

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

Ship's Name <i>Swan Hunter & Migham Richardson's No 1592</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <i>464.21</i> Breadth <i>61.75</i> Depth <i>34.04</i>					Date of Survey <i>23.3.38</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>18198</i> tons					Surveyor's Signature
Coefficient of fineness for use with Tables <i>.768</i>					Particulars of Classification + <i>100A1</i> <i>carrying petroleum in bulk</i> <i>(contemplated)</i>

Depth for Freeboard (D). Moulded depth ... <i>34.04</i> Stringer plate ... <i>.07</i> Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <i>34.11</i>	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = $(34.11 - 30.94) 3 = +9.51$ (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) <i>61.75</i> Standard Round of Beam = $\frac{B \times 12}{50} = 14.82$ Ship's Round of Beam = <i>15.00</i> Difference <i>.18 excess</i> Restricted to Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.18}{4} \times \frac{.5733}{.5747} = -.03$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	103.00	103.00	8.0		103.00	Standard Height of Superstructure <i>7.5</i>
" overhang ...	3.50	1.75			1.75	" " R.Q.D.
R.Q.D. enclosed ...						Deduction for complete superstructure <i>42.00</i>
" overhang ...						Percentage covered $\frac{S}{L} = 43.55.81$
Bridge enclosed...	36.00	36.00	8.0		36.00	" " $\frac{S_1}{L} = 42.55.67$
" overhang aft ...	3.50	2.63			2.63	" " $\frac{E}{L} = 42.55.67$
" overhang forward	4.00	2.00			2.00	Percentage from Table, Line A. <i>Tanker</i> <i>33.55.67</i>
F'cle enclosed EQUIVALENT	52.06	52.06	8.0		52.06	(corrected for absence of forecastle (if required))
" overhang ... "	1.29	.64			.64	Percentage from Table, Line B.
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = $42 \times \frac{.3367}{.3353} = -14.28$
" " forward	203.35	198.08			198.08	
Total ...	202.06	197.44			197.44	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	56.42	1		56.42	38.00	38.00	1		38.00	Mean actual sheer aft = <i>Deficient</i>
1/2 L from A.P. ...	25.105	4		100.42	21.875	21.875	4		87.50	Mean actual sheer forward = <i>Deficient</i>
2/2 L " ...	6.205	2		12.41	6.00	6.00	2		12.00	Mean standard sheer forward
Amidships ...		4					4			Length of enclosed superstructure forward of amidships =
3/2 L from F.P. ...	12.41	2		24.82	12.25	12.25	2		24.50	" " aft of " = <i>Tanker</i>
1/2 L " ...	50.21	4		200.84	50.125	50.125	4		200.50	
F.P. ...	112.84	1		112.84	113.00	113.00	1		113.00	
Total ...				507.75					475.50	
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{32.25}{18} \left(.75 - \frac{.2190}{.5310} \right) = +.95$										If limited to maximum allowance of 1 1/2 ins. per 100 ft.
If limited on account of midship superstructure.										

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = <i>34.11</i> Summer freeboard = <i>6.69</i> Moulded draught (d) = <i>27.42</i> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>6.85</i> = <i>6 3/4</i> Addition for Winter North Atlantic Freeboard (if required) = <i>6.85 + 4.64 = 11.49</i> = <i>11 1/2</i>	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 17239$ Tons per inch immersion at summer load water line $T = 58.12$ Deduction = $\frac{\Delta}{40T}$ inches = <i>7.42</i> = <i>7 1/2</i>	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.768 + .68}{1.36} = \frac{1.448}{1.36}$ <table><tr><td>+</td><td>-</td></tr><tr><td>Depth Correction ...</td><td><i>9.51</i></td></tr><tr><td>Deduction for superstructures ...</td><td><i>14.28</i></td></tr><tr><td>Sheer correction ...</td><td><i>.95</i></td></tr><tr><td>Round of Beam correction ...</td><td><i>.03</i></td></tr><tr><td>Correction for Thickness of Deck amidships ...</td><td>-</td></tr><tr><td>Other corrections, scantlings, etc. ...</td><td>-</td></tr><tr><td></td><td><i>10.46</i></td></tr></table> Summer Freeboard = <i>80.20</i>	+	-	Depth Correction ...	<i>9.51</i>	Deduction for superstructures ...	<i>14.28</i>	Sheer correction ...	<i>.95</i>	Round of Beam correction ...	<i>.03</i>	Correction for Thickness of Deck amidships ...	-	Other corrections, scantlings, etc. ...	-		<i>10.46</i>
+	-																	
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Deduction for superstructures ...	<i>14.28</i>																	
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Round of Beam correction ...	<i>.03</i>																	
Correction for Thickness of Deck amidships ...	-																	
Other corrections, scantlings, etc. ...	-																	
	<i>10.46</i>																	

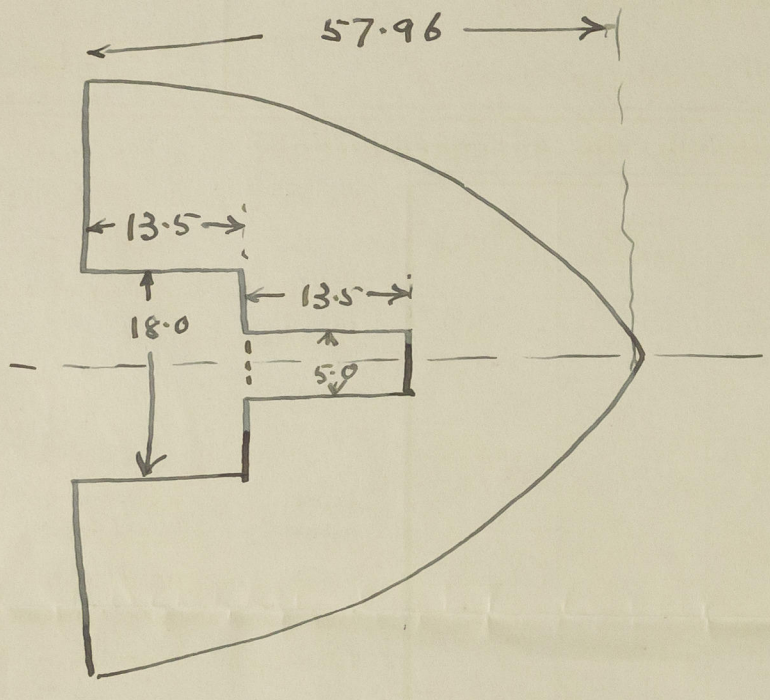
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	<i>14 1/4</i>	Tropical Fresh Water Freeboard	<i>5 1/2</i>
Fresh Water Line " "	<i>7 1/2</i>	Fresh Water " "	<i>6 1/4</i>
Tropical Line " "	<i>6 3/4</i>	Tropical " "	<i>6 1/2</i>
Winter Line below " "	<i>6 3/4</i>	Winter " "	<i>7 1/2</i>
Winter North Atlantic Line " "	<i>11 1/2</i>	Winter North Atlantic " "	<i>7 1/2</i>

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.

Total length of forecastle = 57.96.
Ruons $\frac{(18.0 \times 13.5) + (5.0 \times 13.5)}{52.67} = \frac{- 5.90}{52.06} = \text{equivalent incland.}$

Total length of forecastle = 57.96
Ruon in Deck $\frac{18 \times 13.5}{52.67} = \frac{4.61}{53.35} = \text{equivalent covered}$
 $\frac{52.06}{1.29} = \text{equivalent incland}$
 $\frac{52.06}{1.29} = \text{equivalent overhang}$



Trade of ship _____
Names of sister ships _____
Builder's name and yard number _____
Owners _____
Fee £ _____

Rpt. C.11
S. H.
Ya
Moulde
Moulde
Coefficient
Moulded
Stringer
Sheathing
T
Poop e
" o
R.Q.D.
" o
Bridge
" o
F'cle e
" o
Trunk
" o
Tonnag
" o
Stat
A.P. ...
1/4 L from
2/8 L ...
Amidship
3/8 L from
1/4 L ...
F.P. ...
To
Corr
If li
Deduct
Additio
Atlan
Deductio
Wint
Addition
requi