

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name NORVEST. DUYONG	Official Number 181910	Nationality and Port of Registry British. LONDON Singapore.	Gross Tonnage 1449. 144-38	Date of Build 1946.	Port of Survey Rotterdam.
Moulded Dimensions: Length 93.50' Breadth 20.00' Depth 9.50'					Date of Survey 21st February 1947.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 293 tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables assumed .68. (Actual .679)					Particulars of Classification + 1 ALK. - Carrying oil in bulk (Not horeke Verified).

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 9.50'	(a) Where D is greater than Table depth (D - Table depth) R = (9.53 - 6.23) .719 = + 2.37"	Moulded Breadth (B) 20.00'
Stringer plate .394"	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = .03'	Standard Round of Beam = $\frac{B \times 12}{50} = \mathbf{4.80"} \checkmark$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 5.12"
Depth for Freeboard (D) = 9.53'		Difference = 0.32"
		Restricted to ✓
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{0.32}{4} \times .5813 = \mathbf{.05"} \checkmark$

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 ...	25.92	25.92	2.42	2.42/3.00	20.91
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
Fore enclosed (Amid)	13.23	13.23	2.25	2.25/6.00	4.96
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	39.15	39.15			25.87

Standard Height of Superstructure **6.00'**

„ „ R.Q.D. **3.00'**

Deduction for complete superstructure **15.35"**

Percentage covered $\frac{S}{L} = \mathbf{41.87} \checkmark$

„ „ $\frac{S_1}{L} = \mathbf{41.87} \checkmark$

„ „ $\frac{E}{L} = \mathbf{27.67} \checkmark$

Percentage from Table, Line A. **13.83 -**

(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 = **15.35 × .1383 = -2.12"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	19.35'	1		19.35	19.49'	19.49	1		19.49
$\frac{1}{2}$ L from A.P. ...	8.61	4		34.44	NIL	-	4		-
$\frac{3}{8}$ L „ ...	2.13	2		4.26	„	-	2		-
Amidships ...	-	4		-	„	-	4		-
$\frac{3}{8}$ L from F.P. ...	4.26	2		8.52	„	-	2		-
$\frac{1}{2}$ L „ ...	17.22	4		68.88	„	-	4		-
F.P. ...	38.70"	1		38.70	12.01"	12.01	1		12.01
Total ...				174.15					31.48

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{142.67}{18} (.75 - .2093) = \mathbf{+ 4.29"} \checkmark$

If limited on account of midship superstructure. **✓**

Mean actual sheer aft = _____

Mean standard sheer aft = _____

Mean actual sheer forward = _____

Mean standard sheer forward = _____

Length of enclosed superstructure forward of amidships = _____

„ „ aft of „ = _____

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. **✓**

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p style="text-align: center;">Ft.</p> <p>Depth to Freeboard Deck = 9.50</p> <p>Summer freeboard = 1.15</p> <p>Moulded draught (d) = 8.35</p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 2.09.2"</p> <p>Addition for Winter North Atlantic Freeboard (if required) = 4"</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>$\Delta =$ ✓</p> <p>Tons per inch immersion at summer load water line</p> <p>T = ✓</p> <p>Deduction = $\frac{\Delta}{40 T}$ inches = 2"</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient NIL. ✓</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction ...</td> <td>2.37</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures ...</td> <td>-</td> <td>2.12</td> </tr> <tr> <td>Sheer correction ...</td> <td>4.29</td> <td>-</td> </tr> <tr> <td>Round of Beam correction ...</td> <td>-</td> <td>.05</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td>-</td> <td>-</td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td>-</td> <td>-</td> </tr> <tr> <td>Summer Freeboard</td> <td>6.66</td> <td>2.17 + 4.49</td> </tr> </tbody> </table> <p>13.84"</p>		+	-	Depth Correction ...	2.37	-	Deduction for superstructures ...	-	2.12	Sheer correction ...	4.29	-	Round of Beam correction ...	-	.05	Correction for Thickness of Deck amidships ...	-	-	Other corrections, scantlings, etc. ...	-	-	Summer Freeboard	6.66	2.17 + 4.49
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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 ...	4"	Tropical Fresh Water Freeboard	0'-9$\frac{3}{4}$"
Fresh Water Line „ „	2"	Fresh Water „	0'-11$\frac{1}{4}$"
Tropical Line „ „	2"	Tropical „	0'-11$\frac{1}{4}$"
Winter Line below „	Not assigned	Winter „	Not assigned
Winter North Atlantic Line „	Not assigned	Winter North Atlantic „	Not assigned