

# LLOYD'S REGISTER OF SHIPPING

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## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Received 2 FEB 1954

Index No.

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Owners C11

Ship's Name <b>"PACIFIC STAR"</b> <b>SILVER BAY</b>	Official Number <b>185006</b>	Nationality and Port of Registry <b>BRITISH</b> <b>LIVERPOOL.</b> <b>GLASGOW</b>	Gross Tonnage <b>112178</b>	Date of Build <b>WHILST BUILDING.</b>	Port of Survey <b>GREENOCK</b>
Moulded Dimensions: Length <b>510'0"</b> Breadth <b>69'0"</b> Depth <b>38'5"</b> Freeboard Length <b>511'0"</b> <b>To CENTRE OF RUDDER STOCK.</b>					Date of Survey <b>WHILST BUILDING</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) <b>24852</b> tons					Surveyor's Signature <b>J. Jamison</b>
Coefficient of fineness for use with Tables <b>.755</b>					Particulars of Classification <b>+100 A.1</b> <b>C.P.I. B. (CONT'G 2)</b>

**DEPTH FOR FREEBOARD (D).**

Moulded depth ... **38'5"**

Stringer plate ... **.89"** **.07**

Wood Sheathing on exposed deck

$T \left( \frac{L-S}{L} \right) =$

Depth for Freeboard (D) = **38'57"**

**DEPTH CORRECTION.**

(a) Where D is greater than Table depth (D-Table depth) R = **(38'57"-34'00") 3**  
**+13'71"** **4'57"**

(b) Where D is less than Table depth (if allowed) (Table depth-D) R = **✓**

If restricted by superstructures **✓**

**ROUND OF BEAM CORRECTION.**

Moulded Breadth (B) **69'0"**

Standard Round of Beam =  $\frac{B \times 12}{50} =$  **16'56"**

Ship's Round of Beam = **18"**

Difference **1'44"**

Restricted to **7**

Correction =  $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right) =$   **$\frac{1'44"}{4} \times \frac{58'68}{510} = -.21"$**

**DEDUCTION FOR SUPERSTRUCTURES.**✓ **BRIDGE 12" INBOARD PAS**

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <b>EQUIV. SIDES. CENTRE.</b>	<b>121'33"</b>	<b>121'33"</b>	<b>8'0"</b>	<b>✓</b>	<b>121'33"</b>
" overhang					
R.Q.D. enclosed					
" overhang <b>EQUIV. SIDES. CENTRE.</b>	<b>49'85"</b>	<b>49'85"</b>	<b>8'0"</b>	<b>✓</b>	<b>49'85"</b>
Bridge enclosed <b>EQUIV. SIDES. CENTRE.</b>	<b>47'8"</b>	<b>47'8"</b>	<b>8'0"</b>	<b>✓</b>	<b>47'8"</b>
" overhang	<b>53'2"</b>				
" overhang forward					
F'cle enclosed	<b>44'5'25"</b>	<b>44'25"</b>	<b>8'0"</b>	<b>✓</b>	<b>44'25"</b>
" overhang <b>EQUIV. SIDES. CENTRE.</b>	<b>45'0'75"</b>	<b>.38</b>			<b>.38</b>
Trunk aft	<b>48'9"</b>				
" forward					
Tonnage opening aft					
" forward					
Total	<b>216'18"</b>	<b>215'81"</b>			<b>215'81"</b>

Standard Height of Superstructure **7'50"**

" " R.Q.D. **✓**

Deduction for complete superstructure **42'00"**

Percentage covered  $\frac{S}{L} =$  **42'39"**

" "  $\frac{S_1}{L} =$  **42'32"**

" "  $\frac{E}{L} =$  **42'32"**

Percentage from Table, Line A. TANKER. **33'32"**  
(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 = **42'00" × 33'32" = 14'00"**

**SHEER CORRECTION.****SEE SKETCH.**

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<b>61'00"</b>	<b>1</b>	<b>61'00"</b>	<b>42'0"</b>	<b>42'00"</b>	<b>1</b>	<b>42'00"</b>
$\frac{1}{8}$ L from A.P. ...	<b>27'145"</b>	<b>4</b>	<b>108'58"</b>	<b>11'125"</b>	<b>11'125"</b>	<b>4</b>	<b>44'50"</b>
$\frac{2}{8}$ L " ...	<b>6'71"</b>	<b>2</b>	<b>13'42"</b>	<b>0</b>	<b>-</b>	<b>2</b>	<b>-</b>
Amidships ...	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>
$\frac{3}{8}$ L from F.P. ...	<b>13'42"</b>	<b>2</b>	<b>26'84"</b>	<b>0</b>	<b>-</b>	<b>2</b>	<b>-</b>
$\frac{4}{8}$ L " ...	<b>54'29"</b>	<b>4</b>	<b>217'16"</b>	<b>3'0"</b>	<b>3'00"</b>	<b>4</b>	<b>12'00"</b>
F.P. ...	<b>122'00"</b>	<b>1</b>	<b>122'00"</b>	<b>66'0"</b>	<b>66'00"</b>	<b>1</b>	<b>66'00"</b>
Total ...			<b>549'00"</b>				<b>164'50"</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$   **$\frac{384'50}{18} \left( .75 - \frac{212'0}{510} \right) = +11'49"$**

If limited on account of midship superstructure. **✓**

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. **✓**

**Deduction for Tropical Freeboard.****Addition for Winter and Winter North Atlantic Freeboard.**

Depth to Freeboard Deck = **38'57"**

Summer freeboard = **8'81"**

Moulded draught (d) = **29'76"**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for =

Winter freeboard =  $\frac{d}{4}$  inches = **7'44" = 7 $\frac{1}{2}$ "**

Addition for Winter North Atlantic Freeboard (if required) = **7'44" + 5'10" = 12'54" = 12 $\frac{1}{2}$ "**

**Deduction for Fresh Water.**

Displacement in salt water at summer load water line **32'0" = 243'5 TONS**

$\Delta =$  **31'0" = 234'5 TONS** **.22480**

Tons per inch immersion at summer load water line **32'0" = 71'20 TONS**

T = **31'0" = 70'60** **69'91**

Deduction =  $\frac{\Delta}{40 T}$  inches = **8'04"**

= **8"**

**TABULAR FREEBOARD corrected for Flush Deck (if required)**Correction for coefficient  **$\frac{785 + 68}{1'36} = 1'435/1'36$** 

Depth Correction ... **13'71"**

Deduction for superstructures ... **14'00"**

Sheer correction ... **11'49"**

Round of Beam correction ... **.21"**

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

Summer Freeboard = **105'75"**

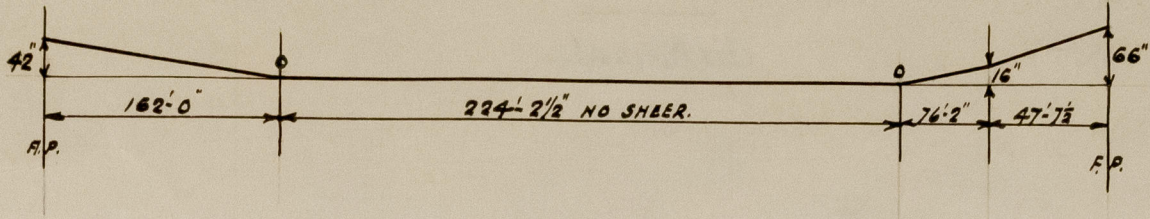
**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-**

Tropical Fresh Water Line above Centre of Disc ...	<b>15'1/2"</b>	Tropical Fresh Water Freeboard ...	<b>8'9'3/4"</b>
Fresh Water Line " " ...	<b>8"</b>	Fresh Water " " ...	<b>7'6'4"</b>
Tropical Line " " ...	<b>7'1/2"</b>	Tropical " " ...	<b>8'1'3/4"</b>
Winter Line below " " ...	<b>7'1/2"</b>	Winter " " ...	<b>9'5'1/4"</b>
Winter North Atlantic Line " " ...	<b>12'1/2"</b>	Winter North Atlantic " " ...	<b>9'10'1/2"</b>



# Silver Bay. Pacific Star.

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.



POOP.  
 Length at side = 118.00.  
 +  $\frac{2}{3} \times 5.00$  = 3.33  
 EQUIVALENT = 121.33'

BRIDGE  
 Length at side = 47.67'  
 +  $\frac{2}{3} \times 5.5$  = 3.67'  
 EQUIVALENT = 51.34'  
 WIDTH CORRECTION =  $51.34 \times \frac{6}{69}$   
 = 49.85'

42397  
 44150

Trade of ship INTERNATIONAL.

Names of sister ships "PARA" & "ALYA BAY"

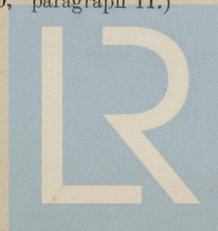
Builder's name and yard number W. HAMILTON & CO. LTD. YARD NO 492.

Owners BLUE STAR LINE

Fee £ 50 : 0 : 0.

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950," paragraph 11.)

ALL PLANS IN LONDON OFFICE.



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