

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Alma</i>	Official Number <i>160615</i>	Nationality and Port of Registry <i>British London</i>	Gross Tonnage <i>10240.20</i>	Date of Build <i>1928</i>	Port of Survey <i>London</i>
Dimensions: Length <i>475.3</i> Breadth <i>63.00</i> Depth <i>43.33</i>					Date of Survey <i>25.10.39</i>
Displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables <i>.74 (estimated)</i>					Particulars of Classification <i>+ 100 A1 with freeboard.</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
depth <i>43.33</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(43.59 - 31.69) x 3 = + 35.70</i>	Moulded Breadth (B) <i>63.0</i>
plate <i>.04</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>11.90</i>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{63 \times 12}{50} = 15.12$
on exposed deck (L - S) = <i>.25 x .8916 = .22</i>	If restricted by superstructures	Ship's Round of Beam = <i>15.25</i>
Depth for Freeboard (D) = <i>43.62</i>		Difference <i>.63</i>
		Restricted to <i>✓</i>
		Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.63}{4} \times .9028 = .14$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
closed				
erhang				
closed				
erhang				
closed				
erhang aft				
erhang forward				
closed	<i>51.50</i>	<i>7.5</i>	<i>-</i>	<i>46.20</i>
erhang				
... ..				
ward				
opening aft				
... forward				
total	<i>51.50</i>	<i>46.20</i>		<i>46.20</i>

Standard Height of Superstructure	<i>7.5</i>
" " R.Q.D.	<i>✓</i>
Deduction for complete superstructure	<i>42</i>
Percentage covered $\frac{S}{L} =$	<i>10.84</i>
" " $\frac{S_1}{L} =$	<i>9.72</i>
" " $\frac{E}{L} =$	<i>9.72</i>
Percentage from Table, Line A.	<i>4.86</i>
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	<i>✓</i>
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	
Deduction =	<i>42 x .0486 = - 2.04</i>

SHEER CORRECTION.

Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	<i>57.53</i>	<i>1</i>	<i>57.53</i>	<i>55.50</i>	<i>55.50</i>	<i>1</i>		<i>55.50</i>
P. ...	<i>25.60</i>	<i>4</i>	<i>102.40</i>	<i>24.69</i>	<i>24.69</i>	<i>4</i>		<i>98.76</i>
...	<i>6.33</i>	<i>2</i>	<i>12.66</i>	<i>6.17</i>	<i>6.17</i>	<i>2</i>		<i>12.34</i>
...	<i>-</i>	<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>4</i>		<i>-</i>
P. ...	<i>12.66</i>	<i>2</i>	<i>25.32</i>	<i>11.85</i>	<i>11.85</i>	<i>2</i>		<i>23.70</i>
...	<i>51.20</i>	<i>4</i>	<i>204.80</i>	<i>47.40</i>	<i>47.40</i>	<i>4</i>		<i>189.60</i>
...	<i>115.06</i>	<i>1</i>	<i>115.06</i>	<i>107.50</i>	<i>107.50</i>	<i>1</i>		<i>107.50</i>
d ...			<i>517.77</i>					<i>487.40</i>

Mean actual sheer aft =
Mean standard sheer aft = *Deficient.*

Mean actual sheer forward =
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = *Nil.*

aft of " =

$\frac{12.66}{3} = 4.22$ $\frac{51.20}{3} = 17.07$ $\frac{115.06}{1} = 115.06$ $\frac{11.85}{3} = 3.95$ $\frac{47.40}{3} = 15.80$ $\frac{107.50}{1} = 107.50$
 $\frac{306.64}{285.25} = .93$ standard.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{30.37}{18} \left(\frac{.75 - .0542}{2} \right) = + 1.17$

ated on account of midship superstructure. *✓*

If limited to maximum allowance of 1½ ins. per 100 ft. *✓*

Correction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	<i>94.89 + .20 = 95.09</i>
Correction for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	<i>99.29</i>
Depth to Freeboard Deck = <i>43.62</i>	Δ =	Depth Correction	<i>35.70</i>
Summer freeboard = <i>13.77</i>	Tons per inch immersion at summer load water line	Deduction for superstructures	<i>2.04</i>
Moulded draught (d) = <i>29.85</i>	T =	Sheer correction	<i>1.17</i>
Correction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40 T}$ inches	Round of Beam correction	<i>.14</i>
Freeboard = $\frac{d}{4}$ inches = <i>7.46 = 7½"</i>	= <i>7½"</i>	Correction for Thickness of Deck amidships	<i>.36</i>
Correction for Winter North Atlantic Freeboard (if required) =		Other corrections, scantlings, etc.	<i>30.91</i>
		Summer Freeboard =	<i>165.25</i>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:			
Tropical Fresh Water Line above Centre of Disc	<i>15"</i>	Tropical Fresh Water Freeboard	<i>13.94"</i>
Fresh Water Line " "	<i>7½"</i>	Fresh Water " "	<i>12.62"</i>
Tropical Line " "	<i>7½"</i>	Tropical " "	<i>13.13"</i>
Winter Line below " "	<i>7½"</i>	Winter " "	<i>13.13"</i>
Winter North Atlantic Line " "	<i>7½"</i>	Winter North Atlantic " "	<i>14.43"</i>

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