

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

No. 21703

SEP 30 1937

SANTA HELENA

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Yolanda E. Ilford</i>	Official Number ✓	Nationality and Port of Registry <i>Panamamian Panama</i>	Gross Tonnage 4680	Date of Build 1913-6	Port of Survey <i>Swansea</i>
Moulded Dimensions: Length <i>375'-0"</i> Breadth <i>51'-0"</i> Depth <i>29'-2"</i> ✓					Date of Survey <i>Sept. 28th 1937</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature <i>W. Malcolm</i>
Coefficient of fineness for use with Tables <i>.49. (assumed)</i>					Particulars of Classification <i>+100A1 Carrying Petroleum in Bulk</i>

Depth for Freeboard (D).		Depth correction.	Round of Beam correction.
Moulded depth ... ..	<i>29'-2"</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(29.22 - 25.00) 2.884 = + 12.14"</i>	Moulded Breadth (B) <i>51.00'</i>
Stringer plate ... <i>.63"</i>	<i>.63</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>4.22</i>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>12.24"</i>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <i>none</i>		If restricted by superstructures	Ship's Round of Beam = <i>12.2"</i> ✓
Depth for Freeboard (D) =	<i>29.22</i>		Difference <i>excess = .26"</i>
			Restricted to
			Correction = $\frac{\text{Diff}^*}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.26}{4} \times .5258 = -.03"$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ... ..	103.0	103.00	7-6	✓	103.00	Standard Height of Superstructure <i>7.25'</i>
.. overhang ... ..						" " R.Q.D. ✓
R.Q.D. enclosed ... ..						Deduction for complete superstructure <i>40.33"</i>
.. overhang ... ..						Percentage covered $\frac{S}{L} =$ <i>47.42</i>
Bridge enclosed ... ..	28.25	28.16	7-6	✓	28.16	" " $\frac{S_1}{L} =$ <i>47.42</i>
.. overhang aft ... ..						" " $\frac{E}{L} =$ <i>47.42</i>
.. overhang forward	<i>4.25</i>					Percentage from Table, Line A. TANKER <i>38.42</i> ✓
Fore enclosed equiv. ...	46.65	46.65	7-6		46.65	(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 ...						Deduction = <i>40.33 x .3842 = 15.50"</i>
" " forward						
Total ... ..	144.81	144.81			144.81	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ... ..	47.50	1		47.50	48.0	47.50	1		47.50	Mean actual sheer aft = <i>Excess</i>
1/4 L from A.P. ...	21.14	4		84.56	22.45	21.14	4		84.56	Mean actual sheer forward = <i>Deficient</i>
1/2 L " ... ..	5.225	2		10.45	5.5	5.225	2		10.45	Mean standard sheer forward
Amidships ... ..	-	4		-	0	-	4		-	Length of enclosed superstructure forward of amidships =
3/4 L from F.P. ...	10.45	2		20.90	10.00	10.00	2		20.00	" " aft of " = } <i>Deficient Sheer.</i>
1/4 L " ... ..	42.28	4		169.12	38.62	38.62	4		154.48	
F.P. ... ..	95.00	1		95.00	90.00	90.00	1		90.00	
Total ... ..				427.53					406.99	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{20.54}{18} (.75 - .2371) = + .59"$   
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 = *29.22*  
Summer freeboard = *4.89*  
Moulded draught (d) = *24.33*

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = *6.08 = 154 mm*Addition for Winter North Atlantic Freeboard (if required) = *6.08 + 3.75 = 9.83 = 250 mm*

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 

Tons per inch immersion at summer load water line

 $T = \frac{\Delta}{4} = 154 \text{ mm.}$ Deduction =  $\frac{\Delta}{40 T}$  inches

*Draft = Deadweight.*  
*24-0 6875 tons*  
*23-6 6640 "*  
*23-0 6420 "*  
*22-6 6190 "*

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

Correction for coefficient  $\frac{.79 + .68}{1.36} = \frac{1.47}{1.36}$ 

Depth Correction ... .. *12.14* -  
Deduction for superstructures ... .. - *15.50*  
Sheer correction ... .. *.59* -  
Round of Beam correction ... .. - *.03*  
Correction for Thickness of Deck amidships ... .. -  
Other corrections, scantlings, etc. ... .. -

56.80

61.39

+	-
12.14	-
-	15.50
.59	-
-	.03
-	-
-	-
12.14	15.53
- 2.44	

Summer Freeboard = *58.62*

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

Tropical Fresh Water Line above Centre of Disc ... *12.14 308 mm*  
Fresh Water Line " " ... *6.08 154 "*  
Tropical Line " " ... *6.08 154 "*  
Winter Line below " " ... *6.08 154 "*  
Winter North Atlantic Line " " ... *9.83 250 "*

Tropical Fresh Water Freeboard ... *1181*  
Fresh Water " ... *1335*  
Tropical " ... *1335*  
Winter " ... *1643*  
Winter North Atlantic " ... *1739*

002883-002890-0230

14/11/40

RECEIVED

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RECEIVED

16 OCT 1937



*Santa Helena*

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.

*Forecastle equiv. bulkhead.*

$$15.08 \times 3.00 = 45.24$$

$$4.00 \times 9.64 \times 2 = 135.40$$

$$180.64 \div 43.5 = 4.15$$

42.50

46.65

Trade of ship

*Oil Tanker*

Names of sister ships

-

Builder's name and yard number

*Greenock + Grangemouth Dryd. Co.*

Owners

*Compania Primera de Navegacion Limitada.*

Fee £

*15*



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