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Empire Farland 36420

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

B.T. COPY.

Ship's Name <i>Rivado Manuel</i> <i>MOTOR COASTER.</i> <i>EMPIRE CLIFF</i>	Official Number <i>164908</i>	Nationality and Port of Registry <i>Panama</i> <i>BRITISH</i> <i>GOOLE.</i>	Gross Tonnage <i>873</i>	Date of Build <i>1940</i>	Port of Survey <i>HULL</i>
Moulded Dimensions: Length <i>190' 39"</i> Breadth <i>30' 0"</i> Depth <i>13' 5"</i>					Date of Survey <i>WHILE BUILDING AT GOOLE.</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>1405</i> tons <i>T.P. Inc. 11.62</i>					Surveyor's Signature <i>W. B. Engledow</i>
Coefficient of fineness for use with Tables <i>.750</i>					Particulars of Classification <i>100A.1.</i> <i>(CONTEMPLATED)</i>

<b>Depth for Freeboard (D).</b> Moulded depth ... <i>13' 5"</i> Stringer plate ... <i>R.Q. DECK .32" .032"</i> <i>DECK COMPOUND</i> <i>Sheathing on exposed deck POOP DECK 2" THICK.</i> <i>BY WALES DOCK CO.</i> $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <i>13' 53"</i>	<b>Depth correction.</b> (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(13' 53" - 12' 69") \times 1.464 = +1' 23"$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ If restricted by superstructures	<b>Round of Beam correction.</b> Moulded Breadth (B) <i>30' 0"</i> Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>7' 20"</i> Ship's Round of Beam = <i>7' 5"</i> Difference <i>15' 15"</i> Restricted to Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <i>30' 4" \times .7992 = -02"</i>
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## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>50' 0"</i>		<i>7' 3"</i>		
overhang ...	<i>2' 3"</i>				
R.Q.D. enclosed ...	<i>119' 0"</i>	<i>120' 06"</i>	<i>4' 6"</i>		<i>120' 06"</i>
overhang ...	<i>120' 06"</i>				
Bridge enclosed ...					
overhang aft ...					
overhang forward ...					
Fore enclosed ...	<i>17' 16"</i>	<i>17' 16"</i>	<i>7' 6"</i>	<i>7' 0"</i>	<i>17' 16"</i>
overhang ...					
Trunk aft ...					
forward ...					
Tonnage opening aft ...					
forward ...					
Total ...	<i>137' 22"</i>	<i>137' 22"</i>			<i>137' 22"</i>

  

Standard Height of Superstructure ...	<i>6' 00"</i>
" " R.Q.D. ...	<i>3' 603"</i>
Deduction for complete superstructure	<i>25' 04"</i>
Percentage covered $\frac{S}{L} =$	<i>72.08</i>
" " $\frac{S_1}{L} =$	<i>72.08</i>
" " $\frac{E}{L} =$	<i>72.08</i>
Percentage from Table, Line A.	<i>65.56</i>
(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 = $25' 04" \times .6556 =$	<i>-16' 41"</i>

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>29.04</i>	1		<i>29.04</i>	<i>30"</i>	<i>73.76</i>	1		<i>73.76</i>
$\frac{1}{4}$ L from A.P. ...	<i>12.92</i>	4		<i>51.68</i>	<i>13"</i>	<i>32.82</i>	4		<i>131.28</i>
$\frac{2}{4}$ L " ...	<i>3.195</i>	2		<i>6.39</i>	<i>3 1/2"</i>	<i>8.11</i>	2		<i>16.22</i>
Amidships ...		4			<i>NIL</i>		4		
$\frac{3}{4}$ L from F.P. ...	<i>6.39</i>	2		<i>12.78</i>	<i>7 1/2"</i>	<i>7.50</i>	2		<i>15.00</i>
$\frac{1}{4}$ L " ...	<i>15.84</i>	4		<i>103.36</i>	<i>29 1/2"</i>	<i>29.50</i>	4		<i>118.00</i>
F.P. ...	<i>58.08</i>	1		<i>58.08</i>	<i>66"</i>	<i>66.00</i>	1		<i>66.00</i>
Total ...				<i>261.33</i>					<i>420.26</i>

  

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$   $\frac{158.93}{18} \left( .75 - \frac{3604}{2 \times 137} \right) = -3.44"$   
 If limited on account of midship superstructure.

Mean actual sheer aft = *Excess*  
 Mean standard sheer aft = *10.76"*

Mean actual sheer forward = *Excess*  
 Mean standard sheer forward = *Excess*

Length of enclosed superstructure forward of amidships = *> 1L*  
 " " aft of " = *> 1L*

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> <i>RAISED QUARTER</i> Depth to Freeboard Deck = <i>18' 03"</i> Summer freeboard = <i>4' 87"</i> Moulded draught (d) = <i>13' 16"</i> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>3' 29" = 3 1/4"</i> Addition for Winter North Atlantic Freeboard (if required) = <i>5 1/4"</i>	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta = 1650$ Tons per inch immersion at summer load water line $T = 11.89$ Deduction = $\frac{\Delta}{40 T}$ inches = <i>3.47"</i> <i>13.6</i> <i>13.0</i> <i>13.6</i> <i>12.0</i> <i>11.8</i>	<b>TABULAR FREEBOARD</b> corrected for Fresh Deck (if required) Correction for coefficient <i>.750 + .68</i> <i>1.36</i> Depth Correction ... <i>1.23</i> Deduction for superstructures ... <i>16.41</i> Sheer correction ... <i>1.86</i> Round of Beam correction ... <i>.02</i> Correction for thickness of Deck amidships ... <i>54' 00"</i> Other corrections, scantlings, etc. ... Summer Freeboard = <i>58' 52"</i>
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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 ...	<i>153</i>	<i>6"</i>	Tropical Fresh Water Freeboard ...	<i>1333</i>	<i>4' 4 1/2"</i>
Fresh Water Line " " ...	<i>89</i>	<i>3 1/2"</i>	Fresh Water " " ...	<i>1397</i>	<i>4' 7"</i>
Tropical Line " " ...	<i>64</i>	<i>2 1/2"</i>	Tropical " " ...	<i>1422</i>	<i>4' 8" LIMITED</i>
Winter Line below " " ...	<i>82</i>	<i>3 1/4"</i>	Winter " " ...	<i>1568</i>	<i>5' 1 1/4"</i>
Winter North Atlantic Line " " ...	<i>133</i>	<i>5 1/4"</i>	Winter North Atlantic " " ...	<i>1619</i>	<i>5' 3 3/4"</i>



# Empire Cliff.

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

$$L = 190.39'$$

$$\frac{L}{2} = 95.19' \quad 95.19'$$

$$\text{Poop bulkhead draft } \frac{1}{2} \rightarrow 50.39'$$

$$\rightarrow 44.80'$$

Sheer at Poop bulkhead + excess Randa Quarter Deck Height  $6'' + 10.76'' = 16.76''$

Virtual Sheer at A.P. =  $16.76 \left( \frac{95.19}{44.80} \right)^2 = 75.67''$  This is, however, greater than actual sheer + excess height of poop above standard height of randa quarter deck.

Actual height of Poop =  $7.25'$

Standard height of R.Q.D. =  $3.603'$

$$3.647' = 43.76''$$

Actual sheer at A.P.

$$+ 30$$

$$73.76$$

31.82 at  $\frac{1}{6}L$

8.11 at  $\frac{1}{3}L$ .

Trade of ship

HOME TRADE.

Names of sister ships

"SEVACITY" Hull Freeboard Report N° 997

Builder's name and yard number

GOOLE SHIPBUILDING & REPAIRING CO. LTD GOOLE. YARD N° 357.

Owners

MINISTRY OF SHIPPING.

Fee £

Will be charged with first entry.



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