac{2.25}{12} \times 5.148$.10	If restricted by superstructures ✓		Ship's Round of Beam	= 9.00
Depth for Freeboard (D) = $\sqrt{43.69}$	43.69			Difference	6.12
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	= $\frac{6.12}{4} \times .5333 = +.82$

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
F'cle enclosed	219.63	219.63	9.0	/	219.63
" overhang	18.12	9.06	.	/	9.06
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	237.75	228.69			228.69

Standard Height of Superstructure **7.50**
" " R.Q.D. _____
Deduction for complete superstructure **42.00**
Percentage covered $\frac{S}{L} = \frac{48.52}{100}$
" " $\frac{S_1}{L} = \frac{46.67}{100}$
" " $\frac{E}{L} = \frac{46.67}{100}$
Percentage from Table, Line A. **29.17**
(corrected for absence of forecastle (if required))
Percentage from Table, Line B.
(corrected for absence of forecastle (if required))
Interpolation for bridge less than .2L (if required)
Deduction = **42.00 x .2917 = 12.25** ✓

SHEER CORRECTION.							
Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P.	59.00	1	59.00	28.63	28.63	1	28.63
$\frac{1}{2}L$ from A.P.	26.255	4	105.02	10.00	10.00	4	40.00
$\frac{3}{4}L$ "	6.49	2	12.98	1.86	1.86	2	3.72
Amidships	-	4	-	-	-	4	-
$\frac{1}{4}L$ from F.P.	12.98	2	25.96	12.75	12.75	2	25.50
$\frac{3}{4}L$ "	52.51	4	210.04	43.31	43.31	4	173.24
F.P.	118.00	1	118.00	89.50	89.50	1	89.50
Total			531.00				360.59

Mean actual sheer aft =
Mean standard sheer aft = } Deficient.
Mean actual sheer forward =
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships = } Deficient sheer.
" " aft of " =
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{170.41}{18} \left(.75 - \frac{2426}{5074} \right) = + 4.80$ ✓
If limited on account of midship superstructure. ✓
If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

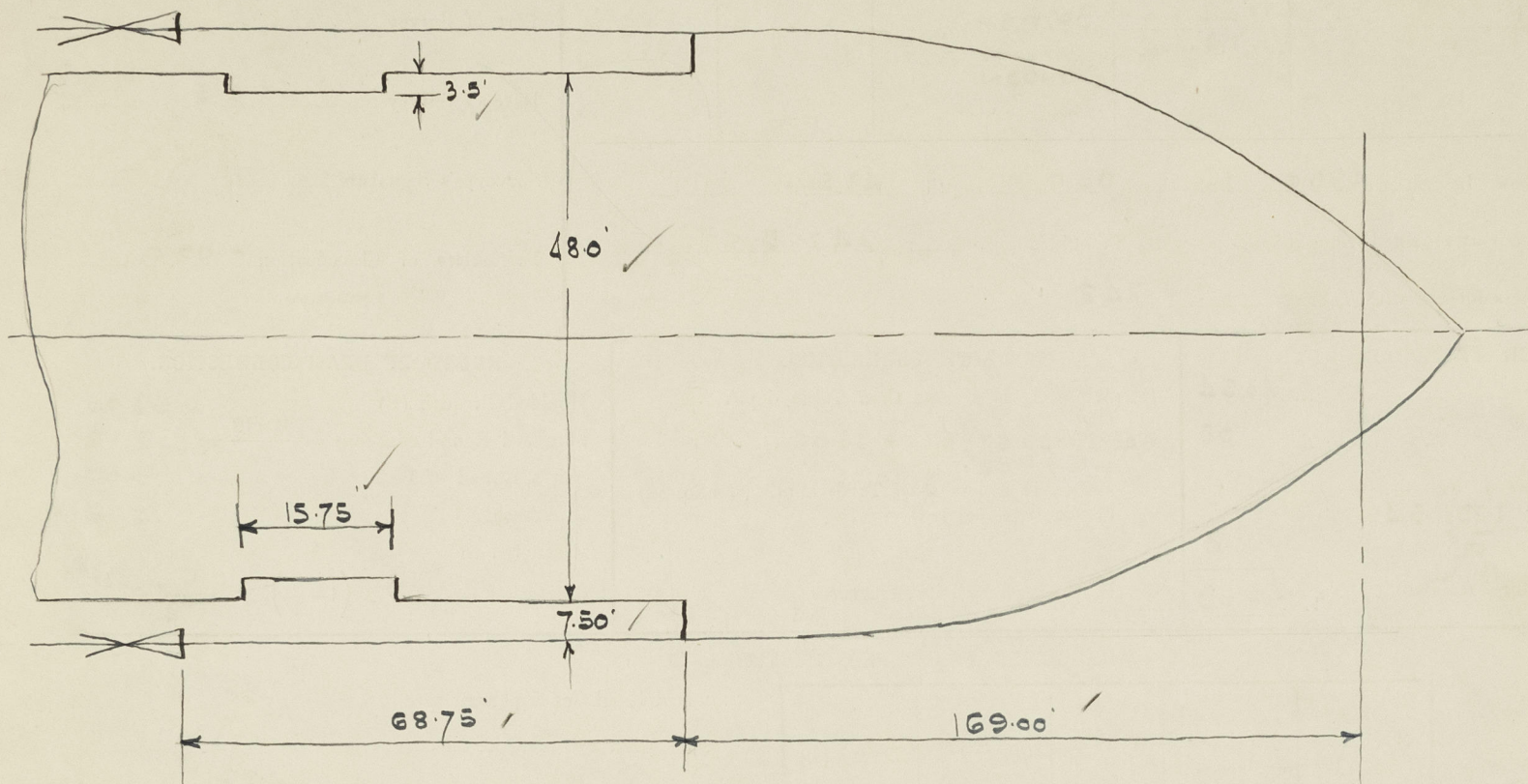
Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 43.78 ✓ Summer freeboard = 18.98 ✓ Moulded draught (d) = 24.80 ✓ Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.20 x 6 1/4 ✓ Addition for Winter North Atlantic Freeboard (if required) = ✓	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40 T}$ inches $\frac{1}{4} = 6 1/4$	TABULAR FREEBOARD corrected for Flush Deck (if required) 742+68 = 1.422 ✓ Correction for coefficient $\frac{1.36}{1.36}$ <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td>33.06</td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td>12.25</td> </tr> <tr> <td>Sheer correction</td> <td>4.80</td> <td></td> </tr> <tr> <td>Round of Beam correction</td> <td>.82</td> <td></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td>1.08</td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td>96.42</td> <td></td> </tr> <tr> <td>136.18</td> <td>12.25</td> <td>+ 123.93</td> </tr> </table> Summer Freeboard = 227.75 ✓		+	-	Depth Correction	33.06		Deduction for superstructures		12.25	Sheer correction	4.80		Round of Beam correction	.82		Correction for Thickness of Deck amidships	1.08		Other corrections, scantlings, etc.	96.42		136.18	12.25	+ 123.93
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	6 1/4 ✓	Tropical Fresh Water Freeboard	18 - 5 1/2
Fresh Water Line	6 1/4 ✓	Fresh Water	18 - 5 1/2
Tropical Line	NIL	Tropical	18 - 1 3/4
Winter Line below	NIL	Winter	18 - 1 3/4
Winter North Atlantic Line	NIL	Winter North Atlantic	18 - 1 3/4

Lunera.

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.



$$\begin{array}{rcl}
 \text{Length to bulkhead} & = & 169.00 \\
 + 53.0 \times 48.0 & \} & = 3189.75 \\
 + 15.75 \times 41.0 & & \quad \quad \quad 63.00 \\
 \hline
 & & 219.63 = \text{Eqin. Qual.}
 \end{array}$$

$$\begin{array}{rcl}
 \text{O/L} & = & 68.75 - 50.63 \\
 & = & 18.12
 \end{array}$$

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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Foundation