

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

Index. No. 35779  
(For London Office only).

32462

Ship's Name <b>JOSEPH SWAN</b>	Official Number <b>166572</b>	Nationality and Port of Registry <b>BRITISH LONDON</b>	Gross Tonnage <b>1571</b>	Date of Build	Port of Survey <b>Sunderland</b>
Moulded Dimensions: Length <b>238.5</b> Breadth <b>38.58</b> Depth <b>18.25</b>				Date of Survey <b>While Building</b>	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>3100</b> tons				Surveyor's Signature <b>W. C. Lulla</b>	
Coefficient of fineness for use with Tables <b>.76</b>				Particulars of Classification <b>+100 A1</b> <i>class contemplated.</i>	

Depth for Freeboard (D). Moulded depth ... <b>18.25</b> Stringer plate ... <b>RAD .50</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>18.29</b>	Depth correction. (a) Where D is greater than Table depth (D-Table depth) R = $(18.29 - 15.90) 1.834 = +4.38$ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures <input checked="" type="checkbox"/>	Round of Beam correction. Moulded Breadth (B) <b>38.58</b> Standard Round of Beam = $\frac{B \times 12}{50} = 9.26$ Ship's Round of Beam = <b>9 1/2</b> Difference = <b>Excess</b> = <b>.24</b> Restricted to Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.24}{4} \times .2202 = -.01$
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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 ...		✓			
„ overhang ...		✓			
R.Q.D. enclosed ...	<b>147.42</b>	<b>147.42</b>	<b>4.0</b>		<b>147.42</b>
„ overhang ...					
Bridge enclosed. <i>Equival.</i> ...	<b>17.25</b>	<b>17.25</b>	<b>7.0</b>		<b>17.25</b>
„ overhang aft ...					
„ overhang forward ...					
F'cle enclosed ...	<b>21.33</b>	<b>21.33</b>	<b>6.0</b>		<b>21.33</b>
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	<b>186.00</b>	<b>186.00</b>			<b>186.00</b>

Standard Height of Superstructure **6.00'**  
„ „ R.Q.D. **3.923'**  
Deduction for complete superstructure **29.85''**  
Percentage covered  $\frac{S}{L} = 77.98$   
„ „  $\frac{S_1}{L} = 77.98$   
„ „  $\frac{E}{L} = 77.98$   
Percentage from Table, Line A. **72.81**  
(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 = **29.85 x 72.81 = 21.73''**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<b>33.85</b>	<b>1</b>		<b>33.85</b>	<b>18''</b>	<b>18.92</b>	<b>1</b>		<b>18.92</b>
1/2 L from A.P. ...	<b>15.06</b>	<b>4</b>		<b>60.24</b>	<b>8''</b>	<b>8.42</b>	<b>4</b>		<b>33.68</b>
3/4 L „ ...	<b>3.72</b>	<b>2</b>		<b>7.44</b>	<b>2''</b>	<b>2.08</b>	<b>2</b>		<b>4.16</b>
Amidships ...	<b>—</b>	<b>4</b>		<b>—</b>	<b>0</b>	<b>—</b>	<b>4</b>		<b>—</b>
3/4 L from F.P. ...	<b>7.45</b>	<b>2</b>		<b>14.90</b>	<b>4 5/8''</b>	<b>4.62</b>	<b>2</b>		<b>9.24</b>
1/2 L „ ...	<b>30.13</b>	<b>4</b>		<b>120.52</b>	<b>18 3/4''</b>	<b>18.75</b>	<b>4</b>		<b>75.00</b>
F.P. ...	<b>67.70</b>	<b>1</b>		<b>67.70</b>	<b>42''</b>	<b>42.00</b>	<b>1</b>		<b>42.00</b>
Total ...				<b>304.65</b>					<b>183.00</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{121.65}{18} (.75 - .3899) = +2.43''$   
If limited on account of midship superstructure. ☒ If limited to maximum allowance of 1 1/2 ins. per 100 ft. ☒

Mean actual sheer aft = **Deficient Sheer**  
Mean standard sheer aft = **Deficient Sheer**  
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. RAISED QUARTER Depth to Freeboard Deck = <b>22.29</b> Summer freeboard = <b>5.40</b> Moulded draught (d) = <b>16.89</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>4.22'' = 4 1/4''</b> Addition for Winter North Atlantic Freeboard (if required) = <b>4 1/4 + 2 = 6 1/4''</b>	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 3454$ Tons per inch immersion at summer load water line $T = 19.1$ Deduction = $\frac{\Delta}{40 T}$ inches = <b>4.52'' = 4 1/2''</b>	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.76 + .68}{1.36} = \frac{1.44}{1.36}$ Depth Correction ... <b>4.38</b> Deduction for superstructures ... <b>21.73</b> Sheer correction ... <b>2.43</b> Round of Beam correction ... <b>.01</b> Correction for Thickness of Deck amidships ... <b>48.00</b> Other corrections, scantlings, etc. ... <b>54.81 21.74 +33.07</b> Summer Freeboard = <b>64.87</b>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, **Wood, Steel, Deck**:

Tropical Fresh Water Line above Centre of Disc ...	<b>8 3/4''</b>	Tropical Fresh Water Freeboard ...	<b>5' 4 3/4''</b>
Fresh Water Line „ „ ...	<b>4 1/2''</b>	Fresh Water „ „ ...	<b>5' 0 1/4''</b>
Tropical Line „ „ ...	<b>4 1/4''</b>	Tropical „ „ ...	<b>5' 0 1/2''</b>
Winter Line below „ „ ...	<b>4 1/4''</b>	Winter „ „ ...	<b>5' 1 1/4''</b>
Winter North Atlantic Line „ „ ...	<b>6 1/4''</b>	Winter North Atlantic „ „ ...	<b>5' 11''</b>

-9 SEP 1938



Joseph Swan

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.

Actual displacement at actual draft 16'-11" = 3430 tons  
T.P.I. = 19.1

Equivalent Bridge

$$\begin{aligned} \text{centre} &= 18'-00'' \\ \text{side} &= 15'-75'' \\ 2.25 \times \frac{2}{3} &= 1.50 \\ &\frac{15'-75''}{1.50} \\ &= 10'-50'' \end{aligned}$$

Trade of ship

Names of sister ships SS. GEORGE BALFOUR SLO. RPT. No. 32079 SS. LEONARD PEARCE SLO. RPT. No. 324

Builder's name and yard number Messrs J.P. Austin & Son Ltd N° 350

Owners London Power Co Ltd.

Fee £ 11 0 0

Will be charged on completion



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Lloyd's Register  
Foundation

Rpt. C.11.

Ship's Name

Official Number

Nationality

Disposition

Poop Bulkhead

Raised Quarter

Bridge, Aft

Bridge, Fore

Forecastle Bulkhead

Trunk, Aft

Trunk, Fore

Exposed Machinery

board or

Exposed Machinery

structure

Machinery

tures not

Appliances

Deckhouses

Poop Bulkhead

Raised Quarter

Bridge, Aft

Bridge, Fore

Forecastle Bulkhead

Exposed Machinery

board or

Exposed Machinery

structure

Machinery

tures not

Appliances

Deckhouses

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