

Class I openings throughout.

C.11.

Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

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

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having P 8

(Type of Superstructures.)

Ship's Name <u>Kim</u>	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
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Moulded Dimensions: Length 395 Breadth 54.75 Depth 32.0
Moulded displacement at moulded draught = 85 per cent. of moulded depth 13021 tons
Coefficient of fineness for use with Tables .775

Port of Survey _____
Date of Survey _____
Name of Surveyor Hou
Particulars of Classification _____

Depth for Freeboard (D) Moulded depth <u>32.00</u> Brigging plate <u>.05</u> Heating on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>✓</u> Depth for Freeboard (D) = <u>32.05</u>	Depth correction (a) Where D is greater than Table depth (D - Table depth) R = <u>✓</u> $(32.05 - 26.33) 3 = +17.16$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u> If restricted by superstructures <u>✓</u>	Round of Beam correction Moulded Breadth (B) <u>54.75</u> Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>13.14</u> Ship's Round of Beam = <u>12</u> Difference <u>1.14</u> Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.14^2}{4} \times .3045 = +.09$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>96.75</u>	<u>96.75</u>	<u>7.50</u>	<u>✓</u>	<u>96.75</u>
„ overhang					
R.Q.D. enclosed					
„ overhang					
Bridge enclosed	<u>25.00</u>	<u>25.00</u>	<u>7.50</u>	<u>✓</u>	<u>25.00</u>
„ overhang aft	<u>3.00</u>	<u>2.25</u>		<u>✓</u>	<u>2.25</u>
„ overhang forward					
Forecastle enclosed	<u>35.50</u>	<u>35.50</u>	<u>7.50</u>	<u>✓</u>	<u>35.50</u>
„ overhang					
Trunk aft	<u>✓</u>	<u>60.96</u>	<u>3.25</u>	<u>7.45</u>	<u>26.59</u>
„ forward	<u>✓</u>	<u>54.25</u>	<u>3.25</u>	<u>7.45</u>	<u>23.67</u>
Tonnage opening aft					
„ forward					
Total	<u>160.25</u>	<u>274.71</u>			<u>209.76</u>

Standard Height of Superstructure 7.45
„ „ R.Q.D. ✓
Deduction for complete superstructure 41.67
Percentage covered $\frac{S}{L} =$ 40.57 %
„ $\frac{S_1}{L} =$ 69.55 %
„ $\frac{E}{L} =$ 53.10 %
Percentage from Table, Line A. ✓
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. TANKER 44.41 %
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required) ✓
Deduction = 41.67 x .4441 = - 18.50

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>49.50</u>	<u>1</u>			<u>48.00</u>	<u>48.00</u>	<u>1</u>		<u>48.00</u>
$\frac{1}{8}L$ from A.P.		<u>4</u>			<u>21.33</u>	<u>21.33</u>	<u>4</u>		<u>85.32</u>
$\frac{2}{8}L$ „		<u>2</u>			<u>5.33</u>	<u>5.33</u>	<u>2</u>		<u>10.66</u>
Amidships		<u>4</u>		<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>4</u>		<u>✓</u>
$\frac{2}{8}L$ from F.P.		<u>2</u>			<u>11.85</u>	<u>11.85</u>	<u>2</u>		<u>23.70</u>
$\frac{1}{8}L$ „		<u>4</u>			<u>47.40</u>	<u>47.40</u>	<u>4</u>		<u>189.60</u>
F.P.		<u>1</u>			<u>96.00</u>	<u>96.00</u>	<u>1</u>		<u>96.00</u>
Total				<u>445.50</u>					<u>453.28</u>

Mean actual sheer aft = Def > 75 %
Mean standard sheer aft = _____
Mean actual sheer forward = Excess
Mean standard sheer forward = _____
Length of enclosed superstructure forward of amidships = } Tanker
„ „ aft of „ = }

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{7.78}{18} \times (.75 - .2028) = -.24$
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. Ft. Depth to Freeboard Deck = <u>32.05</u> Summer freeboard = <u>5.35</u> Moulded draught (d) = <u>26.70</u> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>6.67</u> <u>6 3/4</u> Addition for Winter North Atlantic Freeboard (if required) = _____	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ _____ Tons per inch immersion at summer load water line $T =$ _____ Deduction = $\frac{\Delta}{40 T}$ inches = _____	TABULAR FREEBOARD corrected for Fresh Deck (if required) Correction for coefficient $\frac{.775 + .68}{1.36} = \frac{1.455}{1.36}$ <table><tr><th></th><th>+</th><th>-</th></tr><tr><td>Depth Correction</td><td><u>17.16</u></td><td><u>✓</u></td></tr><tr><td>Deduction for superstructures</td><td><u>✓</u></td><td><u>18.50</u></td></tr><tr><td>Sheer correction</td><td><u>✓</u></td><td><u>24</u></td></tr><tr><td>Round of Beam correction</td><td><u>.09</u></td><td><u>✓</u></td></tr><tr><td>Correction for Thickness of Deck amidships</td><td><u>✓</u></td><td><u>✓</u></td></tr><tr><td>Other corrections, scantlings, etc.</td><td><u>✓</u></td><td><u>✓</u></td></tr><tr><td></td><td><u>17.25</u></td><td><u>18.74</u></td></tr></table> Summer Freeboard = <u>64.15</u>		+	-	Depth Correction	<u>17.16</u>	<u>✓</u>	Deduction for superstructures	<u>✓</u>	<u>18.50</u>	Sheer correction	<u>✓</u>	<u>24</u>	Round of Beam correction	<u>.09</u>	<u>✓</u>	Correction for Thickness of Deck amidships	<u>✓</u>	<u>✓</u>	Other corrections, scantlings, etc.	<u>✓</u>	<u>✓</u>		<u>17.25</u>	<u>18.74</u>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:— 5' - 4 1/4"

Tropical Fresh Water Line above Centre of Disc		Tropical Fresh Water Freeboard	
Fresh Water Line „ „		Fresh Water „ „	
Tropical Line „ „		Tropical „ „	
Winter Line below „ „	<u>6 3/4</u>	Winter „ „	<u>5' - 11"</u>
Winter North Atlantic Line „ „		Winter North Atlantic „ „	