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No. 29571.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>S.S. DUIVENDYK</b> (EX CURACAO)	Official Number	Nationality and Port of Registry <b>NETHERLAND</b> <b>ROTTERDAM.</b>	Gross Tonnage <b>± 8269</b>	Date of Build <b>1930</b>	Port of Survey <b>Rotterdam</b>
Moulded Dimensions: Length <b>144.540</b> Breadth <b>19.170</b> Depth <b>9.760 m</b>					Date of Survey <b>3<sup>rd</sup> October 1946</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>16585</b> $H^3$ tons					Surveyor's Signature <b>H. P. Jonker</b>
Coefficient of fineness for use with Tables <b>0.421</b>					Particulars of Classification <b>100A-</b> <b>Class Contemplated</b>

DEPTH FOR FREEBOARD (D). $m$	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <b>9.760</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>8.33 (9.771 - 9.636) 30 = + 34 m.m.</b>	Moulded Breadth (B) <b>19.170</b>
Stringer plate ... <b>11</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>1.35</b>	Standard Round of Beam = $\frac{B \times 12}{48.50} = \frac{383}{48.50} = 7.89$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ ✓	If restricted by superstructures ✓	Ship's Round of Beam <b>50</b> = <b>385</b> $m$
Depth for Freeboard (D) = <b>9.771</b>		Difference <b>+ 142</b>
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{14}{4} \times 0.0188 = 0.0668$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<b>10.500</b>	<b>10.500</b>	<b>2.440</b>	✓	<b>10.500</b>
" overhang ...			<b>+ 65 m.m.</b>		
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	<b>131.340</b>	<b>131.340</b>	<b>2.440</b>	✓	<b>131.340</b>
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	<b>141.840</b>	<b>141.840</b>			<b>141.840</b>

Standard Height of Superstructure **2.29 m.**

" " R.Q.D. ✓

Deduction for complete superstructure **1067 m.m.**

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

" "  $\frac{S_1}{L} =$  **98.12**

" "  $\frac{E}{L} =$

Percentage from Table, Line A. **97.68**  
(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 = **1067 x 97.68 = - 1042 m.m.**

Sheer measured afloat.

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<b>1458</b>	<b>1</b>	<b>1458</b>	<b>1200</b>	<b>1200</b>	<b>1</b>	<b>1</b>	<b>1200</b>	
$\frac{1}{2}$ L from A.P. ...	<b>649</b>	<b>4</b>	<b>2596</b>	<b>360</b>	<b>360</b>	<b>4</b>	<b>4</b>	<b>1440</b>	
$\frac{1}{2}$ L " ...	<b>160</b>	<b>2</b>	<b>320</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	
Amidships ...	<b>-</b>	<b>4</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>4</b>	<b>4</b>	<b>-</b>	
$\frac{1}{2}$ L from F.P. ...	<b>321</b>	<b>2</b>	<b>642</b>	<b>642</b>	<b>442</b>	<b>2</b>	<b>2</b>	<b>884</b>	
$\frac{1}{2}$ L " ...	<b>1298</b>	<b>4</b>	<b>5192</b>	<b>1473</b>	<b>1473</b>	<b>4</b>	<b>4</b>	<b>5892</b>	
F.P. ...	<b>2916</b>	<b>1</b>	<b>2916</b>	<b>3390</b>	<b>3390</b>	<b>1</b>	<b>1</b>	<b>3081</b>	
Total ...			<b>13124</b>					<b>12497</b>	

Mean actual sheer aft = **deficient**

Mean standard sheer aft =

Mean actual sheer forward = **excess**

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **deficient sheer**

Sheer aft:  $\frac{S}{L} =$  **std** **actual** **std** **actual**

$\frac{1458}{649} = \frac{1200}{360} = \frac{1458}{1947} = \frac{1200}{1080} = \frac{2280}{3885}$

$\frac{160}{0} = \frac{0}{0} = \frac{480}{2280} = \frac{5969}{2280}$

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	<b>2404</b>
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line $\Delta = 166.90 H^3$	Correction for coefficient $\frac{721 + 68}{1.36} = \frac{11401}{1.36}$	<b>2476</b>
Depth to Freeboard Deck = <b>9.771</b>	Tons per inch immersion at summer load water line $T = 58 H^3$	Depth Correction ... <b>34</b>	
Summer freeboard = <b>1.480</b>	Deduction = $\frac{\Delta}{40 T}$ in inches = <b>7.19</b>	Deduction for superstructures ... <b>1042</b>	
Moulded draught (d) = <b>8.291</b>	= <b>183 m.m.</b>	Sheer correction ... <b>9</b>	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d \cdot m.m.}{48} = 173 = 17cm$	= <b>18 cm.</b>	Round of Beam correction ...	
Addition for Winter North Atlantic Freeboard (if required) =		Correction for Thickness of Deck amidships ...	
		Other corrections, scantlings, etc. ...	
		<b>43</b> <b>1042</b> <b>- 999</b>	
		Summer Freeboard = <b>1477</b>	

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

Tropical Fresh Water Line above Centre of Disc ...	<b>35 cm</b>	Tropical Fresh Water Freeboard ...	<b>148 cm</b>
Fresh Water Line " " ...	<b>18 "</b>	Fresh Water " " ...	<b>130 "</b>
Tropical Line " " ...	<b>17 "</b>	Tropical " " ...	<b>131 "</b>
Winter Line below " " ...	<b>17 "</b>	Winter " " ...	<b>165 "</b>
Winter North Atlantic Line " " ...	<b>...</b>	Winter North Atlantic " " ...	<b>...</b>



*s/s. Duwendyk.*

29571.

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.

Displacement on a moulded draft of 8162 <sup>m</sup>/<sub>m</sub> = 16690 <sup>kg</sup>/<sub>m</sub><sup>3</sup>. per 25 <sup>m</sup>/<sub>m</sub> = 58 <sup>kg</sup>/<sub>m</sub><sup>3</sup>  
 The freeboard assigned by the Germanischer Lloyd = 1610 <sup>m</sup>/<sub>m</sub> from top of steel deck -

<u>Sheer forward</u>				
Standard	0	321	1298	2916
actual	0	670	1800	3390
diff	-	349	502	474
x .3476	-	121	175	165
		321	1298	2916
effective	-	442	1473	3081

Actual sheer aft = .5869  
Standard " "

$$\frac{.5869 - .50}{.75 - .50} = \frac{.0869}{.25} = .3476$$

Trade of ship Ocean trade  
 Names of sister ships \_\_\_\_\_  
 Builder's name and yard number Deutsche werft at Hamburg, Yard N° 125 (22149 in the Reg Book)  
 Owners Westert Amerik. Stoomvaart Maatsch. (Holland-Amerika Lijn)  
 Fee 228.- J:



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