

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Rod - Bridge - Forecastle Port of Survey _____

(Type of Superstructures.)

Ship's Name <u>LOKE</u>	Nationality and Port of Registry <u>Stockholm Sweden</u>	Official Number	Gross Tonnage	Date of Build <u>1905.</u>
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Date of Survey _____ Name of Surveyor _____

Moulded Dimensions: Length 230 ✓ Breadth 34.25 ✓ Depth 18.29 ✓

Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons

Coefficient of fineness for use with Tables .765 (General)

Particulars of Classification _____

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>18.29</u>	(a) Where D is greater than Table depth (D - Table depth) R = $(18.33 - 15.33) \times 1.769$ = <u>5.307</u> ✓	Moulded Breadth (B) <u>34.25</u> ×
Stringer plate <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = _____	Standard Round of Beam = $\frac{B \times 12}{50}$ = <u>8.21</u> ✓
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ _____	If restricted by superstructures <u>P</u>	Ship's Round of Beam = <u>8.5</u> ✓
Depth for Freeboard (D) = <u>18.33</u>		Difference = <u>-.29</u> ✓
		Restricted to _____
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right)$ = $\frac{.29^2}{4} \times .313 =$ <u>-.02</u>

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed				
" overhang			<u>2.5</u>	<u>51.40</u>
R.Q.D. enclosed	<u>79.50</u>	<u>2.5</u>	<u>.646</u>	<u>51.40</u>
" overhang				
Bridge enclosed	<u>57.25</u>	<u>7.0</u>		<u>51.525</u>
" overhang aft				
" overhang forward				
F'cle enclosed <u>29.40</u>	<u>25.50</u>	<u>7.0</u>		<u>25.50</u>
" overhang	<u>3.00</u>	<u>1.50</u>		<u>1.50</u>
Trunk aft				
" forward				
Tonnage opening aft				
" " forward				
Total	<u>165.25</u>	<u>158.02</u>		<u>129.92</u>

Standard Height of Superstructure 6.00 ✓

 " " R.Q.D. 5.82

 " " 3.867 ✓

Deduction for complete superstructure 29.00 ✓

Percentage covered $\frac{S}{L} =$ 71.84

 " " $\frac{S_1}{L} =$ 68.70

 " " $\frac{E}{L} =$ 56.50

Percentage from Table, Line A. 41.10 ✓

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. _____

(corrected for absence of forecastle (if required))

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

Deduction = $29 \times .41 =$ 11.92 ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>33.0</u>	1		<u>33.00</u>	<u>40.00</u>	<u>40.00</u>	1		<u>40.00</u>
$\frac{1}{4}$ L from A.P.	<u>14.69</u>	4		<u>58.76</u>	<u>16.58</u>	<u>16.58</u>	4		<u>66.32</u>
$\frac{2}{4}$ L " "	<u>3.63</u>	2		<u>7.26</u>	<u>4.14</u>	<u>4.14</u>	2		<u>8.28</u>
Amidships		4					4		
$\frac{3}{4}$ L from F.P.	<u>7.26</u>	2		<u>14.52</u>	<u>8.82</u>	<u>8.82</u>	2		<u>17.64</u>
$\frac{1}{4}$ L " "	<u>29.38</u>	4		<u>117.52</u>	<u>35.30</u>	<u>35.30</u>	4		<u>141.20</u>
F.P.	<u>66.0</u>	1		<u>66.00</u>	<u>79.00</u>	<u>79.00</u>	1		<u>79.00</u>
Total				<u>297.06</u>					<u>352.44</u>

Mean actual sheer aft = excess

Mean standard sheer aft _____

Mean actual sheer forward = excess

Mean standard sheer forward _____

Length of enclosed superstructure forward of amidships = 0.93

 " " aft of " = .5L

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{55.38}{18} \left(\frac{75 - .359}{2 \times 230} \right) = 1.20 \times \frac{193}{200} =$ -1.16 ✓

If limited on account of midship superstructure. 193 ✓

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

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p style="text-align: center;">Ft.</p> <p>Depth to Freeboard Deck = <u>18.33</u> ✓</p> <p>Summer freeboard = <u>1.87</u> ✓</p> <p>Moulded draught (d) = <u>16.46</u> ✓</p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>4.12</u> ✓</p> <p>Addition for Winter North Atlantic Freeboard (if required) = _____</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line _____</p> <p>$\Delta =$ _____</p> <p>Tons per inch immersion at summer load water line _____</p> <p>T = _____</p> <p>Deduction = $\frac{\Delta}{40T}$ inches = _____</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient $\frac{.765 + .68}{1.36} = \frac{1.445}{1.36}$</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">+</th> <th style="width: 50%;">-</th> </tr> <tr> <td>Depth Correction</td> <td><u>5.31</u></td> </tr> <tr> <td>Deduction for superstructures</td> <td><u>11.92</u></td> </tr> <tr> <td>Sheer correction</td> <td><u>1.16</u></td> </tr> <tr> <td>Round of Beam correction</td> <td><u>.02</u></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td></td> </tr> <tr> <td style="border-top: 1px solid black;">5.31</td> <td style="border-top: 1px solid black;">13.10</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">- 7.79</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">Summer Freeboard = <u>22.49</u></td> </tr> </table>	+	-	Depth Correction	<u>5.31</u>	Deduction for superstructures	<u>11.92</u>	Sheer correction	<u>1.16</u>	Round of Beam correction	<u>.02</u>	Correction for Thickness of Deck amidships		Other corrections, scantlings, etc.		5.31	13.10		- 7.79		Summer Freeboard = <u>22.49</u>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:— 1 - 10 1/2 ✓

Tropical Fresh Water Line above Centre of Disc	Tropical Fresh Water Freeboard
Fresh Water Line " "	Fresh Water " "
Tropical Line " "	Tropical " "
Winter Line below " "	Winter " "
Winter North Atlantic Line " "	Winter North Atlantic " "

TIMBER Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having _____ Port of Survey _____

(Type of Superstructures.) _____ Date of Survey _____

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>LOKE</u>				

Name of Surveyor _____

Particulars of Classification _____

Moulded Dimensions: Length _____ Breadth _____ Depth _____

Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons

Coefficient of fineness for use with Tables _____

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth	(a) Where D is greater than Table depth (D - Table depth) R =	Moulded Breadth (B)
Stringer plate	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50}$ =
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam =
Depth for Freeboard (D) =		Difference =
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed						Standard Height of Superstructure _____
" overhang						" " R.Q.D. _____
R.Q.D. enclosed						Deduction for complete superstructure <u>29.00</u>
" overhang						Percentage covered $\frac{S}{L} =$
Bridge enclosed						" " $\frac{S_1}{L} =$
" overhang aft						" " $\frac{E}{L} =$ <u>56.50</u>
" overhang forward						Percentage from Table, Line A. <u>73.31</u>
F'cle enclosed						(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = <u>29.00</u> × <u>0.7331</u> = <u>21.26</u>
" forward						
Total						

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.		1					1		
$\frac{1}{4}L$ from A.P.		4					4		
$\frac{2}{8}L$ "		2					2		
Amidships		4					4		
$\frac{3}{8}L$ from F.P.		2					2		
$\frac{1}{4}L$ "		4					4		
F.P.		1					1		
Total									

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

If limited on account of midship superstructure. _____

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

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = $\frac{\text{Ft.}}{18.33}$</p> <p>Summer freeboard = $\frac{1.10}{17.23}$</p> <p>Moulded draught (d) = $\frac{17.23}{5.74} = 5\frac{3}{4}$</p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{5.74}{4} = 1.43$</p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>$\Delta =$</p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = $\frac{\Delta}{40T}$ inches =</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient</p> <table border="1"> <tr> <td>+</td> <td>-</td> </tr> <tr> <td>5.31</td> <td></td> </tr> <tr> <td></td> <td>21.26</td> </tr> <tr> <td></td> <td>1.16</td> </tr> <tr> <td></td> <td>.02</td> </tr> <tr> <td>5.31</td> <td>22.44</td> </tr> <tr> <td></td> <td>- 17.13</td> </tr> <tr> <td></td> <td>Summer Freeboard = 13.15</td> </tr> </table>	+	-	5.31			21.26		1.16		.02	5.31	22.44		- 17.13		Summer Freeboard = 13.15
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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	Tropical Fresh Water Freeboard
Fresh Water Line " "	Fresh Water " "
Tropical Line " "	Tropical " "
Winter Line below " "	Winter " "
Winter North Atlantic Line " "	Winter North Atlantic " "

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Diff S = 6
W = 2.4

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Description of Hatchway	Dimensions of Hatchway	COAMINGS	HATCH BEAMS	FORE AND AFTERS	HATCH COVERS	Spacing of Cleats	Number of Tarpaulins
		Height above Deck Thickness Stiffeners Brackets, Stays	Number Spacing Scantling and Sketch	Number Spacing Unsupported Lengths Scantling* and Sketch	Material Thickness How fitted Bearing Surface		

*Are wood fore and afters steel shod at all bearing surfaces?
 Are battens and wedges efficient and in good condition?
 Are tarpaulins in good condition and in accordance with rule requirements?
 Are lashings provided in accordance with rule requirements?

Particulars of fiddley, funnel and ventilator coamings :-

Particulars of Flush Bunker Scuttles :-

Particulars of Companionways :-

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :-

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :-

Particulars of Gangway Cargo and Coaling Ports :-

Particulars of Scuppers and Sanitary Discharge Pipes :-

Particulars of Side Scuttles :-

Particulars of Guard Rails :-

Particulars of Gangways, Lifelines, etc. :-

RETAIN

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well						
Forward Well						

State position of each freeing port ... (F. and A. position and height above deck edge)
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :-
 Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead								
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	

