

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 33118
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker having <u>a Poop, a Bridge, & a Forecastle</u>					Port of Survey
(Type of Superstructures.)					Date of Survey <u>20-10-31</u>
Ship's Name <u>Josephine Charlotte</u>	Nationality and Port of Registry <u>Antwerp Belgium</u>	Official Number	Gross Tonnage	Date of Build <u>1928/29</u>	Name of Surveyor
Moulded Dimensions: Length <u>340.0</u> Breadth <u>48.5</u> Depth <u>25.58</u>					Particulars of Classification <u>+ 100 A 1</u>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>7710</u> tons					
Coefficient of fineness for use with Tables <u>.753</u>					

Depth for Freeboard (D)		Depth correction	Round of Beam correction
Moulded depth	<u>25.58</u>	(a) Where D is greater than Table depth (D-Table depth) R = <u>(25.62 - 22.67) 2.65</u>	Moulded Breadth (B) <u>48.5</u>
Stringer plate	<u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>2.98 + 7.71</u>	Standard Round of Beam = $\frac{B \times 12}{50}$ = <u>11.64</u> ✓
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures	Ship's Round of Beam = <u>12.25</u> ✓
Depth for Freeboard (D) =	<u>25.62</u>		Difference <u>.61</u> ✓
			Restricted to
			Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$ = $\frac{.61}{4} \times .472 = .07$

DEDUCTION FOR SUPERSTRUCTURES.						Standard Height of Superstructure <u>6.90</u>
Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)		" " R.Q.D. <u>-</u>
Poop enclosed	<u>34.75</u>	<u>8.0</u>	<u>-</u>	<u>34.75</u>		Deduction for complete superstructure <u>38.0</u>
" overhang						Percentage covered $\frac{S}{L} =$ <u>52.8</u> ✓
R.Q.D. enclosed						" " $\frac{S_1}{L} =$ <u>52.8</u> ✓
" overhang						" " $\frac{E}{L} =$ <u>52.8</u> ✓
Bridge enclosed	<u>105.75</u>	<u>8.0</u>	<u>-</u>	<u>105.75</u>		Percentage from Table, Line A.
" overhang aft						(corrected for absence of forecastle (if required))
" overhang forward						Percentage from Table, Line B. <u>38.8</u> ✓
F'cle enclosed	<u>39.05</u>	<u>8.0</u>	<u>-</u>	<u>39.05</u>		(corrected for absence of forecastle (if required))
" overhang						Interpolation for bridge less than 2L (if required) <u>3/4</u>
Trunk aft						Deduction = <u>38.0</u> x <u>.388</u> = <u>14.75</u> ✓
" forward						
Tonnage opening aft						
" " forward						
Total	<u>179.55</u>			<u>179.55</u>		

SHEER CORRECTION.								Mean actual sheer aft = <u>Excess</u>
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	Mean standard sheer aft
P.	<u>44.0</u>	1		<u>48.0</u>	<u>44.0</u>	1	<u>44.0</u>	
L from A.P.	<u>19.58</u>	4		<u>20.83</u>	<u>19.58</u>	4	<u>78.32</u>	Mean actual sheer forward = <u>Deficient</u>
L "	<u>4.84</u>	2		<u>5.21</u>	<u>4.84</u>	2	<u>9.68</u>	Mean standard sheer forward
Amidships	<u>-</u>	4		<u>-</u>	<u>-</u>	4	<u>-</u>	Length of enclosed superstructure forward of amidships = <u>.17L</u>
L from F.P.	<u>9.68</u>	2		<u>9.13</u>	<u>9.13</u>	2	<u>18.26</u>	" " aft of " = <u>.14L</u>
L "	<u>39.16</u>	4		<u>36.53</u>	<u>36.53</u>	4	<u>146.12</u>	
P.P.	<u>88.0</u>	1		<u>84.0</u>	<u>84.0</u>	1	<u>84.00</u>	
Total			<u>396.0</u>				<u>380.38</u>	
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{15.62}{18} \left(.75 - \frac{.269}{.486} \right) = .42$ ✓								If limited to maximum allowance of 1½ ins. per 100 ft.
If limited on account of midship superstructure.								

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	<u>53.70</u>
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.753 + .62}{1.36} = \frac{1.433}{1.36}$	<u>56.60</u>
Depth to Freeboard Deck = <u>25.62</u>	Δ = <u>7640</u>	Depth Correction	<u>7.71</u>
Summer freeboard = <u>4.16</u>	Tons per inch immersion at summer load water line	Deduction for superstructures	<u>14.75</u>
Moulded draught (d) = <u>21.46</u>	T = <u>33</u>	Sheer correction	<u>.42</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>5.36</u>	Deduction = $\frac{\Delta}{40T}$ inches = <u>5.79</u>	Round of Beam correction	<u>.07</u>
Addition for Winter North Atlantic Freeboard (if required) =		Correction for Thickness of Deck amidships	<u>-</u>
		Other corrections, scantlings, etc.	<u>-</u>
		Summer Freeboard = <u>49.91</u>	

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—				<u>49.91</u> = <u>1.268</u> m
Tropical Fresh Water Line above Centre of Disc	<u>11.15</u>	<u>283</u>	Tropical Fresh Water Freeboard	<u>30.76</u> = <u>1.268</u> m
Fresh Water Line " "	<u>5.79</u>	<u>147</u>	Fresh Water " "	<u>44.12</u> = <u>1.121</u> m
Tropical Line " "	<u>5.36</u>	<u>136</u>	Tropical " "	<u>44.58</u> = <u>1.132</u> m
Winter Line below " "	<u>5.36</u>	<u>136</u>	Winter " "	<u>55.37</u> = <u>1.404</u> m
Winter North Atlantic Line " "	<u>-</u>	<u>-</u>	Winter North Atlantic " "	<u>-</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	...	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...	...
	Sides	...	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...	...
HATCH BEAMS	Brackets, Stays	...	...	...	...	...	...	...	...	...
	Number	...	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...	...
FORE AND AFTERS	Bearing Surface	...	...	...	...	...	...	...	...	...
	Number	...	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...	...
HATCH COVERS	Scantling* and Sketch	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...	...
	Material	...	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...	...

*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 fiddle, 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 ... } After Well :—
 (F. and A. position and height above deck edge) } Forward Well :—
 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	...