

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. **34**
~~133~~
 (For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker
 having Half height prop. Bridge and Forecastle.

Port of Survey Laidon

Date of Survey 23-5-32

Name of Surveyor _____

Particulars of Classification +100-A-1.

(Type of Superstructures.)

Ship's Name OSWIN. Nationality and Port of Registry SWEDISH HELSINGBORG. Official Number 5402 Gross Tonnage 1320 Date of Build 1913-2

Moulded Dimensions: Length 235-0 Breadth 37-5 Depth 18-58

Moulded displacement at moulded draught = 85 per cent. of moulded depth 3089 tons

Coefficient of fineness for use with Tables .777

Depth for Freeboard (D)

Moulded depth 18-58

Stringer plate -04

Sheathing on exposed deck

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

Depth for Freeboard (D) = 18-62

Depth correction

(a) Where D is greater than Table depth
 (D—Table depth) R = (18-62 - 18-58) 1-807 = + 5-33

(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) 37-5

Standard Round of Beam = $\frac{B \times 12}{50} = 9-0$

Ship's Round of Beam = 9-5

Difference -50

Restricted to

Correction = $\frac{\text{Diff}^n}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{50}{4} (1 - \frac{4534}{2350}) = -04$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	<u>16-33</u>	<u>16-33</u>	<u>3-5</u>	<u>5-33</u>	<u>14-65</u>	Standard Height of Superstructure <u>6-0</u>
" overhang						" " R.Q.D. <u>3-9</u>
R.Q.D. enclosed						Deduction for complete superstructure <u>29-5</u>
" overhang						Percentage covered $\frac{S}{L} = 45-6\%$
Bridge enclosed... ..	<u>63-25</u>	<u>63-25</u>	<u>7-04</u>		<u>63-25</u>	" " $\frac{S_1}{L} = 45-34\%$
" overhang aft	<u>2-5</u>	<u>1-87</u>			<u>1-87</u>	" " $\frac{E}{L} = 44-62\%$
" overhang forward						Percentage from Table, Line A.
F'cle enclosed	<u>25-08</u>	<u>25-08</u>	<u>7-04</u>		<u>25-08</u>	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B. <u>31-43</u>
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = <u>29-5 x 31-43 = -9-27</u>
" " forward						
Total	<u>107-16</u>	<u>106-53</u>			<u>104-85</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>33-50</u>	1		<u>33-50</u>	<u>38-00</u>	<u>38-00</u>	1		<u>38-00</u>
L from A.P.	<u>14-91</u>	4		<u>59-64</u>	<u>15-50</u>	<u>15-50</u>	4		<u>62-00</u>
L "	<u>3-68</u>	2		<u>7-36</u>	<u>3-50</u>	<u>3-50</u>	2		<u>7-00</u>
Amidships	-	4		-	-	-	4		-
L from F.P.	<u>7-36</u>	2		<u>14-72</u>	<u>7-00</u>	<u>7-00</u>	2		<u>14-00</u>
L "	<u>29-82</u>	4		<u>119-28</u>	<u>29-00</u>	<u>29-00</u>	4		<u>116-00</u>
F.P.	<u>67-00</u>	1		<u>67-50</u>	<u>72-00</u>	<u>72-00</u>	1		<u>72-00</u>
Total				<u>301-50</u>					<u>309-00</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{7-5}{18} (75-228) = -22$

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 = 18-62

Summer freeboard = 2-27

Moulded draught (d) = 16-35

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 4-09 = 104 inches

Addition for Winter North Atlantic Freeboard (if

required = 4-09 x 2 = 8-18 = 164 inches

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 3255$

Tons per inch immersion at summer load water line

T = 17-68

Deduction = $\frac{\Delta}{40T}$ inches

= 4-63

= 118 inches

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient .777-63

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	<u>5-33</u>	
Deduction for superstructures		<u>9-27</u>
Sheer correction		<u>22</u>
Round of Beam correction		<u>07</u>
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<u>5-33</u>	<u>9-56</u>

Summer Freeboard = 29-24

29-40

31-50

693 inches

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

Tropical Fresh Water Line above Centre of Disc	<u>222</u> inches
Fresh Water Line " "	<u>117</u> inches
Tropical Line " "	<u>104</u> inches
Winter Line below " "	<u>104</u> inches
Winter North Atlantic Line " "	<u>154</u> inches

Tropical Fresh Water Freeboard	<u>478</u> inches
Fresh Water " "	<u>576</u> inches
Tropical " "	<u>589</u> inches
Winter " "	<u>797</u> inches
Winter North Atlantic " "	<u>847</u> inches