

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, ~~SAILING SHIP, CUNNINGHAM~~)

Ship's Name <b>OLAV BAKKE</b>	Official Number	Nationality and Port of Registry <b>Norwegian Haugesund</b>	Gross Tonnage <b>5870.</b> <del>About 5700</del>	Date of Build <b>1945</b>	Port of Survey <b>Göteborg</b>
Moulded Dimensions: Length <b>450.85'</b> Breadth <b>58.5'</b> Depth <b>29'</b>					Date of Survey <b>While building</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>12,575 M<sup>3</sup></b>					Surveyor's Signature <i>W. Hoffmann</i>
Coefficient of fineness for use with Tables $\frac{12575 \times 35.31}{450.85 \times 58.5 \times 29.0 \times 85} = .683$					Particulars of Classification <b>+100A1 with freeboard</b>

Depth for Freeboard (D).		Depth correction.	Round of Beam correction.
Moulded depth	<b>29.00</b>	(a) Where D is greater than Table depth (D—Table depth) R =	Moulded Breadth (B) <b>58.5'</b>
Stringer plate	<b>.03</b>	(b) Where D is less than Table depth (if allowed) (Table depth—D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>14.04</b>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$		<b>(30.06-29.03)3 = -3.09</b>	Ship's Round of Beam <b>370mm.</b> = <b>14.57</b>
Depth for Freeboard (D) =	<b>29.03</b>	If restricted by superstructures	Difference <b>Excess</b> = <b>0.53</b>
			Restricted to
			Correction = $\frac{\text{Diffe}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.53}{4} \times .005 = \text{Nil.}$

### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed	<b>32.50</b>	<b>32.50</b>			<b>32.50</b>
» overhang	<b>.27</b>	<b>.13</b>			<b>.13</b>
R.Q.D. enclosed					
» overhang					
Bridge enclosed					
» overhang aft	<b>413.70</b>	<b>413.70</b>	<b>9'-0"</b>		<b>413.70</b>
» overhang forward					
Fore enclosed					
» overhang					
Trunk aft					
» forward					
Tonnage opening aft	<b>4.38</b>	<b>2.26</b>			<b>2.26</b>
» » forward					
Total	<b>450.85</b>	<b>448.59</b>			<b>448.59</b>

Standard Height of Superstructure	<b>7.5'</b>
» » R.Q.D.	
Deduction for complete superstructure	<b>42"</b>
Percentage covered $\frac{S}{L} =$	<b>100.00</b>
» » $\frac{S_1}{L} =$	<b>99.50</b>
» » $\frac{E}{L} =$	<b>99.50</b>
Percentage from Table, Line A. (corrected for absence of forecastle [if required])	
Percentage from Table, Line B. (corrected for absence of forecastle [if required])	<b>99.38</b>
Interpolation for bridge less than 2L (if required)	
Deduction =	<b>42 x .9938 = -41.73"</b>

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<b>55.09</b>	1		<b>55.09</b>	<b>56.69</b>	<b>74.69</b>	1		<b>74.69</b>
1/6 L from A.P.	<b>24.52</b>	4		<b>98.08</b>	<b>24.53</b>	<b>33.24</b>	4		<b>132.96</b>
2/6 L »	<b>6.06</b>	2		<b>12.12</b>	<b>5.98</b>	<b>8.22</b>	2		<b>16.44</b>
Amidships	<b>--</b>	4		<b>--</b>	<b>0</b>	<b>--</b>	4		<b>--</b>
2/6 L from F.P.	<b>12.12</b>	2		<b>24.24</b>	<b>11.06</b>	<b>14.36</b>	2		<b>28.72</b>
1/6 L »	<b>49.03</b>	4		<b>196.12</b>	<b>48.78</b>	<b>58.10</b>	4		<b>232.40</b>
F.P.	<b>110.17</b>	1		<b>110.17</b>	<b>112.56</b>	<b>130.56</b>	1		<b>130.56</b>
Total				<b>495.82</b>	<b>+18"</b>				<b>615.77</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{119.95}{18} \times .25 = -1.67"$   
If limited on account of midship superstructure.

Actual 'tween deck height = **9'-0"**  
Standard " " " = **7'-6"**  
Excess = **1'-6"**

Mean actual sheer aft = **Excess**  
Mean standard sheer aft = **=18"**

Mean actual sheer forward = **Excess**  
Mean standard sheer forward = **Excess**

Length of enclosed superstructure forward of amidships = **C.S.S.**  
» » aft of » = **C.S.S.**

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	<b>87.36</b>
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.6830+.68}{1.36} = \frac{1.363}{1.36}$	<b>87.55</b>
Depth to Freeboard Deck = <b>29.03</b>	$\Delta =$ <b>13362</b>	Depth Correction	<b>3.09</b>
Summer freeboard = <b>3.42</b>	Tons per inch immersion at summer load water line	Deduction for superstructures	<b>41.73</b>
Moulded draught (d) = <b>25.61</b>	$T =$ <b>50.29</b>	Sheer correction	<b>1.67</b>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>6.40 = 6½"</b>	Deduction = $\frac{\Delta}{40 T}$ inches = <b>6.65 = 6.3/4"</b>	Round of Beam correction	<b>-</b>
Addition for Winter North Atlantic Freeboard (if required) = <b>---</b>		Correction for Thickness of Deck amidships	<b>-</b>
		Other corrections, scantlings, etc.	<b>-</b>
			<b>- 46.49 46.49</b>
		Summer Freeboard =	<b>41.06"</b>

### SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~XXXX~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	<b>13½"</b> = <b>336 mm</b>	Tropical Fresh Water Freeboard	<b>3'-5"</b> = <b>1041 mm.</b>
Fresh Water Line	<b>6½"</b> = <b>170 mm</b>	Fresh Water	<b>2'-10½"</b> = <b>871 mm.</b>
Tropical Line	<b>6½"</b> = <b>165 mm</b>	Tropical	<b>2'-10½"</b> = <b>876 mm.</b>
Winter Line below	<b>6½"</b> = <b>165 mm</b>	Winter	<b>3'-11½"</b> = <b>1206 mm.</b>
Winter North Atlantic Line		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.

Displacement at 75% of Moulded depth = 11,065 tons. Tons per inch = 48.40  
" " 85% " " " = 12,780 " " " = 49.82  
" " 95% " " " = 14,540 " " " = 51.25

Trade of ship General.

Names of sister ships

Builder's name and yard number A-B. Götaverken, Gothenburg, Yard No. 561.

Owners

Fee £

