

37041

30 OCT 1942

Lloyd's Register of Shipping

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER SAILING SHIP, TANKER)

Ship's Name: *"DIVINA"* Official Number: *650* Nationality: *Swedish* Port of Registry: *Stockholm* Date of Survey: *30, 13 & 30, 8, 15, 28, 1, 1942*

Moulded Dimensions: Length *51.100* Breadth *8.990* Depth *4.420*

Moulded displacement at moulded draught = 85 per cent of moulded depth *1154.8* ton

Coefficient of fineness for use with Tables *.68 (Actual .654)*

Particulars of Class: *100 A1*

Depth for Freeboard (D):

Moulded depth *4.420*

Stringer plate *8*

Sheathing on exposed deck

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

Depth for Freeboard (D) = *4.428*

Depth correction:

(a) Where D is greater than Table depth (D-Table depth) R = $3.33(4.428-3.453)13.1 = +106 \text{ mm.}$

(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) *8.990*

Standard Round of Beam = *0.180*

Ship's Round of Beam *0.182*

Difference *2 mm.*

Restricted to

Corrected $D-B \times 1 = \frac{7}{4} \times 6.571 = -1 \text{ mm.}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _e)	Height	Height Correction	Effective Length (E)
Poop enclosed	<i>12.544</i>	<i>12.544</i>	<i>2.100</i>	-	<i>12.544</i>
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Wale enclosed	<i>5.220</i>	<i>5.220</i>	<i>2.150</i>		<i>5.220</i>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<i>17.764</i>	<i>17.764</i>			<i>17.764</i>

Standard Height of Superstructure *1830 mm*

Deduction for complete superstructure *585 mm*

Percentage covered $\frac{S}{L} = 34.29\%$

$\frac{S_e}{L} = 34.29\%$

$\frac{E}{L} = 34.29\%$

Percentage from Table, Line A *18.65%*

(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 = $585 \times 18.65 = -109 \text{ mm.}$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<i>685</i>	<i>1</i>		<i>685</i>	<i>678</i>	<i>678</i>	<i>1</i>		<i>678</i>
$\frac{1}{4}L$ from A.P.	<i>304</i>	<i>4</i>		<i>1216</i>	<i>302</i>	<i>307</i>	<i>4</i>		<i>1228</i>
$\frac{1}{2}L$	<i>76</i>	<i>2</i>		<i>152</i>	<i>79</i>	<i>79</i>	<i>2</i>		<i>158</i>
Amidships	-	<i>4</i>		-	<i>0</i>	<i>0</i>	<i>4</i>		-
$\frac{3}{4}L$ from F.P.	<i>152</i>	<i>2</i>		<i>304</i>	<i>154</i>	<i>154</i>	<i>2</i>		<i>308</i>
$\frac{1}{4}L$	<i>608</i>	<i>4</i>		<i>2432</i>	<i>606</i>	<i>606</i>	<i>4</i>		<i>2424</i>
F.P.	<i>1371</i>	<i>1</i>		<i>1371</i>	<i>1377</i>	<i>1377</i>	<i>1</i>		<i>1377</i>
Total				<i>6160</i>					<i>6173</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{13}{18} (.75 - .1714) = \text{Nil.}$

If limited on account of midship superstructure *Yes.*

Mean actual sheer aft *Excess.*

Mean standard sheer aft

Mean actual sheer forward *Excess.*

Mean standard sheer forward

Length of enclosed superstructure forward of amidships *Nil.*

 " aft of *Nil.*

Deduction for Tropical Freeboard

Addition for Winter and Winter North Atlantic Freeboard

Deduction for Fresh Water

TABULAR FREEBOARD corrected for Fresh Water

Correction for coefficient *Nil*

Depth to Freeboard Deck *4.428*

Summer freeboard *.461*

Moulded draught (d) *3.967*

$48 \leftarrow 83 \text{ mm.}$

$51 \text{ mm.} + 83 \text{ mm.} = 134 \text{ mm.}$

$\frac{1240}{40 \times 9.65} = 3.22"$

$= 82 \text{ mm.}$

465 -

465 -

106 -

- 109

- 1

- 1

- 1

106 110 - 4

461

461 mm

296

379

378

544

595

18. Nov 1942

165 mm

82 "

83 "

83 "

134 "



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Depth of Paper:-

$$\begin{array}{r} 4.8 \times .58 = 2.784 \\ 4.19 \times .58\frac{1}{2} = 1.215 \\ \hline 8.99 \quad \boxed{3.999} \\ \quad .444 \\ \hline 12.100 \\ \hline \underline{\underline{12.544}} \end{array}$$

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