

Empire *Blomfield, etc.*  
37782

EX. COPE

18 JUN

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. *37992*  
(For London Office only.)  
No. 18657

Ship's Name <i>"EMPIRE ALDgate"</i>	Official Number <i>180083</i>	Nationality and Port of Registry <i>British West Hartlepool</i>	Gross Tonnage <i>3485</i>	Date of Build <i>July 1945</i>	Port of Survey <i>West Hartlepool.</i>
Moulded Dimensions: Length <i>312'-0"</i> Breadth <i>46'-4"</i> Depth <i>24'-9"</i> <i>20 cent. q mddn stick 312'-7"</i>					Date of Survey <i>June 1945.</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>6625</i> tons					Surveyor's Signature <i>W.J. Craig</i>
Coefficient of fineness for use with Tables <i>.761</i>					Particulars of Classification <i>+100 A.1. with Freeboard.</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth <i>24'-9"</i>	(a) Where D is greater than Table depth (D - Table depth) R = $(24.80 - 20.84) \times 2.405 = +9.52$ <i>3.96</i>	Moulded Breadth (B) <i>46'-4"</i>
Stringer plate <i>76 UPPER DICK 54 R. 82 dk.</i> <i>.05</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>✓</i>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>11.12</i>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <i>✓</i>	If restricted by superstructures <i>✓</i>	Ship's Round of Beam = <i>11"</i>
Depth for Freeboard (D) = <i>24.80</i>		Difference <i>.12</i>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ $\frac{.12}{4} \times \frac{2807}{L} = +.01$

### DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height <i>at to steel</i>	Height Correction	Effective Length (E)
Poop enclosed <i>under 5 stacks</i> <i>71.58</i>	<i>71.58</i>	<i>7'-6"</i>	-	<i>71.58</i>
" overhang ...				
R.Q.D. enclosed <i>126.0</i>	<i>126.00</i>	<i>4'-10"</i>	-	<i>126.00</i>
" overhang ...				
Bridge enclosed ...				
" overhang aft ...				
" overhang forward				
F'cle enclosed ... <i>27.25</i>	<i>27.25</i>	<i>7'-0"</i>	-	<i>27.25</i>
" overhang ...				
Trunk aft ...				
" forward ...				
Tonnage opening aft ...				
" " forward				
Total ... <i>224.83</i>	<i>224.83</i>			<i>224.83</i>

Standard Height of Superstructure *6.626*  
" " R.Q.D. *4.835*  
Deduction for complete superstructure *36.17*  
Percentage covered  $\frac{S}{L} =$   
" "  $\frac{S_1}{L} =$  *71.93*  
" "  $\frac{E}{L} =$   
Percentage from Table, Line A. *65.38*  
(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 =  $36.17 \times .6538 = -23.65$

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate <i>inches</i>	Effective Ordinate	S	M	Product
A.P. ...	<i>41.26</i>	<i>1</i>	<i>41.26</i>	<i>9.0</i>	<i>9.00</i>	<i>1</i>	<i>9.00</i>		
$\frac{1}{4}$ L from A.P. ...	<i>18.36</i>	<i>4</i>	<i>73.44</i>	<i>.75</i>	<i>.75</i>	<i>4</i>	<i>3.00</i>		
$\frac{3}{8}$ L " ...	<i>4.54</i>	<i>2</i>	<i>9.08</i>	-	-	<i>2</i>	-		
Amidships ...	-	<i>4</i>	-	-	-	<i>4</i>	-		
$\frac{3}{8}$ L from F.P. ...	<i>9.08</i>	<i>2</i>	<i>18.16</i>	<i>6.25</i>	<i>6.25</i>	<i>2</i>	<i>18.16</i>		
$\frac{1}{4}$ L " ...	<i>36.72</i>	<i>4</i>	<i>146.88</i>	<i>40.00</i>	<i>40.00</i>	<i>4</i>	<i>146.88</i>		
F.P. ...	<i>82.52</i>	<i>1</i>	<i>82.52</i>	<i>82.50</i>	<i>82.50</i>	<i>1</i>	<i>82.52</i>		
Total ...			<i>371.34</i>				<i>259.56</i>		

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{111.78 - (.75 - .3576)}{18} = +2.42$   
If limited on account of midship superstructure.

Mean actual sheer aft = *< .5*  
Mean standard sheer aft  
Mean actual sheer forward = *same*  
Mean standard sheer forward  
Length of enclosed superstructure forward of amidships = *sheer deficient*  
" " aft of " =

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line <i>20'-10"</i>	Correction for coefficient $\frac{.761 + .68}{1.30} = \frac{1.441}{1.30}$
Depth to <i>R.Q.</i> Deck = <i>29.62</i>	$\Delta =$ <i>65.47</i>	Depth Correction ... <i>9.52</i>
Summer freeboard = <i>8.92</i>	Tons per inch immersion at summer load water line <i>20'-10"</i>	Deduction for superstructures ... <i>23.65</i>
Moulded draught (d) = <i>20.70</i>	T = <i>29.04</i>	Sheer correction ... <i>2.42</i>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>5'-18" = 5'-1/4"</i>	Deduction = $\frac{\Delta}{40 T}$ inches = <i>5'-64" = 5'-3/4"</i>	Round of Beam correction <i>.01</i>
Addition for Winter North Atlantic Freeboard (if required) = <i>7'-4"</i>	<i>MLD DISP @ 20'-8 1/2" = 6509</i> <i>" " " @ 20'-8 1/2" = 28.95</i>	Correction for Thickness of Deck amidships <i>57.84</i>
		Other corrections, scantlings, <i>11.54</i>
		<i>81.33</i> <i>23.65</i> <i>+ 57.68</i>
		Summer Freeboard = <i>107.00</i>

### SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel Deck:

Tropical Fresh Water Line above Centre of Disc ... <i>11'-8"</i>	Tropical Fresh Water Freeboard ... <i>8'-0"</i>
Fresh Water Line " " ... <i>5'-3/4"</i>	Fresh Water " " ... <i>8'-5 1/4"</i>
Tropical Line " " ... <i>5'-1/4"</i>	Tropical " " ... <i>8'-5 3/4"</i>
Winter Line below " " ... <i>5'-1/4"</i>	Winter " " ... <i>9'-4 1/4"</i>
Winter North Atlantic Line " " ... <i>7'-1/4"</i>	Winter North Atlantic " " ... <i>9'-6 1/4"</i>

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"EMPIRE ALDGATE"

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.

Plans of Midship Section, Profile & decks & sternframe  
& molder enclosed for reference which please return  
with assignment.

*[Signature]*

*[Signature]*

Trade of ship

ocean-going

Names of <sup>similar</sup> sister ships

Empire Caicos & previous assets.

Builder's name and yard number

William Gray & Co Ltd No 1150.

Owners

Ministry of War Transport.

Fee £ 14-0-0.

NR.



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