

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Received .....  
 Index No. ....  
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 Owners C11.....

Ship's Name <b>"ADELLEN"</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <b>476'-4 1/2"</b> Breadth <b>68'-0"</b> Depth <b>36'-0"</b>					Date of Survey <b>2/5/56</b>
Freeboard Length <b>476.96'</b> to $\phi$ of R.S.					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>21480</b> tons					Particulars of Classification <b>100A1 from +100A1 CPIS</b>
Coefficient of fineness for use with Tables <b>.757</b>					

DEPTH FOR FREEBOARD (D). FT		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	36.00	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	68.00'
Stringer plate	.82"	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	4.27	Standard Round of Beam = $\frac{B \times 12}{50}$	16.32
Wood Sheathing on exposed deck				Ship's Round of Beam	17.00
$T \left( \frac{L-S}{L} \right) =$				Difference	.68
Depth for Freeboard (D) =	36.07	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right)$	$\frac{.68}{4} \times .2335 = -.04$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)
Poop enclosed EQUIV	113.21	7.5'	-	113.21
" overhang				
R.Q.D. enclosed				
" overhang				
Bridge enclosed				
" overhang aft				
" overhang forward				
F'cle enclosed	34.54	7.5'	-	34.54
" overhang		7.5'	-	
Trunk aft EQUIV	217.86	greater than standard		217.86
" forward				
Tonnage opening aft				
" forward				
Total	147.75			365.61

Standard Height of Superstructure **7.5'**  
 " " R.Q.D. **-**  
 Deduction for complete superstructure **42.00"**  
 Percentage covered  $\frac{S}{L} = 30.98$   
 " "  $\frac{S_1}{L} = 76.65$   
 " "  $\frac{E}{L} = 71.18$   
 Percentage from Table, Line A. & B. **71.18**  
 (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 =  $42 \times .7118 = 29.90$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	57.700	1	57.70	45.75	45.75	1	45.75
1/2 L from A.P.	25.675	4	102.70	20.75	20.75	4	83.00
3/4 L "	6.350	2	12.70	5.625	5.625	2	11.25
Amidships	0	4	0	0	0	4	0
3/4 L from F.P.	12.695	2	25.39	6.89	6.89	2	13.78
1/2 L "	51.350	4	205.40	26.75	26.75	4	107.00
F.P.	115.390	1	115.39	61.625	61.625	1	61.63
Total			519.28				322.41

Mean actual sheer aft =  
 Mean standard sheer aft = } Deficient  
 Mean actual sheer forward =  
 Mean standard sheer forward = }  
 Length of enclosed superstructure forward of amidships = } Deficient  
 " " aft of " = } sheers.

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{196.87}{18} \left( .75 - \frac{.5951}{1549} \right) = + 6.51"$   
 If limited on account of midship superstructure. If limited to maximum allowance of 1 1/2 ins. per 100ft.

<b>Deduction for Tropical Freeboard.</b>	<b>Deduction for Fresh Water.</b>	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required)	<b>95.39</b>
<b>Addition for Winter and Winter North Atlantic Freeboard.</b>	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.757 \times .68}{1.36} = 1.437/1.36$	<b>100.80</b>
Depth to Freeboard Deck = <b>36.07</b>	$\Delta =$	Depth Correction ... .. <b>12.81</b>	
Summer freeboard = <b>7.52</b>	Tons per inch immersion at summer load water line	Deduction for superstructures ... .. <b>29.90</b>	
Moulded draught (d) = <b>28.55</b>	T =	Sheer correction ... .. <b>6.51</b>	
Keel allowance =	Deduction = $\frac{\Delta}{40 T}$ inches	Round of Beam correction ... .. <b>.04</b>	
Extreme draught =		Correction for Thickness of Deck amidships ... ..	
Deduction for Tropical freeboard and addition for =		Other corrections, scantlings, etc. ... ..	
Winter freeboard = $\frac{d}{4}$ inches =		<b>19.32</b> <b>29.94</b> <b>-10.62</b>	
Addition for Winter North Atlantic Freeboard (if required) =		Summer Freeboard = <b>90.18</b>	

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

7'-6 1/4" 2020  
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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.

Length of Trunk from Poop front bld to forefront bld = 329.21

$$\therefore \text{Eqiv length of Trunk} = 329.21 \times \frac{22.5}{34} = 217.86 \checkmark$$

Hatches 2' high

117.21  
/ 34.54  
329.21  
471.96

Trade of ship .....

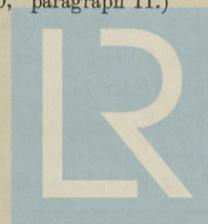
Names of sister ships .....

Builder's name and yard number .....

Owners .....

Fee £ : : .....

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950," paragraph 11.)



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