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Index. No. 36002  
(For London Office only).

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

No. 17978

Ship's Name <b>"ELMDENE"</b>	Official Number <b>167371</b>	Nationality and Port of Registry <b>BRITISH LONDON</b>	Gross Tonnage <b>4853.20</b>	Date of Build <b>1939-11</b>	Port of Survey <b>West Hartlepool.</b>
Moulded Dimensions: Length <b>406'0" BP</b> Breadth <b>56'0"</b> Depth <b>36'4 1/2" to shell deck</b> <b>To CE OF RUDDER STOCK } 406'6 1/4"</b> <b>27'10 1/2" to Freeboard "</b>				Date of Survey <b>Whitby Building Oct. 1939.</b>	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>11633</b> tons				Surveyor's Signature <b>W. J. C. A. S.</b>	
Coefficient of fineness for use with Tables <b>.748</b> ✓				Particulars of Classification <b>+100 A.1. with Freeboard.</b>	

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... <b>27'8 7/8"</b>	(a) Where D is greater than Table depth (D - Table depth) R = <b>(27.91 - 27.10) 3 = +243</b> ✓	Moulded Breadth (B) <b>66.0</b>
Stringer plate <b>40"</b> ... <b>.033</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>81</b>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>13.44</b>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>13 1/2"</b>
Depth for Freeboard (D) = <b>27.908</b>		Difference <b>Excess = .06</b>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.06}{4} \times .0056 = \text{Nil.}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <i>To CE OF RUDDER STOCK</i>	<b>23.40</b> ✓	<b>23.40</b>	<b>7'6"</b>		<b>23.40</b>
" overhang ...					
R.Q.D. enclosed					
" overhang					
Bridge enclosed ...	<b>378.62</b> ✓	<b>378.62</b>	<b>8'6"/14'8"</b>		<b>378.62</b>
" overhang aft					
" overhang forward					
F'cle enclosed ...					
" overhang					
Trunk of <del>UPPER F'CLE</del>	<b>33.876</b>		<b>7'0"</b>		
" forward ...					
Tonnage opening aft	<b>4.50</b>	<b>2.25</b>	<b>11'2 1/2"</b>		<b>2.25</b>
" " forward					
Total ...	<b>406.52</b>	<b>404.27</b>			<b>404.27</b>

Standard Height of Superstructure	<b>7'50"</b> ✓
" " R.Q.D.	✓
Deduction for complete superstructure	<b>42.00</b> ✓
Percentage covered $\frac{S}{L} =$	<b>100.00</b> ✓
" " $\frac{S_1}{L} =$	<b>99.44</b>
" " $\frac{E}{L} =$	<b>99.44</b>
Percentage from Table, Line A.	<b>99.31</b> ✓
(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 =	<b>42.00 x .9931 = 41.71</b> ✓

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<b>50.65</b>	1		<b>50.65</b>	<b>51.0</b>	<b>63.00</b>	1		<b>63.00</b>
1/4 L from A.P. ...	<b>22.54</b>	4		<b>90.16</b>	<b>22.9</b>	<b>28.04</b>	4		<b>112.16</b>
2/4 L " ...	<b>5.57</b>	2		<b>11.14</b>	<b>5.7</b>	<b>6.93</b>	2		<b>13.86</b>
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	<b>11.14</b>	2		<b>22.28</b>	<b>11.5</b>	<b>12.54</b>	2		<b>25.08</b>
1/4 L " ...	<b>45.08</b>	4		<b>180.32</b>	<b>45.7</b>	<b>50.73</b>	4		<b>202.92</b>
F.P. ...	<b>101.30</b>	1		<b>101.30</b>	<b>102.0</b>	<b>114.00</b>	1		<b>114.00</b>
Total ...				<b>455.85</b>	<b>+12"</b>				<b>531.02</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{75.17}{18} \times .25 = -1.04$

If limited on account of midship superstructure.

Mean actual sheer aft = **Excess**  
Mean standard sheer aft = **Excess**

Mean actual sheer forward = **Excess**  
Mean standard sheer forward = **Excess**

Length of enclosed superstructure forward of amidships = **65.5** ✓  
aft of " = **65.5** ✓

Deduction for Tropical Freeboard.  
Addition for Winter and Winter North Atlantic Freeboard.

Ft.  
Depth to Freeboard Deck = **27.91**  
Summer freeboard = **3.08** ✓  
Moulded draught (d) = **24.83** ✓

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = **6.21 = 6 1/4"** ✓

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line  
 $\Delta =$  **12161 tons at 24'10" mid draft**  
Tons per inch immersion at summer load water line  
 $T =$  **45.74**

Deduction =  $\frac{\Delta}{40T}$  inches  
**= 6.65"**  
**= 6 3/4"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{748+68}{136} = \frac{1428}{136}$

Depth Correction ... **2.43**  
Deduction for superstructures ... **41.71**  
Sheer correction ... **1.04**  
Round of Beam correction ...  
Correction for Thickness of Deck amidships ...  
Other corrections, scantlings, etc. ...

**2.43 42.75 - 40.32**  
Summer Freeboard = **36.88** ✓

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

Tropical Fresh Water Line above Centre of Disc ... **13"**  
Fresh Water Line ... **6 3/4"**  
Tropical Line ... **6 1/4"**  
Winter Line below ... **6 1/4"**  
Winter North Atlantic Line ...

Tropical Fresh Water Freeboard ... **2'0"**  
Fresh Water ... **2'6 1/4"**  
Tropical ... **2'6 3/4"**  
Winter ... **3'7 1/4"**  
Winter North Atlantic ...

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to Crail  
30.10.39.

Names of sister ships.

Builder's name and yard number Wm Gray & Co Ltd 1095

Owners Elmdene Shipping Co Ltd. (Gene Shipping Co Ltd)

Fee £ 15-0-0.

Clndene.



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway	N <sup>o</sup> 1	N <sup>o</sup> 2	N <sup>o</sup> 3	2 deep tank hatchways	N <sup>o</sup> 4	N <sup>o</sup> 5	20 Framing Hatches	2 deep tank small hatches	
Dimensions of Hatchway	29'3" x 22'0"	35'0" x 22'0"	20'0" x 22'0"	15'0" x 10'0"	30'0" x 22'0"	30'0" x 22'0"	2'3" x 2'0"	2'0" x 2'0"	
COAMINGS	Height above Deck ... 9 x 3 1/2 x .50 Thickness ... B.A. Sides ... Coaming Ends ... Coaming Stiffeners ... Brackets, Stays ...	Height above Deck ... 9 x 3 1/2 x .50 Thickness ... B.A. Sides ... Coaming Ends ... Coaming Stiffeners ... Brackets, Stays ...	Height above Deck ... 11 x 3 1/2 x .42 Thickness ... 9 x 3 1/2 x .42 Sides ... Coaming Ends ... Coaming Stiffeners ... Brackets, Stays ...	Height above Deck ... 12 x 3 1/2 x 3 1/2 x Thickness ... 150 L Sides ... Coaming Ends ... Coaming Stiffeners ... Brackets, Stays ...	Height above Deck ... 9 x 3 1/2 x .50 Thickness ... B.A. Sides ... Coaming Ends ... Coaming Stiffeners ... Brackets, Stays ...	Height above Deck ... 9 x 3 1/2 x .50 Thickness ... B.A. Sides ... Coaming Ends ... Coaming Stiffeners ... Brackets, Stays ...	Height above Deck ... 9 x 3 1/2 x .40 Thickness ... B.A. Sides ... Coaming Ends ... Coaming Stiffeners ... Brackets, Stays ...	Height above Deck ... 12 x 3 1/2 x 3 1/2 x Thickness ... 150 L Sides ... Coaming Ends ... Coaming Stiffeners ... Brackets, Stays ...	
HATCH BEAMS	Number ... 5 Spacing ... 4'10 1/2" Scantling and Sketch ... Bearing Surface ... 3 1/2"	Number ... 7 Spacing ... 4'7 1/2" Scantling and Sketch ... Bearing Surface ... 3 1/2"	Number ... 4 Spacing ... 3'7 1/2" / 4'8 1/2" Scantling and Sketch ... Bearing Surface ... 5"	Number ... 2 Spacing ... 5'0" Scantling and Sketch ... Bearing Surface ... 3 1/2"	Number ... 5 Spacing ... 5'0" Scantling and Sketch ... Bearing Surface ... 3 1/2"	Number ... 5 Spacing ... 5'0" Scantling and Sketch ... Bearing Surface ... 3 1/2"	Number ... Spacing ... Scantling and Sketch ... Bearing Surface ...	Number ... Spacing ... Scantling and Sketch ... Bearing Surface ...	
FORE AND AFTERS	Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ...	Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ...	Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ...	Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ... 2 1/2" wood covers ALSO	Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ... wood 2 3/4"	Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ... wood 3"	Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ... wood 2 1/2"	Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ... 5" T. ballist cover	
HATCH COVERS	Material ... wood Thickness ... 3 1/4" How fitted ... F+A Bearing Surface ... 3"	Material ... wood Thickness ... 2 3/4" How fitted ... F+A Bearing Surface ... 3"	Material ... wood Thickness ... 2 1/2" How fitted ... F+A Bearing Surface ... 3"	Material ... 40 steel stiffened Thickness ... W.T. ballist cover How fitted ... 3" not bent Bearing Surface ... 3"	Material ... wood Thickness ... 2 3/4" How fitted ... F+A Bearing Surface ... 3"	Material ... wood Thickness ... 3" How fitted ... F+A Bearing Surface ... 3"	Material ... wood Thickness ... 2 1/2" How fitted ... Secured by iron nuts + bolts + forming material Bearing Surface ...	Material ... 5" T. ballist cover Thickness ... How fitted ... Bearing Surface ...	
Spacing of Cleats	24"	24"	24"	24"	24"	24"	24"	24"	
Number of Tarpaulins	1	1	1	1	1	1	1	1	
*Are wood fore and afters steel shod at all bearing surfaces? <span style="float: right;">yes ✓</span> Are battens and wedges efficient and in good condition? <span style="float: right;">yes ✓</span> Are tarpaulins in good condition and in accordance with rule requirements? <span style="float: right;">✓</span> Are lashings provided in accordance with rule requirements? <span style="float: right;">✓</span>									

note in red from approved plans. 7.11.39

Particulars of any special features:—

Endorsement at first survey and at surveys for renewal of Certificate:—

The fittings and appliances are in accordance with the particulars shown on this form (or as now modified) and are in good condition.

Logan 30.10.39



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