

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

AUG 17 1937

Ship's Name <i>ELENA. R.</i> <i>(ex "Munindies")</i>	Official Number <i>529</i>	Nationality and Port of Registry <i>Greek, Syra</i>	Gross Tonnage <i>4576</i>	Date of Build <i>1917</i>	Port of Survey <i>Amsterdam</i>
Moulded Dimensions: Length <i>370'-0"</i> Breadth <i>53'-0"</i> Depth <i>30'-0"</i>					Date of Survey <i>14<sup>th</sup> August 1937</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature <i>C.H. Meuwisse</i>
Coefficient of fineness for use with Tables <i>.78 (estimated)</i>					Particulars of Classification <i>+100 A7.</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... <i>30'-0"</i>	(a) Where D is greater than Table depth (D-Table depth) R = <i>(30.04 - 24.67) 2.846 = + 15.28</i>	Moulded Breadth (B) <i>53'-0"</i>
Upper plate ... <i>.04</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <i>5.37</i>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>12.72</i>
Nothing on exposed deck	If restricted by superstructures	Ship's Round of Beam = <i>12</i>
$T \left( \frac{L-S}{L} \right) =$		Difference <i>.72 def.</i>
Depth for Freeboard (D) = <i>30.04</i>		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S}{L} \right) = \frac{.72}{4} \times .559 = +.10$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>i</sub> )	Height	Height Correction	Effective Length (E)
enclosed ...	<i>26.75</i>	<i>26.75</i>	<i>7'-6"</i>		<i>26.75</i>
overhang ...					
D. enclosed					
overhang					
age enclosed...	<i>103.5</i>	<i>103.50</i>	<i>7'-6"</i>		<i>103.50</i>
overhang aft					
overhang forward					
enclosed OPEN ...	<i>39.5</i>	<i>32.90</i>	<i>3'-6" + WOOD DECK</i>		<i>32.90</i>
overhang ...					
ik aft					
forward					
age opening aft					
" forward					
Total	<i>169.75</i>	<i>163.15</i>			<i>163.15</i>

Standard Height of Superstructure *7.20'*  
" " R.Q.D.  
Deduction for complete superstructure *40.00*  
Percentage covered  $\frac{S}{L} =$  *45.88*  
" "  $\frac{S_i}{L} =$  *44.10*  
" "  $\frac{E}{L} =$  *44.10*  
Percentage from Table, Line A. *✓*  
(corrected for absence of forecastle (if required))  
Percentage from Table, Line B. *30.98*  
(corrected for absence of forecastle (if required))  
Interpolation for bridge less than 2L (if required) *✓*  
Deduction =  $40 \times .3098 = - 12.39$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	<i>47.00</i>	<i>1</i>		<i>47.00</i>	<i>33"</i>	<i>33.00</i>	<i>1</i>		<i>33.00</i>
from A.P. ...	<i>20.91</i>	<i>4</i>		<i>83.64</i>	<i>13.82</i>	<i>13.82</i>	<i>4</i>		<i>55.28</i>
" ...	<i>5.17</i>	<i>2</i>		<i>10.34</i>	<i>3.45</i>	<i>3.45</i>	<i>2</i>		<i>6.90</i>
amidships ...		<i>4</i>			<i>0"</i>		<i>4</i>		
from F.P. ...	<i>10.34</i>	<i>2</i>		<i>20.68</i>	<i>8.87</i>	<i>8.87</i>	<i>2</i>		<i>17.74</i>
" ...	<i>41.83</i>	<i>4</i>		<i>167.32</i>	<i>35.55</i>	<i>35.55</i>	<i>4</i>		<i>142.20</i>
...	<i>94.00</i>	<i>1</i>		<i>94.00</i>	<i>81"</i>	<i>81.00</i>	<i>1</i>		<i>81.00</i>
Total				<i>422.98</i>					<i>336.12</i>

Mean actual sheer aft = *Deficient*  
Mean standard sheer aft  
Mean actual sheer forward = *Deficient*  
Mean standard sheer forward  
Length of enclosed superstructure forward of amidships = *Deficient*  
" aft of " = *Sheer.*

FOR'D SHEER  
STANDARD  
*10.34-3 31.02*  
*41.83-3 125.49*  
*94.00-1 94.00*  
*250.51*

ACTUAL  
*8.87-3 26.61*  
*35.55-3 106.65*  
*81.00-1 81.00*  
*214.26 = 85.53%*

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{86.86(.75-.2291)}{18} = +2.51$   
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 = *30.04*  
Summer freeboard = *6.04*  
Moulded draught (d) = *24.00*

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = *6*

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.78+.68}{1.36} = \frac{1.46}{1.36}$

	+	-
Depth Correction	<i>15.28</i>	
Deduction for superstructures		<i>12.39</i>
Sheer correction	<i>2.51</i>	
Round of Beam correction	<i>.10</i>	
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<i>17.89</i>	<i>12.39 + 5.50</i>
Summer Freeboard =	<i>72.48</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>279</i>	Tropical Fresh Water Freeboard	<i>1841</i>
Fresh Water Line	<i>152</i>	Fresh Water	<i>1562</i>
Tropical Line	<i>127</i>	Tropical	<i>1689</i>
Winter Line below	<i>140</i>	Winter	<i>1714</i>
Winter North Atlantic Line	<i>✓</i>	Winter North Atlantic	<i>1981</i>

20 AUG 1937

10m 3.37.

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MAKING 1024  
16 SEP 1937  
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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.

Trade of ship

*Ocean Trade*

Names of sister ships

*S.S. Pleiades*

Builder's name and yard number

*S.B. & D.D. Co. Newport News U.S.A.*

Owners

*A. Roussos & Co.*

Fee

*f 100.-*

Exp.

*f 4.-*

*Amsterdam, 14<sup>th</sup>*

*C.H. Meuwisse*

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Foundation