

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>not available</i> <b>CAROLINE MÆRSK</b> Odense Yard No. 83	Official Number ✓	Nationality and Port of Registry Danish	Gross Tonnage ab. 10,100	Date of Build 1940-41	Port of Survey Odense
Moulded Dimensions: Length <i>496'-0"</i> Breadth <i>65'-9"</i> Depth <i>35'-11"</i> Freeboard <i>496.98'</i>					Date of Survey November 1940
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>22.635</i> tons					Surveyor's Signature <i>S. Sanderson</i>
Coefficient of fineness for use with Tables <i>(.795)</i> .794 ✓					Particulars of Classification <i>Contemplated</i>

Depth for Freeboard (D).		Depth correction.	Round of Beam correction.
Moulded depth ...	<i>35.917</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(35.988 - 33.182) 3 = +8.568"</i>	Moulded Breadth (B) <i>65'-9"</i>
Stringer plate ...	<i>.071</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓	Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>15.78</i>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	<i>mark</i>	If restricted by superstructures ✓	Ship's Round of Beam = <i>15 3/4"</i>
Depth for Freeboard (D) =	<i>35.988</i>		Difference <i>+ .03'</i>
			Restricted to
			Correction = $\frac{\text{Diff.}}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <i>Nil</i> ✓

## DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>102.05'</i>	<i>7.50'</i>		<i>102.05'</i>
.. overhang ...	<i>2.42'</i>	<i>1.21'</i>		<i>1.21'</i>
R.Q.D. enclosed				
.. overhang				
Bridge enclosed...	<i>34.54'</i>	<i>7.50'</i>		<i>34.54'</i>
.. overhang aft	<i>4.38'</i>			<i>4.38'</i>
.. overhang forward	<i>4.38'</i>			<i>4.38'</i>
F'cle enclosed ...	<i>35.17'</i>	<i>7.50'</i>		<i>35.17'</i>
.. overhang ...	<i>3.00'</i>			<i>3.00'</i>
Trunk aft ...				
.. forward ...				
Tonnage opening aft				
.. forward				
Total ...	<i>181.56</i>	<i>180.35</i>		<i>180.35</i>

Standard Height of Superstructure *7.50'*  
R.Q.D. ✓  
Deduction for complete superstructure *42"* ✓  
Percentage covered  $\frac{S}{L} =$  *36.53* ✓  
 $\frac{S_1}{L} =$  *36.29* ✓  
 $\frac{E}{L} =$  *36.29* ✓  
Percentage from Table, Line A. ✓  
(corrected for absence of forecastle (if required))  
Percentage from Table, Line B. *Tanker* ✓  
(corrected for absence of forecastle (if required)) *27.29* ✓  
Interpolation for bridge less than 2L (if required)  
Deduction = *42 × .2729 = 11.46"* ✓

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>59.70</i>	1		<i>59.70</i>	<i>59.5"</i>	<i>59.50</i>	1		<i>59.50</i>
1/4 L from A.P. ...	<i>26.56</i>	4		<i>106.24</i>	<i>26.65"</i>	<i>26.65</i>	4		<i>106.60</i>
1/2 L ..	<i>6.56</i>	2		<i>13.13</i>	<i>6.75"</i>	<i>6.75</i>	2		<i>13.50</i>
Amidships ...	<i>0</i>	4		<i>0</i>	<i>0</i>	<i>0</i>	4		<i>0</i>
3/4 L from E.P. ...	<i>13.13</i>	2		<i>26.26</i>	<i>13.45"</i>	<i>13.45</i>	2		<i>26.90</i>
1/4 L ..	<i>53.13</i>	4		<i>212.52</i>	<i>53.00"</i>	<i>53.00</i>	4		<i>212.00</i>
E.P. ...	<i>119.40</i>	1		<i>119.40</i>	<i>122.25"</i>	<i>122.25</i>	1		<i>122.25</i>
Total ...				<i>537.25</i>					<i>540.75</i>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{3.50}{18} (75-.18) = -.11"$  ✓  
If limited on account of midship superstructure. If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{794+.68}{1.36}$
Depth to Freeboard Deck = <i>35.92</i>	$\Delta =$ <i>20850</i>	Depth Correction ... <i>8.57"</i>
Summer freeboard = <i>7.58</i>	Tons per inch immersion at summer load water line	Deduction for superstructures ... <i>11.46"</i>
Moulded draught (d) = <i>28.34</i>	$T =$ <i>67.2</i>	Sheer correction ... <i>11"</i>
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40T}$ inches	Round of Beam correction ...
Winter freeboard = $\frac{d}{4}$ inches = <i>7.09</i> ~ <i>180</i> $\frac{1}{4}$ <i>7'</i>	$=$ <i>7.75</i> ~ <i>195</i> $\frac{1}{4}$ <i>7 3/4"</i>	Correction for Thickness of Deck amidships
Addition for Winter North Atlantic Freeboard (if required) = <i>7.09 + 4.97 = 12.06</i> ~ <i>305</i> $\frac{1}{4}$ <i>12"</i>		Other corrections, scantlings, etc. ...
		<i>8.57 + 11.57 = 3.00</i>
		Summer Freeboard = <i>91.04"</i>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: <i>91.04" ~ 2310</i> $\frac{1}{4}$ <i>7-7"</i>		
Tropical Fresh Water Line above Centre of Disc <i>14 3/4"</i>	<i>375</i> $\frac{1}{4}$ <i>195</i>	Tropical Fresh Water Freeboard <i>6-11 1/4"</i>
Fresh Water Line ..	<i>180</i>	Fresh Water ..
Tropical Line ..	<i>180</i>	Tropical ..
Winter Line below ..	<i>180</i>	Winter ..
Winter North Atlantic Line ..	<i>305</i>	Winter North Atlantic ..

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.

Trade of ship ✓

Names of sister ships none

Builder's name and yard number

Messrs. Odense Staalskibsverft Yard No. 83

Owners

A. P. Möller Esq.

Fee £



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Foundation