

# Preliminary Computation (Excluding bridge) Class 2 doing app. leeway on back bush head opening

## Lloyd's Register of Shipping.

 Index. No. \_\_\_\_\_  
 (For London Office only).

### SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Mess Swan Hunter's</i> <i>Yara No 1708.</i> <i>[For the African Eastern Co]</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey _____  Date of Survey _____  Surveyor's Signature _____  Particulars of Classification _____
Moulded Dimensions: Length <i>410.67</i> Breadth <i>56.5</i> Depth <i>29.5</i> <i>(to entire of rudder stock)</i> Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>12330</i> tons  Coefficient of fineness for use with Tables <i>742</i> ✓					

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... <i>29.5</i> Stringer plate ... <i>.65</i> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ ✓  Depth for Freeboard (D) = <i>29.55</i> ✓	(a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ <i>(29.55 - 27.88) x 3 = +6.51"</i> (b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓  If restricted by superstructures ✓	Moulded Breadth (B) <i>56.5</i> Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>13.56</i> Ship's Round of Beam = <i>13.58</i> Difference <i>.02</i> Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <i>.06 x 2401 = Nil</i>

#### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<i>151.62</i>	<i>151.62</i>	<i>7.5</i>	<i>x .90</i>	<i>136.46</i>	
„ overhang ...						
R.Q.D. enclosed ...						
„ overhang ...						
Bridge enclosed ...						
„ overhang aft ...						
„ overhang forward ...						
Fore enclosed ...	<i>48.79</i>	<i>48.79</i>	<i>7.5</i>		<i>48.79</i>	
„ overhang ...						
Trunk aft <i>210.45 x 30</i>		<i>111.64</i>	<i>7.5</i>	<i>x .90</i>	<i>100.48</i>	
„ forward <i>56.5</i>						
Tonnage opening aft ...						
„ „ forward						
Total ...	<i>200.41</i>	<i>312.05</i>			<i>285.73</i>	

Standard Height of Superstructure *7.5* ✓

„ „ R.Q.D. *42.00*

Deduction for complete superstructure *42.00*

Percentage covered  $\frac{S}{L} =$  *48.80* ✓

„ „  $\frac{S_1}{L} =$  *75.99* ✓

„ „  $\frac{E}{L} =$  *69.58* ✓

Percentage from Table, Line A. Tanker *62.54* ✓

(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 = *42.0 x .6254 = 26.27* ✓

#### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...		1					1			
$\frac{1}{6}L$ from A.P. ...		4					4			
$\frac{2}{6}L$ „ ...		2					2			
Amidships ...		4					4			
$\frac{3}{6}L$ from F.P. ...		2					2			
$\frac{4}{6}L$ „ ...		4					4			
F.P. ...		1					1			
Total ...										

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 „ =

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$  *.39 (1.75 - .6440) = .01* ✓

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 = <i>29.55</i> Summer freeboard = <i>4.02</i> Moulded draught (d) = <i>25.53</i>  Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 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 Flash Deck (if required) Correction for coefficient <i>1.42 + .68 = 1.42 / 1.36</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction ...</td> <td><i>6.51</i></td> <td></td> </tr> <tr> <td>Deduction for superstructures ...</td> <td></td> <td><i>26.27</i></td> </tr> <tr> <td>Sheer correction ...</td> <td></td> <td><i>.01</i></td> </tr> <tr> <td>Round of Beam correction ...</td> <td></td> <td></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td></td> <td></td> </tr> <tr> <td></td> <td><i>6.51</i></td> <td><i>26.28</i></td> </tr> </tbody> </table> <p>Summer Freeboard = <i>48.27</i></p>		+	-	Depth Correction ...	<i>6.51</i>		Deduction for superstructures ...		<i>26.27</i>	Sheer correction ...		<i>.01</i>	Round of Beam correction ...			Correction for Thickness of Deck amidships ...			Other corrections, scantlings, etc. ...				<i>6.51</i>	<i>26.28</i>
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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 ...		Tropical Fresh Water Freeboard ...	
Fresh Water Line „ „ ...		Fresh Water „ „ ...	
Tropical Line „ „ ...		Tropical „ „ ...	
Winter Line below „ „ ...		Winter „ „ ...	
Winter North Atlantic Line „ „ ...		Winter North Atlantic „ „ ...	