

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

No. 18183

Ship's Name <b>EMPIRE WOLFE</b>	Official Number <b>168930</b>	Nationality and Port of Registry <b>BRITISH WEST HARTLEPOOL</b>	Gross Tonnage <b>2873.42</b>	Date of Build <b>1941</b>	Port of Survey <b>West Hartlepool</b>
Moulded Dimensions: Length <b>310'-0"</b> Breadth <b>46'-4"</b> Depth <b>25'-2"</b> <i>To center of rudder stock 310'-44"</i>				Date of Survey <b>August 1941</b>	Surveyor's Signature <i>W. J. Chang</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>6127</b> tons				Particulars of Classification <b>+ 100 A.1.</b>	
Coefficient of fineness for use with Tables <b>.765</b>					

<b>Depth for Freeboard (D).</b> Moulded depth ... <b>25'-14"</b> Stringer plate ... <b>40"</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <b>✓</b> Depth for Freeboard (D) = <b>25'-20"</b>	<b>Depth correction.</b> (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(25'-20" - 20'-70") \times 2.388 = +10'-75"$ <b>4.50</b> (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>✓</b> If restricted by superstructures <b>✓</b>	<b>Round of Beam correction.</b> Moulded Breadth (B) <b>46'-4"</b> Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>11'-12"</b> Ship's Round of Beam = <b>11"</b> Difference <b>Deficiency</b> <b>12"</b> Restricted to <b>✓</b> Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S}{L}) = \frac{12}{4} \times 53\% = +0.02'$
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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>5 ante 7. stock</i>	31'-2 1/2"	31'-21"	7'-9"	✓	31'-21"	Standard Height of Superstructure <b>6604</b>
overhang ...	2'-0"	1'-00"			1'-00"	" " R.Q.D. <b>✓</b>
R.Q.D. enclosed						Deduction for complete superstructure <b>3603</b>
overhang						Percentage covered $\frac{S}{L} =$ <b>47.17</b>
Bridge enclosed	76'-0"	76'-00"	9'-0"	✓	76'-00"	" " $\frac{S_1}{L} =$ <b>46.20</b>
overhang aft	4'-0"	3'-00"			3'-00"	" " $\frac{E}{L} =$ <b>46.20</b>
overhang forward	2'-0"	1'-00"			1'-00"	Percentage from Table, Line A. <b>✓</b>
Fore enclosed	31'-2 3/4"	31'-23"	7'-0"	✓	31'-23"	(corrected for absence of forecastle (if required)) <b>32.77</b>
overhang						Percentage from Table, Line B. <b>✓</b>
Trunk aft						(corrected for absence of forecastle (if required)) <b>✓</b>
forward						Interpolation for bridge less than 2L (if required) <b>✓</b>
Tonnage opening aft						Deduction = $36.03 \times 32.77 = -11.81'$
" forward						
Total	146'-44"	143'-44"			143'-44"	

## SHEER CORRECTION.

No sheer between frame 40 &amp; frame 117.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	41.04	1		41.04	18.0	18.0	1		18.0
1/2 L from A.P.	18.265	4		73.04	1.5	1.5	4		6.0
3/8 L	4.515	2		9.03	-	-	2		-
Amidships	-	4		-	-	-	4		-
3/8 L from F.P.	9.03	2		18.06	-	-	2		-
1/2 L	36.53	4		146.12	15.0	15.0	4		60.00
F.P.	82.09	1		82.09	66.0	66.00	1		66.00
Total				369.38					150.00

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{219.38}{18} \times \frac{75-23.10}{2 \times 143} = +6.34'-27"$   
 If limited on account of midship superstructure.

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 = **Deficient**  
 " " aft of " = **Deficient**

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **25'-20"**  
 Summer freeboard = **4'-5 1/2"**  
 Moulded draught (d) = **20'-68"**

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **5'-17" = 5 1/4"**Addition for Winter North Atlantic Freeboard (if required) = **7 1/4"**

## Deduction for Fresh Water.

Displacement in salt water at summer load water line **2019**  
 $\Delta =$  **6496**  
 Tons per inch immersion at summer load water line **2019**  
 $T =$  **29.2**

Deduction =  $\frac{\Delta}{40T}$  inches  
 = **5'-5 1/2"**  
 = **5 1/2"**

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{7653 + 68}{1.36} = 1.4453$   
**1.36**

Depth Correction ... **10.75**  
 Deduction for superstructures ... **-27**  
 Sheer correction ... **32**  
 Round of Beam correction ... **02**  
 Correction for Thickness of Deck amidships ... **-4**  
 Other corrections, scantlings, etc. ... **-4**

Summer Freeboard = **54'-18"**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:-

Tropical Fresh Water Line above Centre of Disc ... **10 3/4"**  
 Fresh Water Line " " ... **5 1/2"**  
 Tropical Line " " ... **5 1/4"**  
 Winter Line below " " ... **5 1/4"**  
 Winter North Atlantic Line " " ... **7 1/4"**

Tropical Fresh Water Freeboard ... **4'-6 1/4"**  
 Fresh Water " " ... **3'-7 1/2"**  
 Tropical " " ... **4'-0 3/4"**  
 Winter " " ... **4'-1"**  
 Winter North Atlantic " " ... **4'-1 1/2"**

9 SEP 1941



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.

No. 18183

# SURVEYOR'S FORM FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TUGGER)

Empire Wolfe  
West Hartlepool  
BRITISH  
1941

310'0"  
46'4"  
22'2"  
1000 +

22'10"  
11'0"

## DEFINITION FOR SUPERSTRUCTURES

Height of superstructure above main deck	Height of superstructure above main deck	Height of superstructure above main deck
31'0"	21'0"	11'0"
21'0"	11'0"	1'0"
11'0"	1'0"	0'0"

## SHEER CORRECTION

Sheer	Correction	Result
18'0"	1'0"	17'0"
12'0"	0'0"	12'0"
6'0"	0'0"	6'0"

Trade of ship ocean going  
Names of sister ships ✓  
Builder's name and yard number Wm Gray & Co's  
Owners Ministry of Shipping  
Fee £ 13-0-0