

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

*NAM FENG*

Ship's Name <i>ex</i> <b>KAPONGA.</b>	Official Number <b>182692.</b>	Nationality and Port of Registry <b>AUCKLAND.</b> <b>HONGKONG</b>	Gross Tonnage <b>2772.</b>	Date of Build <b>1949.</b>	Port of Survey
Moulded Dimensions: Length <b>300.625</b> Breadth <b>46.00</b> Depth <b>23.25</b>					Date of Survey <b>12.4.55.</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) <b>5540</b> tons					Surveyor's Signature
Coefficient of fineness for use with Tables <b>.709</b>					Particulars of Classification <b>+100 A1.</b>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <b>23.25</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>+4.49</b>	Moulded Breadth (B) <b>46.00</b>
Stringer plate ... <b>.03</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 11.04$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>9.00</b>
Depth for Freeboard (D) = <b>23.28</b>		Difference <b>2.04</b>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = +.29$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
F'cle enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	<b>133.34</b>	<b>132.38</b>			<b>132.38</b>

  

Standard Height of Superstructure	<b>6.51</b>
" " R.Q.D.	<b>✓</b>
Deduction for complete superstructure	<b>35.37</b>
Percentage covered $\frac{S}{L} =$	<b>44.36</b>
" " $\frac{S_1}{L} =$	<b>44.04</b>
" " $\frac{E}{L} =$	<b>44.04</b>
Percentage from Table, Line A. <b>TIMBER.</b>	<b>65.52</b>
(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 = <b>35.37</b> x <b>65.52</b>	<b>= 23.17</b>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.		1					1		
$\frac{1}{2}L$ from A.P.		4					4		
$\frac{2}{3}L$ "		2					2		
Amidships		4					4		
$\frac{2}{3}L$ from F.P.		2					2		
$\frac{1}{2}L$ "		4					4		
F.P.		1					1		
Total				<b>360.66</b>					<b>364.50</b>

  

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

If limited on account of midship superstructure.

Mean actual sheer aft = **EXCESS**

Mean standard sheer aft = **EXCESS**

Mean actual sheer forward = **EXCESS**

Mean standard sheer forward = **EXCESS**

Length of enclosed superstructure forward of amidships = **7.12**

" " aft of " = **7.12**

**- .12**

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

<p><b>Deduction for Tropical Freeboard.</b></p> <p><b>Addition for Winter and Winter North Atlantic Freeboard.</b></p> <p>Depth to Freeboard Deck = <b>23.28</b></p> <p>Summer freeboard = <b>2.42</b></p> <p>Moulded draught (d) = <b>20.86</b></p> <p>Keel allowance =</p> <p>Extreme draught =</p> <p>Deduction for Tropical Freeboard and addition for Winter freeboard = <b>5.22 = 5 1/4"</b></p> <p>Addition for Winter North Atlantic Freeboard (if required) = <b>6.95 = 7"</b></p>	<p><b>Deduction for Fresh Water.</b></p> <p>Displacement in salt water at summer load water line</p> <p><math>\Delta =</math></p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = <math>\frac{\Delta}{40 T}</math> inches = <b>5 1/4"</b></p>	<p><b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) <b>43.56</b></p> <p>Correction for coefficient <math>\frac{1.389}{1.36}</math> <b>44.49</b></p> <table border="1"> <tr><td>+</td><td>-</td></tr> <tr><td>4.49</td><td></td></tr> <tr><td>23.17</td><td></td></tr> <tr><td>.12</td><td></td></tr> <tr><td>.29</td><td></td></tr> <tr><td></td><td>12.4</td></tr> <tr><td></td><td></td></tr> <tr><td>7.78</td><td>23.29</td></tr> <tr><td></td><td>- 16.61</td></tr> <tr><td></td><td>Summer Freeboard = <b>28.98</b></td></tr> </table>	+	-	4.49		23.17		.12		.29			12.4			7.78	23.29		- 16.61		Summer Freeboard = <b>28.98</b>
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**SUMMER FREEBOARD** amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

TIMBER	Tropical Fresh Water Line above Centre of Disc	<b>22 3/4"</b>	Tropical Fresh Water Freeboard	<b>2.5"</b>
"	Fresh Water Line	<b>17 1/2"</b>	Fresh Water	<b>1.11 3/4"</b>
"	Tropical Line	<b>17 1/2"</b>	Tropical	<b>1.11 3/4"</b>
"	Winter Line	<b>5 1/4"</b>	Winter	<b>3.0"</b>
"	Winter North Atlantic Line	<b>7"</b>	Winter North Atlantic	<b>4.0 1/2"</b>
"	<b>SUMMER LINE ABOVE.</b>	<b>12 1/4"</b>		