

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

 Index. No. 34296  
 (For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey _____	
having <u>C.S.S. with Tonnage opening.</u>					Date of Survey <u>January 13th 1933</u>	
(Type of Superstructures.)						
Ship's Name <u>SWAN HUNTERS</u> <u>No 1483 SHIP.</u>	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Name of Surveyor _____	
Moulded Dimensions: Length <u>486.50</u> Breadth <u>65.0</u> Depth <u>35.25</u>					Particulars of Classification <u>+100A.1</u>	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>19,430</u> tons					with freeboard (contemplating)	
Coefficient of fineness for use with Tables <u>.718</u>						

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. <u>35.25</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(35.29 - 32.43) 3' = + 8.58</u>	Moulded Breadth (B) <u>65.0</u>
Stringer plate ... .. <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{65 \times 12}{50} = 15.60$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$		Ship's Round of Beam = <u>16.25</u>
		Difference <u>.65</u>
Depth for Freeboard (D) = <u>35.29</u>	If restricted by superstructures	Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.65}{4} (1 - \frac{99.43}{100}) = .01$

## DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	Standard Height of Superstructure
Poop enclosed ... .. <u>128.79</u>	<u>128.79</u>	<u>8'-7"</u>	<u>✓</u>	<u>128.79</u>	<u>7'-6"</u>
„ overhang ... ..		<u>+3' 4000</u>			
R.Q.D. enclosed ... ..					R.Q.D. <u>✓</u>
„ overhang ... ..					Deduction for complete superstructure <u>42"</u>
Bridge enclosed ... .. <u>352.21</u>	<u>352.21</u>	<u>8'-7"</u>	<u>✓</u>	<u>352.21</u>	Percentage covered $\frac{S}{L} = \frac{100}{100} = 100$
„ overhang aft ... ..		<u>+3' 4000</u>			„ $\frac{S_1}{L} = \frac{99.43}{100}$
„ overhang forward ... ..					„ $\frac{E}{L} = \frac{99.43}{100}$
F'ce enclosed ... ..					Percentage from Table, Line A. <u>✓</u>
„ overhang ... ..					(corrected for absence of forecastle (if required))
Trunk aft ... .. <u>5.50</u>	<u>2.75</u>	<u>20' 00"</u>	<u>✓</u>	<u>2.75</u>	Percentage from Table, Line B. <u>99.30</u>
„ forward ... ..					(corrected for absence of forecastle (if required))
Tonnage opening aft ... ..					Interpolation for bridge less than 2L (if required) <u>C.S.S.</u>
„ „ forward ... ..					Deduction = <u>42 × .993 = -41.71</u>
Total ... .. <u>486.50</u>	<u>483.75</u>			<u>483.75</u>	

## SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product	Mean actual sheer aft = Excess
A.P. ... ..	<u>58.65</u>	1	<u>58.65</u>	<u>54.00</u>	<u>70.00</u>	1	<u>70.00</u>	Mean actual sheer forward = Excess.
$\frac{1}{4}$ L from A.P. ... ..	<u>26.10</u>	4	<u>104.40</u>	<u>24.00</u>	<u>31.15</u>	4	<u>124.60</u>	Mean standard sheer forward
$\frac{3}{8}$ L „ ... ..	<u>6.45</u>	2	<u>12.90</u>	<u>6.00</u>	<u>7.70</u>	2	<u>15.40</u>	
Amidships ... ..	-	4	-	-	-	4	-	Length of enclosed superstructure forward of amidships =
$\frac{3}{8}$ L from F.P. ... ..	<u>12.90</u>	2	<u>25.80</u>	<u>12.00</u>	<u>13.64</u>	2	<u>27.28</u>	„ „ aft of „ =
$\frac{1}{4}$ L „ ... ..	<u>52.20</u>	4	<u>208.80</u>	<u>48.00</u>	<u>55.18</u>	4	<u>220.72</u>	
F.P. ... ..	<u>117.30</u>	1	<u>117.30</u>	<u>108.00</u>	<u>124.00</u>	1	<u>124.00</u>	
Total ... ..			<u>527.85</u>	<u>+16</u>			<u>582.00</u>	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{54.15}{18} \left( .75 - \frac{.50}{2} \right) = -.757$

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 = 35.29  
 Summer freeboard = 5.58  
 Moulded draught (d) = 29.71

 Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 7.43 - 7.2  
 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 =  $\frac{\Delta}{40 T}$  inches =  $7\frac{1}{2}$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{718.68}{1.36} = \frac{1.398}{1.36}$	<u>98.25</u>
	<u>101.00</u>
Depth Correction ... ..	<u>8.58</u>
Deduction for superstructures ... ..	<u>-41.71</u>
Sheer correction ... ..	<u>.75</u>
Round of Beam correction ... ..	<u>-</u>
Correction for Thickness of Deck amidships ... ..	<u>-</u>
Other corrections, scantlings, etc. ... ..	<u>-</u>
	<u>8.58</u> <u>42.46</u> <u>-33.88</u>
Summer Freeboard =	<u>67.12</u>

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

Tropical Fresh Water Line above Centre of Disc ... .. <u>15"</u>	Tropical Fresh Water Freeboard ... .. <u>4'-7<math>\frac{1}{2}</math>"</u>
Fresh Water Line „ „ ... .. <u>7<math>\frac{1}{2}</math>"</u>	Fresh Water „ „ ... .. <u>4'-11<math>\frac{1}{2}</math>"</u>
Tropical Line „ „ ... .. <u>7<math>\frac{1}{2}</math>"</u>	Tropical „ „ ... .. <u>4'-11<math>\frac{1}{2}</math>"</u>
Winter Line below „ „ ... .. <u>7<math>\frac{1}{2}</math>"</u>	Winter „ „ ... .. <u>6'-2<math>\frac{1}{2}</math>"</u>
Winter North Atlantic Line „ „ ... .. <u>✓</u>	Winter North Atlantic „ „ ... .. <u>✓</u>