

JOTUNFJELL 35176
INNERBY 35103
ALEXANDRA HOEGH 34497

Rpt. C.11.
KOLLBJÖRQ 35245.
SULÖR 35718
GARD 35833

Amended computation

Index. No. 34927
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer , Sailing Ship, Tanker					Port of Survey <i>Göteborg</i>	
having <i>poop, bridge and forecastle</i>					Date of Survey <i>25th May 1935</i>	
(Type of Superstructures.)					Name of Surveyor <i>G. H. Ingquist</i>	
Ship's Name <i>Kollbjörn</i> <i>PICARDIE</i>		Nationality and Port of Registry <i>Norwegian</i> <i>Oslo</i>	Official Number <i>8262-95</i>	Gross Tonnage <i>1936</i> <i>6</i>	Date of Build <i>1936</i> <i>6</i>	
Moulded Dimensions: Length <i>46.5</i>		Breadth <i>60.75</i>	Depth <i>34.0</i>	Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>18580</i> tons		
Coefficient of fineness for use with Tables <i>.7966</i>		Particulars of Classification <i>+100M</i> <i>Carry 4 petroleum in bulk</i>				

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth ...	<i>34.00</i>	(a) Where D is greater than Table depth (D - Table depth) R =	<i>(34.07 - 31.00) x 3 = +9.21</i>	Moulded Breadth (B)	<i>60.75</i>
Stringer plate ...	<i>.07</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	<i>-</i>	Standard Round of Beam = $\frac{B \times 12}{50}$	<i>14.58</i>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	<i>✓</i>	If restricted by superstructures	<i>-</i>	Ship's Round of Beam	<i>15.20</i>
Depth for Freeboard (D) =	<i>34.07</i>			Difference	<i>.62</i>
				Restricted to	<i>-</i>
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	<i>= \frac{.62}{4} \times .6445 = -.10</i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed <i>equally</i>	<i>94.73</i>	<i>94.73</i>	<i>7.5</i>	<i>-</i>	<i>94.73</i>	Standard Height of Superstructure <i>7.5</i>
" overhang ...						" " R.Q.D. <i>-</i>
R.Q.D. enclosed						Deduction for complete superstructure <i>42</i>
" overhang						Percentage covered $\frac{S}{L} =$ <i>35.55</i>
Bridge enclosed <i>equally</i>	<i>32.65</i>	<i>32.65</i>	<i>7.5</i>	<i>-</i>	<i>32.65</i>	" " $\frac{S_1}{L} =$ <i>35.55</i>
" overhang aft						" " $\frac{E}{L} =$ <i>35.55</i>
" overhang forward						Percentage from Table, Line A. <i>Tanker 26.55</i>
Fore enclosed	<i>37.92</i>	<i>37.92</i>	<i>7.5</i>	<i>-</i>	<i>37.92</i>	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B. <i>-</i>
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = <i>42 x 26.55 = -11.15</i>
" forward						
Total	<i>165.30</i>	<i>165.30</i>			<i>165.30</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<i>56.50</i>	<i>1</i>	<i>56.50</i>	<i>40.00</i>	<i>40.00</i>	<i>40.00</i>	<i>1</i>	<i>40.00</i>		Mean actual sheer aft = <i>Deficient</i>
$\frac{1}{2}L$ from A.P.	<i>25.14</i>	<i>4</i>	<i>100.56</i>	<i>14.60</i>	<i>14.60</i>	<i>14.60</i>	<i>4</i>	<i>58.40</i>		Mean actual sheer forward = <i>Deficient</i>
$\frac{3}{4}L$	<i>6.215</i>	<i>2</i>	<i>12.43</i>	<i>2.52</i>	<i>2.52</i>	<i>2.52</i>	<i>2</i>	<i>5.04</i>		Mean standard sheer forward
Amidships	<i>-</i>	<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>4</i>	<i>-</i>		Length of enclosed superstructure forward of amidships = <i>1</i>
$\frac{3}{4}L$ from F.P.	<i>12.43</i>	<i>2</i>	<i>24.86</i>	<i>7.60</i>	<i>7.60</i>	<i>7.60</i>	<i>2</i>	<i>15.20</i>		" " aft of " = <i>1</i>
$\frac{1}{2}L$	<i>50.28</i>	<i>4</i>	<i>201.12</i>	<i>34.76</i>	<i>34.76</i>	<i>34.76</i>	<i>4</i>	<i>139.04</i>		
F.P.	<i>113.00</i>	<i>1</i>	<i>113.00</i>	<i>80.00</i>	<i>80.00</i>	<i>80.00</i>	<i>1</i>	<i>80.00</i>		
Total			<i>508.47</i>					<i>337.68</i>		

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{170.79}{18} \left(.75 - \frac{.1777}{.5723} \right) = +5.43$

If limited on account of midship superstructure. *✓*

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

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *34.07*
Summer freeboard = *7.42*
Moulded draught (d) = *26.65*

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = *6.66 = 6\frac{3}{4}*
Addition for Winter North Atlantic Freeboard (if required) = *6.66 + 4.65 = 11.31 = 11\frac{1}{4}*
= 286

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 17129$
Tons per inch immersion at summer load water line
 $T = 57.94$
Deduction = $\frac{\Delta}{40T}$ inches
= 7.37
= 7\frac{1}{2}
= 190

TABULAR FREEBOARD *corrected for Plank Deck (if required)*
7966 + .68
1.36

Correction for coefficient

Depth Correction ... *9.21*
Deduction for superstructures ... *11.15*
Sheer correction ... *5.43*
Round of Beam correction ... *1.60*
Correction for Thickness of Deck amidships ... *-*
Other corrections, scantlings, etc. ... *-*

78.95
85.72

14.64
11.25
+ 3.39
Summer Freeboard = *89.11*

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck

Tropical Fresh Water Line above Centre of Disc ... *1.4\frac{1}{4} = 361*
Fresh Water Line " " ... *7\frac{1}{2} = 190*
Tropical Line " " ... *6\frac{3}{4} = 171*
Winter Line below " " ... *6\frac{3}{4} = 171*
Winter North Atlantic Line " " ... *11\frac{1}{4} = 286*

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