

Amended Computation

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name CARELIA	Official Number 167268	Nationality and Port of Registry Dutch Groningen	Gross Tonnage 8029 8082	Date of Build 1938	Port of Survey Amsterdam
Moulded Dimensions: Length 140.511 Breadth 17.980 Depth 10.363 <i>To centre of rudder stock</i>					Date of Survey Whilst building 1-4-38
Moulded displacement at moulded draught = 85 per cent. of moulded depth 17620 M³ tons					Surveyor's Signature M. P. Jonker
Coefficient of fineness for use with Tables .792					Particulars of Classification + 100 A.1. carrying petroleum in bulk. (contemplated)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 10363	(a) Where D is greater than Table depth (D - Table depth) R = 8.33(10.386 - 9.368)30 = +254	Moulded Breadth (B) 17980 mm
Stringer plate ... 23	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 1.018	Standard Round of Beam = $\frac{B \times 12}{50} =$ 360
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = 360
Depth for Freeboard (D) = 10386		Difference = nil
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) =$ nil

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>Equiv.</i>	28809	28809	2286 +		28809
.. overhang ...			54 mm wood sheathing		
R.Q.D. enclosed					
.. overhang					
Bridge enclosed <i>Equiv.</i>	13912	13912	2286	2286	13887
.. overhang aft					
.. overhang forward					
Fore enclosed	14722	14722	2286 + 64 mm wood sheathing		14722
.. overhang	2436	2436	2286	2286	2436
Foremast					
.. forward					
Tonnage opening aft					
.. forward					
Total	59879	59879			59850

Standard Height of Superstructure **2290 mm**

.. R.Q.D. ☒

Deduction for complete superstructure **1067 mm**

Percentage covered $\frac{S}{L} =$ **42.62**

.. $\frac{S_1}{L} =$ **42.62**

.. $\frac{E}{L} =$ **42.60**

Percentage from Table, Line A. TANKER
(corrected for absence of forecastle (if required)) **33.60**

Percentage from Table, Line B.
(corrected for absence of forecastle (if required)) **-**

Interpolation for bridge less than 2L (if required) ☒

Deduction = **1067 x 33.60 = 358 mm**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	1425	1	1425	1425	1425	1425	1	1425	1425
1/4 L from A.P. ...	633	4	2532	633	633	633	4	2532	2532
1/2 L ..	158	2	316	158	158	158	2	316	316
Amidships	-	4	-	-	-	-	4	-	-
3/4 L from F.P. ...	316	2	632	309	309	309	2	618	618
1/4 L ..	1266	4	5064	1261	1261	1261	4	5044	5044
F.P. ...	2849	1	2849	2845	2845	2845	1	2845	2845
Total			12818						12780

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{38}{18} (75 - 2131) = +1$ mm

If limited on account of midship superstructure. ☒

Mean actual sheer aft = *Excess*

Mean standard sheer aft

Mean actual sheer forward = *Deficient*

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = **1**

.. aft of .. = **2**

Tanker

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = 10386 Ft.</p> <p>Summer freeboard = 2040</p> <p>Moulded draught (d) = 8346</p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4} \text{ inches} = 174 = 17 \text{ cms.}$</p> <p>Addition for Winter North Atlantic Freeboard (if required) = 174 + 115 = 289 mm = 29 cms.</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line $\Delta = 16689 \text{ M}^3$</p> <p>Tons per inch immersion at summer load water line $T = 21.82$</p> <p>Deduction = $\frac{\Delta}{40 T} \text{ inches} = 191 \text{ mm} = 19 \text{ cms.}$</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient $\frac{792 + 68}{1.36} = \frac{1.472}{1.36}$</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>254</td><td></td></tr><tr><td>Deduction for superstructures</td><td></td><td>358</td></tr><tr><td>Sheer correction</td><td>1</td><td></td></tr><tr><td>Round of Beam correction</td><td></td><td></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>255</td><td>358</td><td>- 103</td></tr><tr><td colspan="3">Summer Freeboard = 2039</td></tr></tbody></table>		+	-	Depth Correction	254		Deduction for superstructures		358	Sheer correction	1		Round of Beam correction			Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.			255	358	- 103	Summer Freeboard = 2039		
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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	14 1/4 ... 36 cms	Tropical Fresh Water Freeboard	5-6 1/8 ... 168
Fresh Water Line	7 1/2 ... 19 "	Fresh Water	6-0 1/4 ... 185 "
Tropical Line	6 3/4 ... 17 "	Tropical	6-1 1/2 ... 187 "
Winter Line below	6 3/4 ... 17 "	Winter	7-3 ... 221 "
Winter North Atlantic Line	11 1/2 ... 29 "	Winter North Atlantic	7-7 1/2 ... 233 "

Carelia.

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.

Poof Equiv^t. Bhd.

$$\begin{array}{r} \frac{2}{3} \times 1440 = 960 \\ \frac{27849}{28809} = \text{Equiv^t Bhd.} \end{array}$$

Bridge Equiv Bhd.

$$\begin{array}{r} \frac{2}{3} \times 1241 = 827 \\ \frac{13085}{13912} = \text{Equiv^t Bhd.} \end{array}$$

Forecastle Sidehouse,

$$\frac{7364 \times 5511}{16664} = 2436 = \text{Equiv^t length.}$$

Trade of ship.....

Names of sister ships.....

Builder's name and yard number.....

Owners.....

Fee £.....



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Foundation