

Empire Wolfe
36387.

Lloyd's Register of Shipping.

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TINDEFJELL

SURVEYS FOR FREEBOARD.

ASTRID

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>ex "EMPIRE PILGRIM."</i>	Official Number <i>168935</i>	Nationality and Port of Registry <i>BRITISH. Hull WEST HARTLEPOOL.</i>	Gross Tonnage <i>2861</i>	Date of Build <i>1942</i>	Port of Survey <i>West Hartlepool.</i>
Moulded Dimensions: Length <i>310'-0"</i> Breadth <i>46'-4"</i> Depth <i>25'-2"</i> <i>To centre of rudder stock 310'-44"</i>					Date of Survey <i>Dec. 1941</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>6727</i> tons					Surveyor's Signature <i>W. J. C. C.</i>
Coefficient of fineness for use with Tables <i>765</i>					Particulars of Classification <i>+ 100 A1.</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth <i>25'-14"</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(25'-14" - 20'-70") × 2.388 = +10'-75"</i>	Moulded Breadth (B) <i>46'-4"</i>
Stringer plate <i>40"</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 11'-12"$
Sheathing on exposed deck T $\left(\frac{L-S}{L}\right) =$		Ship's Round of Beam = <i>11"</i>
Depth for Freeboard (D) = <i>25'-20"</i>	If restricted by superstructures	Difference <i>deficiency</i> <i>12"</i>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{12}{4} \times 0.5380 = +0.2"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>To centre of stock</i>	<i>31'-2 1/2"</i>	<i>31'-21"</i>	<i>7'-9"</i>	<i>✓</i>	<i>31'-21"</i>
" overhang ...	<i>2'-0"</i>	<i>1'-00"</i>			<i>1'-00"</i>
R.Q.D. enclosed					
" overhang					
Bridge enclosed	<i>76'-0"</i>	<i>76'-00"</i>	<i>9'-0"</i>	<i>✓</i>	<i>76'-00"</i>
" overhang aft	<i>4'-0"</i>	<i>3'-00"</i>			<i>3'-00"</i>
" overhang forward	<i>2'-0"</i>	<i>1'-00"</i>			<i>1'-00"</i>
Forecastle enclosed	<i>31'-2 1/2"</i>	<i>31'-23"</i>	<i>7'-0"</i>	<i>✓</i>	<i>31'-23"</i>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	<i>146'-44"</i>	<i>143'-44"</i>			<i>143'-44"</i>

Standard Height of Superstructure	<i>6'-604"</i>
" " R.Q.D.	<i>✓</i>
Deduction for complete superstructure	<i>36'-03"</i>
Percentage covered $\frac{S}{L} =$	<i>47.17</i>
" " $\frac{S_1}{L} =$	<i>46.20</i>
" " $\frac{E}{L} =$	<i>46.20</i>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<i>✓</i>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	<i>32.77</i>
Interpolation for bridge less than 2L (if required)	<i>✓</i>
Deduction = $36.03 \times 0.3277 = -11.81"$	

SHEER CORRECTION. *No sheer between frame 40 and frame 117.*

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>41.04</i>	1		<i>41.04</i>	<i>✓ 18.0</i>	<i>18.00</i>	1		<i>18.00</i>
1/2 L from A.P. ...	<i>18.265</i>	4		<i>73.04</i>	<i>✓ 1.5</i>	<i>1.50</i>	4		<i>6.00</i>
3/4 L " ...	<i>4.515</i>	2		<i>9.03</i>	-	-	2		-
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	<i>9.03</i>	2		<i>18.06</i>	-	-	2		-
1/2 L " ...	<i>36.53</i>	4		<i>146.12</i>	<i>✓ 15.0</i>	<i>15.00</i>	4		<i>60.00</i>
F.P. ...	<i>82.09</i>	1		<i>82.09</i>	<i>✓ 66.0</i>	<i>66.00</i>	1		<i>66.00</i>
Total				<i>369.38</i>					<i>150.00</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{219.38}{18} \left(\frac{75-1358}{2L} \right) = +6.27"$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *15'-20"*
 Summer freeboard = *4'-50"*
 Moulded draught (d) = *20'-70"*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *5'-17" 5/4"*

Addition for Winter North Atlantic Freeboard (if required) =

7 1/4"

Deduction for Fresh Water.

Displacement in salt water at summer load water line *at*
 $\Delta = 6496$
 Tons per inch immersion at summer load water line *at*
 $T = 27.2$

Deduction = $\frac{\Delta}{40T}$ inches

= *5'-56"*

= *5'-1/2"*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient *0.765 + 0.68 = 1.445 / 1.36*

	+	-
Depth Correction	<i>10'-75"</i>	
Deduction for superstructures		<i>11'-81"</i>
Sheer correction	<i>6'-27"</i>	
Round of Beam correction	<i>0'-02"</i>	
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<i>17'-04"</i>	<i>11'-81"</i>

Summer Freeboard = *54'-12"*

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

Tropical Fresh Water Line above Centre of Disc	<i>10'-34"</i>	= <i>273 mm</i>	Tropical Fresh Water Freeboard <i>1099 mm</i>
Fresh Water Line	<i>5'-1/2"</i>	= <i>140 mm</i>	Fresh Water
Tropical Line	<i>5'-1/4"</i>	= <i>133 mm</i>	Tropical
Winter Line	<i>5'-1/4"</i>	= <i>133 mm</i>	Winter
Winter North Atlantic Line	<i>7'-1/4"</i>	= <i>184 mm</i>	Winter North Atlantic

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.

Trade of ship Ocean-going

Names of sister ships "Empire Newcomen", "Empire Carey"

Builder's name and yard number William Gray & Co Ltd, No. 1126

Owners Ministry of War Transport

Fee £ 13 : - : -



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Foundation