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Rpt. C.11 (Comp.).

Empire Rhodes etc  
36661.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

196 JUN 1942

Index. No. 36863  
(For London Office only).

Ship's Name <b>DELFSHAVEN</b> <b>EMPIRE HAZLITT</b> <b>"EDINA"</b>	Official Number <b>169046</b> <b>1457</b>	Nationality and Port of Registry <b>British</b> <b>South Shields</b> <b>Liberian</b>	Gross Tonnage <b>7000</b> <b>7036</b> <b>7113</b>	Date of Build <b>1942</b>	Port of Survey <b>Newcastle on Tyne</b>
Moulded Dimensions: Length <b>425.83</b> Breadth <b>56.00</b> Depth <b>34.64</b>				Date of Survey <b>During Construction</b>	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>14100</b> tons				Surveyor's Signature <b>A. Alhori.</b>	
Coefficient of fineness for use with Tables <b>.784</b>				Particulars of Classification <b>+100. A.1</b> <b>with freeboard (contemplated)</b>	

<b>Depth for Freeboard (D).</b> Moulded depth ... <b>34.64</b> Stringer plate ... <b>.65</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>34.69</b>	<b>Depth correction.</b> (a) Where D is greater than Table depth (D - Table depth) R = $(34.69 - 28.39) 3 = +27.90$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures	<b>Round of Beam correction.</b> Moulded Breadth (B) <b>56.00</b> Standard Round of Beam = $\frac{B \times 12}{50} = \frac{56 \times 12}{50} = 13.44$ Ship's Round of Beam = <b>14.00</b> Difference <b>.56</b> Restricted to <input checked="" type="checkbox"/> Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.56}{4} \times .9163 = .13$
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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 ...					
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
Forecastle enclosed ...	<b>35.66</b>	<b>35.66</b>	<b>6.78</b>	<b>6.78</b>	<b>32.07</b>
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	<b>35.66</b>	<b>35.66</b>			<b>32.07</b>

Standard Height of Superstructure **4.5**  
 „ „ R.Q.D. ☒  
 Deduction for complete superstructure **42.00**  
 Percentage covered  $\frac{S}{L} = .0834$   
 „  $\frac{S_1}{L} = .0834$   
 „  $\frac{E}{L} = .07534$   
 Percentage from Table, Line A. **.0374**  
 (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 =  $42.00 \times .0374 = -1.58$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<b>52.58</b>	1		<b>52.58</b>	<b>31.00</b>	<b>31.00</b>	1		<b>31.00</b>
$\frac{1}{4}$ L from A.P. ...	<b>23.40</b>	4		<b>93.60</b>	<b>.06</b>	<b>.06</b>	4		<b>.24</b>
$\frac{3}{4}$ L „ ...	<b>5.785</b>	2		<b>11.57</b>			2		
Amidships ...		4					4		
$\frac{3}{4}$ L from F.P. ...	<b>11.587</b>	2		<b>23.174</b>			2		
$\frac{1}{4}$ L „ ...	<b>46.80</b>	4		<b>187.20</b>	<b>6.33</b>	<b>6.33</b>	4		<b>25.32</b>
F.P. ...	<b>105.187</b>	1		<b>105.187</b>	<b>81.00</b>	<b>81.00</b>	1		<b>81.00</b>
Total ...				<b>448.22</b>					<b>137.56</b>

Mean actual sheer aft = **Deficient**  
 Mean standard sheer aft = **Deficient**  
 Mean actual sheer forward = **Deficient**  
 Mean standard sheer forward = **Deficient**  
 Length of enclosed superstructure forward of amidships = ☒  
 „ „ aft of „ = ☒  
 Sheer smaller to base line from frame 30 to frame 129.

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{335.66}{18} \times .7082 = +13.21$   
 If limited on account of midship superstructure. If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = <b>37.69</b> Summer freeboard = <b>11.06</b> Moulded draught (d) = <b>26.63</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>6.66</b> Addition for Winter North Atlantic Freeboard (if required) = <input checked="" type="checkbox"/>	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta =$ <b>13960</b> Tons per inch immersion at summer load water line $T =$ <b>44.2</b> Deduction = $\frac{\Delta}{40T}$ inches = <b>.78</b> <b>13960</b> <b>40 x 44.2</b> <b>.78</b>	<b>TABULAR FREEBOARD</b> corrected for Plush Deck (if required) Correction for coefficient $\frac{68 + 484}{1.36} = \frac{1464}{1.36} = 1076.47$ Depth Correction ... <b>27.90</b> Deduction for superstructures ... <b>1.48</b> Sheer correction ... <b>13.21</b> Round of Beam correction ... <b>.13</b> Correction for Thickness of Deck amidships ... <b>4.41</b> Other corrections, scantlings, etc. ... <b>48.66</b> Summer Freeboard = <b>132.45</b>
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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	<b>3.50m/ins.</b>	<b>13.34</b>	Tropical Fresh Water Freeboard	<b>11.034</b>	<b>3370m/ins.</b>
Fresh Water Line	<b>1.80m/ins.</b>	<b>7.34</b>	Fresh Water	<b>10.534</b>	<b>3190m/ins.</b>
Tropical Line	<b>1.70m/ins.</b>	<b>6.34</b>	Tropical	<b>10.6</b>	<b>3200m/ins.</b>
Winter Line below	<b>1.70m/ins.</b>	<b>6.34</b>	Winter	<b>11.72</b>	<b>3540m/ins.</b>
Winter North Atlantic Line			Winter North Atlantic		

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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.

Designated draught = 26'-9"  
 Less Rise of water 80 x .86 = 1.36' =  $\frac{9\frac{1}{2}}{12}$   
26'-4 $\frac{1}{2}$ "

*am 11*

Extreme draught	-	Extreme Displacement	T.P.1.
28'-0	-	14400 tons	44.8
26'-9	-	13960 "	44.2
26'-0	-	13520 "	43.9

Note: Mean moulded depth as measured 37'-7 $\frac{3}{4}$ "

Trade of ship

Names of sister ships

B Type Standard vessel. Sister to same Builder No 526. "Empire Forest"

Builder's name and yard number

John Readhead & Sons Ltd. No 528.

Owners

Ministry of War Transport.

Fee £

Whole charged with first entry



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