

Preliminary (Amended)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 35249
(For London Office only).

Ship's Name <i>Swan Hunter & Wigham Richardsons No 1570/36</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <u>440.0</u> ✓ Breadth <u>61.00</u> ✓ Depth <u>28.25</u> ✓					Date of Survey <u>4.10.37</u>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>12645</u> ✓ tons					Surveyor's Signature
Coefficient of fineness for use with Tables <u>.684</u> ✓					Particulars of Classification <u>100A1</u> <i>(contemplated)</i>

Depth for Freeboard (D). Moulded depth <u>28.25</u> ✓ Stringer plate <u>.04</u> ✓ Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .21 \times .1588 = .03$ ✓ Depth for Freeboard (D) = <u>28.32</u> ✓	Depth correction. (a) Where D is greater than Table depth (D-Table depth) R = ✓ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓ $(29.33 - 28.32) 3 = -3.03$ ✓ If restricted by superstructures <u>yes. nil</u> ✓	Round of Beam correction. Moulded Breadth (B) <u>61.00</u> ✓ Standard Round of Beam = $\frac{B \times 12}{50} = 14.64$ ✓ Ship's Round of Beam = <u>9.00</u> ✓ Difference <u>5.64</u> ✓ <i>deficient</i> Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{5.64^2}{4} \times \frac{2693}{4} = +.38$ ✓
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>75.08</u> ✓	<u>75.08</u> ✓	<u>7.75</u> ✓	✓	<u>75.08</u> ✓
„ overhang	<u>.50</u>	<u>.25</u> ✓	„	-	<u>.25</u> ✓
R.Q.D. enclosed					
„ overhang					
Bridge enclosed <i>equiv.</i> ...	<u>190.61</u> ✓	<u>141.54</u> ✓	<u>4.45</u> ✓	-	<u>141.54</u> ✓
„ overhang aft	<u>15.91</u> ✓	<u>11.93</u> ✓	„	-	<u>11.93</u> ✓
„ overhang forward	<u>29.56</u> ✓	<u>14.78</u> ✓	„	-	<u>14.78</u> ✓
Fore enclosed	<u>23.58</u> ✓	<u>23.58</u> ✓	„	✓	<u>23.58</u> ✓
„ overhang	<u>13.83</u> ✓	<u>13.81</u> ✓	„	✓	<u>13.81</u> ✓
Trunk aft					
Open <i>BARGE</i> forward	<u>21.08</u> ✓	<u>10.54</u> ✓	<u>7.75</u> ✓	✓	<u>10.54</u> ✓
Tonnage opening aft					
„ „ forward					
Total	<u>370.15</u> ✓	<u>321.51</u> ✓			<u>321.51</u> ✓

Standard Height of Superstructure 7.5' ✓
 „ „ R.Q.D. ✓
 Deduction for complete superstructure 42" ✓
 Percentage covered $\frac{S}{L} = 84.12$ ✓
 „ „ $\frac{S_1}{L} = 73.07$ ✓
 „ „ $\frac{E}{L} = 73.07$ ✓
 Percentage from Table, Line A. 66.44 ✓
 (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 × .6644 = 28.04 ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>54.00</u> ✓	1		<u>54.00</u>	<u>35.50</u> ✓	<u>35.50</u> ✓	1		<u>35.50</u>
$\frac{1}{4}$ L from A.P.	<u>24.03</u>	4		<u>96.12</u>	<u>11.00</u> ✓	<u>11.00</u> ✓	4		<u>44.00</u>
$\frac{2}{4}$ L „	<u>5.94</u>	2		<u>11.88</u>	<u>-1.00</u> ✓	<u>-1.00</u> ✓	2		<u>-2.00</u>
Amidships		4					4		
$\frac{3}{4}$ L from F.P.	<u>11.88</u>	2		<u>23.76</u>	<u>15.50</u> ✓	<u>15.50</u> ✓	2		<u>31.00</u>
$\frac{1}{4}$ L „	<u>48.06</u>	4		<u>192.24</u>	<u>48.00</u> ✓	<u>48.00</u> ✓	4		<u>192.00</u>
F.P.	<u>108.00</u> ✓	1		<u>108.00</u>	<u>94.00</u> ✓	<u>94.00</u> ✓	1		<u>94.00</u>
Total				<u>486.00</u>					<u>394.50</u>

Mean actual sheer aft =
 Mean standard sheer aft =
 Mean actual sheer forward =
 Mean standard sheer forward =
 Length of enclosed superstructure forward of amidships =
 „ „ aft of „ =
 } *Deficient sheers.*

SHEER FORWARD				SHEER AFT			
11.88	1	35.50	1	54.00	1	54.00	35.50
48.06	3	144.18	3	24.03	3	72.09	11.00
108.00	1	108.00	1	5.94	3	17.82	-1.00
					1		
		<u>287.82</u>				<u>143.91</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{88.5}{18} \left(\frac{.75 - .4206}{2} \right) = +1.62$ ✓
 If limited on account of midship superstructure, ✓

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

Depth to Freeboard Deck = 28.24 ✓
 Summer freeboard = 4.63 ✓
 Moulded draught (d) = 23.46 ✓

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 5.86 = 5 $\frac{3}{4}$ ✓
 Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta =$
 Tons per inch immersion at summer load water line
 $T =$
 Deduction = $\frac{\Delta}{40T}$ inches =

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.684 \times .68}{1.36} = \frac{1.367}{1.36}$ ✓

Depth Correction
 Deduction for superstructures
 Sheer correction
 Round of Beam correction
 Correction for Thickness of Deck amidships
 Other corrections, scantlings, etc.

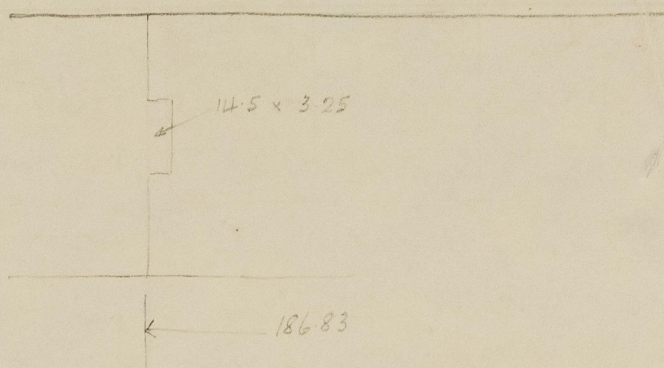
	+	-
Depth Correction		
Deduction for superstructures		<u>28.04</u> ✓
Sheer correction	<u>1.62</u> ✓	
Round of Beam correction	<u>.38</u> ✓	
Correction for Thickness of Deck amidships		<u>.36</u> ✓
Other corrections, scantlings, etc.		
	<u>2.00</u>	<u>28.40</u>
Summer Freeboard =		<u>58.03</u> ✓

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: 4'10" ✓

Tropical Fresh Water Line above Centre of Disc
 Fresh Water Line „ „
 Tropical Line „ „
 Winter Line below „ „
 Winter North Atlantic Line „ „

Tropical Fresh Water Freeboard
 Fresh Water „ „
 Tropical „ „
 Winter „ „
 Winter North Atlantic „ „

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.



Bridge Equiv. Bhd

$$\frac{14.5 \times 3.25}{61} = \frac{186.83}{186.06 \text{ equiv bhd}}$$

$$\frac{15.17}{.77} = 15.94$$

Bridge Equivalent Bulkheads.

Forward. $\frac{12.8 \times 9.6}{29.6} = 4.15$ ✓
 $\frac{3.2 \times 3.4}{29.6} = .37$ ✓
 4.52 ✓

Aft $\frac{7.0 \times 3.2}{30.3} = .74$ ✓
 3.78 ✓
 186.83 ✓
190.61 ✓

overhang aft. 15.14 ✓
 .74 ✓
15.91 ✓

overhang forward 34.08 ✓
 4.52 ✓
29.56 ✓

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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Foundation