

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.  
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

SAN VIRGILIO

Ship's Name <b>EMPIRE NEPTUNE</b>	Official Number 180222	Nationality and Port of Registry <b>BRITISH</b> <i>South Shields</i> <i>London</i>	Gross Tonnage 8285	Date of Build 1945	Port of Survey <b>NEWCASTLE-ON-TYNE</b>
Moulded Dimensions: Length <b>461'-0"</b> Breadth <b>59'-0"</b> Depth <b>34'-0"</b> <i>To centre of rudder stock.</i>					Date of Survey <b>DURING CONSTRUCTION</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>17737</b> tons					Surveyor's Signature <i>Al Hunter</i>
Coefficient of fineness for use with Tables <b>.79</b>					Particulars of Classification <b>* 100 A1</b> <b>CARRYING PETROLEUM IN BULK</b> <b>(CLASS CONTEMPLATED)</b>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... .. <b>34.00</b>	(a) Where D is greater than Table depth (D - Table depth) R = $(34.06 - 30.73) 3 = +9.99$	Moulded Breadth (B) <b>59.0'</b>
Stringer plate ... .. <b>.06</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 14.16$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>14.38"</b>
Depth for Freeboard (D) = <b>34.06</b>		Difference = <b>.22.</b>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.22}{4} \left( 1 - \frac{.428}{.572} \right) = .03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height FEET	Height Correction	Effective Length (E)	
<i>EQUIN</i> Poop/enclosed <i>SIDE</i> <del>93.69</del>	<del>93.69</del>	96.19	7.50	✓	96.19	Standard Height of Superstructure <i>7.5</i>
" overhang ...	<del>97.44</del> 96.19					" " R.Q.D. ✓
R.Q.D. enclosed	-					Deduction for complete superstructure 42.00
" overhang <i>SIDE</i> <del>47.17</del>	<del>47.17</del>					Percentage covered $\frac{S}{L} = 43.23$
Bridge/enclosed <i>SIDE</i> <del>44.50</del>	<del>44.50</del>	47.17	7.50	✓	47.17	" " $\frac{S_1}{L} = 42.80$
" overhang aft ...	<del>48.50</del> 7.88					" " $\frac{E}{L} = 42.80$
" overhang forward	<del>59</del>					Percentage from Table, Line A. Tanker 33.80
F'cle enclosed ...	48.04	48.04	7.50	✓	48.04	(corrected for absence of forecastle (if required)) ✓
" overhang ...	-					Percentage from Table, Line B. ✓
Trunk aft ...	-					(corrected for absence of forecastle (if required)) ✓
" forward ...	-					Interpolation for bridge less than .2L (if required) ✓
Tonnage opening aft ...	-					
" " forward	-					
Total ...	199.28	197.31			197.31	Deduction = 42.00 × .338 = -14.20.

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft =	Mean standard sheer aft =		
A.P. ...	56.10	1		56.10	56.00	56.00	1		56.00	} Deficient.	}		
1/4 L from A.P. ...	24.96	4		99.84	24.87	24.87	4		99.48			Mean actual sheer forward =	Mean standard sheer forward =
2/4 L ..	6.17	2		12.34	6.12	6.12	2		12.24				
Amidships ...	-	4		-	-	-	4		-	} Tanker.	}		
3/4 L from F.P. ...	12.34	2		24.68	12.25	12.25	2		24.50			Length of enclosed superstructure forward of amidships =	L
1/4 L ..	49.93	4		199.72	49.87	49.87	4		199.48			.. .. aft of .. =	.. ..
F.P. ...	112.20	1		112.20	112.50	112.50	1		112.50				
Total ...				504.88					504.20				

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - \frac{S}{2L}}{.5339} \right) = \frac{.68}{18} \left( \frac{.75 - .2161}{.5339} \right) = +.02$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	77.95.
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{79+68}{1.36} = \frac{1.47}{1.36}$	84.26
Depth to Freeboard Deck = <b>34.06</b>	$\Delta = 16740$	Depth Correction ... .. <b>9.99</b>	
Summer freeboard = <b>6.67</b>	Tons per inch immersion at summer load water line	Deduction for superstructures ... .. <b>- 14.20</b>	<b>85B.</b>
Moulded draught (d) = <b>27.39</b>	T = <b>56.02</b>	Sheer correction ... .. <b>.02</b>	<b>24.7.45</b>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>6.85 = 6 3/4"</b>	Deduction = $\frac{\Delta}{40T}$ inches = <b>7.48</b>	Round of Beam correction ... .. <b>- .03</b>	
Addition for Winter North Atlantic Freeboard (if required) = <b>6.85 + 4.61 = 11.46 = 11 1/2"</b>	= <b>7 1/2"</b>	Correction for Thickness of Deck amidships ... .. <b>-</b>	
		Other corrections, scantlings, etc. ... .. <b>-</b>	
		10.01 14.23 - 4.22	
		Summer Freeboard = <b>80.04</b>	

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

Tropical Fresh Water Line above Centre of Disc ... .. <b>14 1/4"</b>	Tropical Fresh Water Freeboard ... .. <b>5 1/2"</b>
Fresh Water Line " " ... .. <b>7 1/2"</b>	Fresh Water " " ... .. <b>6' - 0 1/2"</b>
Tropical Line " " ... .. <b>6 3/4"</b>	Tropical " " ... .. <b>6' - 1 1/4"</b>
Winter Line below " " ... .. <b>6 3/4"</b>	Winter " " ... .. <b>7' - 2 3/4"</b>
Winter North Atlantic Line " " ... .. <b>11 1/2"</b>	Winter North Atlantic " " ... .. <b>7' - 7 1/2"</b>



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.

EXTREME DISPLACEMENT AT 26'-0" EXTREME DRAFT = 15,758 TONS. TONS PER INCH = 55.46  
 " " " 27'-6" " " = 16,765 " " " = 56.05  
 " " " 29'-0" " " = 17,776 " " " = 56.68  
 BOTTOM OF KEEL IS 1 1/2" BELOW BASE LINE.

*omit*

Poof Equivalent Abd:-

Centre = 97.44  
 Side =  $\frac{93.69}{3.75 \times \frac{2}{3}} = 2.50$   
 $\frac{93.69}{96.49}$

Bridge Equivalent Abd:-

Centre = 48.50  
 Side =  $\frac{44.50}{4.00 \times \frac{2}{3}} = 2.67$   
 $\frac{44.50}{47.17}$

025 }  
 025 }  
 025 }  
 025 }

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Trade of ship OCEAN GOING OIL TANKER

Names of sister ships NAVICELLA (Yd. No. 663) SAN VELINO (Yd. No. 661) &c. &c.

Builder's name and yard number R. W. HAWTHORN LESLIE & CO. LD. No. 666

Owners MINISTRY OF WAR TRANSPORT.

Fee £ 19 — —



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