

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.  
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

31635

Ship's Name <b>"ELIZABETH-B"</b>	Official Number ✓	Nationality and Port of Registry <b>NETHERLANDS Burchard DORDRECHT London</b>	Gross Tonnage <b>275</b>	Date of Build <b>1949</b>	Port of Survey <b>HEUSDEN</b>
Moulded Dimensions: Length <b>42.00 M</b> Breadth <b>7.40 M</b> Depth <b>3.15 M</b> ✓					Date of Survey <b>WHILE BUILDING</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>530 M<sup>3</sup></b> tons					Surveyor's Signature <b>CH. Lammert</b>
Coefficient of fineness for use with Tables <b>(0.64.637) .68</b> ✓					Particulars of Classification <b>100 A1 "CARRYING PETROLEUM IN BULK"</b>

<b>DEPTH FOR FREEBOARD (D).</b>	<b>DEPTH CORRECTION.</b>	<b>ROUND OF BEAM CORRECTION.</b>
Moulded depth ... <b>3150 mm</b> ✓	(a) Where D is greater than Table depth (D - Table depth) R = <b>8.33(3.158 - 2.860) = + 32 mm</b> ✓	Moulded Breadth (B) <b>7.40 M</b>
Stringer plate ... <b>8 mm</b> ✓	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>3.58</b>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{7.40 \times 12}{50} = 1.776 M$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = <b>150 mm</b>
Depth for Freeboard (D) = <b>3158 mm</b> ✓		Difference = <b>2 mm</b>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{2^2}{4} \times 2.344 = \text{NIL}$

<b>DEDUCTION FOR SUPERSTRUCTURES.</b>					
	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height m/m	Height Correction	Effective Length (E)
Poop enclosed ...	<b>11.64</b>	<b>11.640</b>	<b>2/30</b>	✓	<b>11.640</b>
" overhang ...	<b>2.16</b>	<b>1.080</b>	<b>2/30</b>	✓	<b>1.080</b>
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	<b>7.85</b>	<b>7.850</b>	<b>2/30</b>		<b>7.850</b>
" overhang ...					
Trunk aft ...	<b>22.51</b>	<b>11.584</b>	<b>1000</b>	<b>1000/830</b>	<b>6.330</b>
" forward } <b>BREADTH 4 M</b>					
Tonnage opening aft ...					
" " forward ...					
Total ...	<b>21.65</b>	<b>32.154</b>			<b>26.900</b>

Standard Height of Superstructure <b>1.830 m</b> ✓
" " R.Q.D. ✓
Deduction for complete superstructure <b>503 mm</b> ✓
Percentage covered $\frac{S}{L} = 51.55$ ✓
" " $\frac{S_1}{L} = 76.56$ ✓
" " $\frac{E}{L} = 64.05$ ✓
Percentage from Table, Line <b>A. TANKER</b> <b>56.46</b> ✓
(corrected for absence of forecastle (if required)) ✓
Percentage from Table, Line <b>B.</b> ✓
(corrected for absence of forecastle (if required)) ✓
Interpolation for bridge less than 2L (if required) ✓
Deduction = <b>503 × 56.46 = 284 mm</b> ✓

<b>SHEER CORRECTION.</b>							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P. ...	<b>604</b>	<b>1</b>	<b>604</b>	<b>625</b>	<b>625</b>	<b>1</b>	<b>625</b>
1/4 L from A.P. ...	<b>268</b>	<b>4</b>	<b>1072</b>	<b>300</b>	<b>300</b>	<b>4</b>	<b>1200</b>
2/4 L " ...	<b>67</b>	<b>2</b>	<b>134</b>	<b>70</b>	<b>70</b>	<b>2</b>	<b>140</b>
Amidships ...	<b>-</b>	<b>4</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>4</b>	<b>-</b>
2/4 L from F.P. ...	<b>134</b>	<b>2</b>	<b>268</b>	<b>130</b>	<b>130</b>	<b>2</b>	<b>260</b>
1/4 L " ...	<b>537</b>	<b>4</b>	<b>2148</b>	<b>570</b>	<b>570</b>	<b>4</b>	<b>2280</b>
F.P. ...	<b>1208</b>	<b>1</b>	<b>1208</b>	<b>1215</b>	<b>1215</b>	<b>1</b>	<b>1215</b>
Total ...		✓	<b>5434</b>				<b>5720</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{286}{18} \left( .75 - \frac{2578}{2 \times 42} \right) = - 8 \text{ mm}$

If limited on account of midship superstructure. ✓

If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

<b>Deduction for Tropical Freeboard.</b>	<b>Deduction for Fresh Water.</b>	<b>TABULAR FREEBOARD corrected for Flush Deck (if required)</b>
<b>Addition for Winter and Winter North Atlantic Freeboard.</b>	Displacement in salt water at summer load water line <b>3.00 M</b>	Correction for coefficient <b>NIL</b>
Depth to Freeboard Deck = <b>3158</b>	$\Delta = \frac{770}{100} \text{ TONS (METRIC)}$	Depth Correction ... <b>32</b>
Summer freeboard = <b>100</b>	Tons per 100 immersion at summer load water line <b>2.52 TONS (METRIC)</b>	Deduction for superstructures ... <b>284</b>
Moulded draught (d) = <b>3058</b>	Deduction = $\frac{\Delta}{40 T} \text{ inches} = 7.64 \text{ mm}$	Sheer correction ... <b>8</b>
Deduction for Tropical freeboard and addition for		Round of Beam correction ... <b>-</b>
Winter freeboard = $\frac{d}{48} \text{ inches} = 64 \text{ mm} : 6 \text{ cm}$ ✓		Correction for Thickness of Deck amidships ... <b>-</b>
Addition for Winter North Atlantic Freeboard (if required) = <b>64 + 34 = 98 mm = 10 cm</b> ✓		Other corrections, scantlings, etc. ... <b>-</b>
		<b>32 292 -260</b>
		Summer Freeboard = <b>95</b>

<b>SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-</b>	
Tropical Fresh Water Line above Centre of Disc <b>13 mm</b>	5/4 Tropical Fresh Water Freeboard <b>10 mm</b> (limited)
Fresh Water Line " <b>8 mm</b>	3/4 Fresh Water " <b>2 mm</b>
Tropical Line " <b>5 mm</b>	2 Tropical " <b>5 mm</b> (limited)
Winter Line below " <b>6 mm</b>	2 1/4 Winter " <b>16 mm</b>
Winter North Atlantic Line " <b>10 mm</b>	4 Winter North Atlantic " <b>20 mm</b>

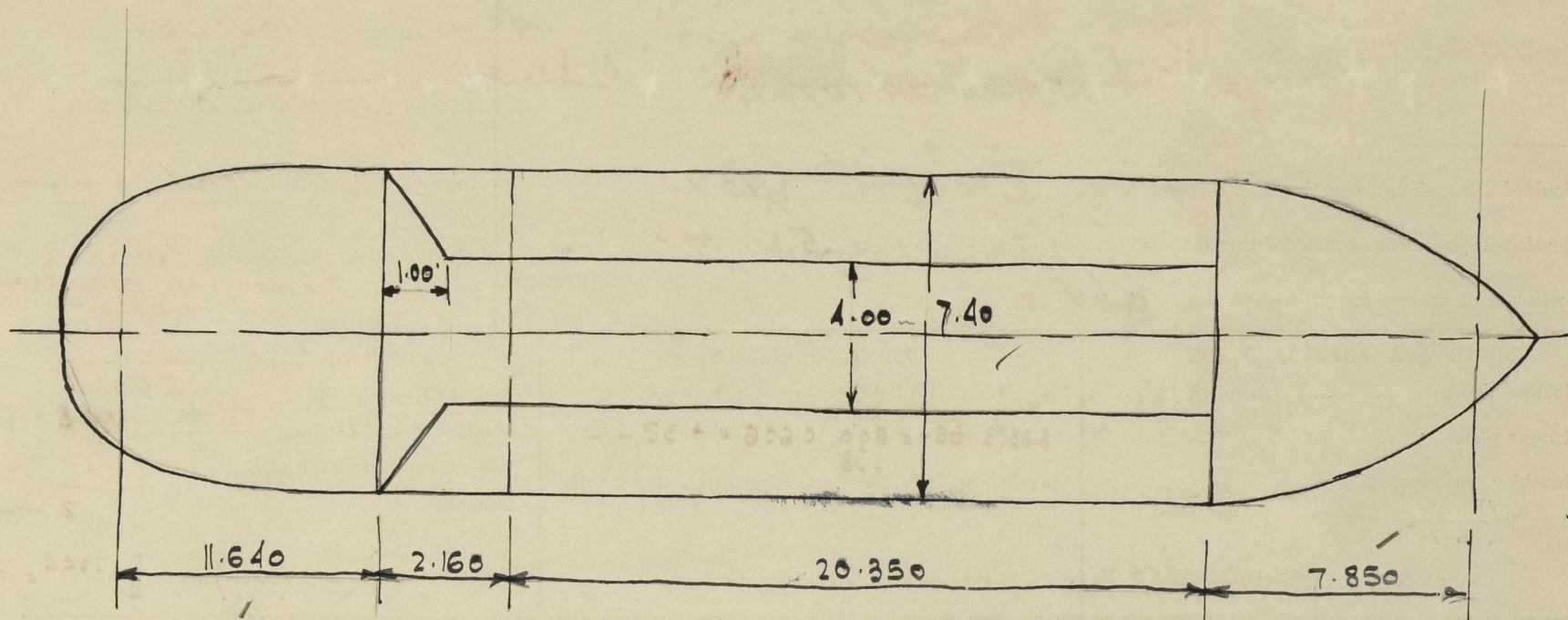
MINI 13 10 mm

4" 1 1/4" 0 3/4" 2" 6 1/4" 8"



*"Elizabeth-B."*

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.



$$\begin{aligned} \text{TRUNK} &:- 20.350 \times \frac{4.00}{7.40} = 11.000 \checkmark \\ &1.080 \times \frac{4.00}{7.40} = .584 \checkmark \\ &\text{Equivalent} \quad \underline{11.584} \checkmark \end{aligned}$$

Trade of ship OCEAN TRADE

Names of sister ships V

Builder's name and yard number MESSRS' DE HAAN & OERLEMANS SCHEEPSWERF, HEUSDEN, YARD N° 253

Owners GEBR. BROERE N.V. DORDRECHT, HOLLAND

Fee FL. 100,-



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