

Rpt. C11.
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Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

10.904

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <i>Belfast.</i>
having <i>R.Q.D. Bridge & Forecastle.</i>					Date of Survey <i>July 21st 1932.</i>
(Type of Superstructures.)					Name of Surveyor <i>John K. Williams.</i>
Ship's Name <i>EMPIRE EYELEEN</i>	Nationality and Port of Registry <i>British Belfast</i>	Official Number <i>142500.</i>	Gross Tonnage <i>502</i>	Date of Build <i>1920-8.</i>	Particulars of Classification <i>+100A1.</i>
Moulded Dimensions: Length <i>160.25 ft.</i> Breadth <i>25 ft.</i> Depth <i>11'-8"</i>					<i>S.S. Bel No. 2-29</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>238</i> tons					
Coefficient of fineness for use with Tables <i>.738</i>					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>11.67</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(11.71 - 10.68) 1.232 = + 1.27</i>	Moulded Breadth (B) <i>25</i>
Stringer plate <i>3/8"</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{6.00}{50}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = $\frac{6.25}{25}$
Depth for Freeboard (D) = <i>11.71</i>		Difference
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.25}{4} (1 - \frac{.7968}{1}) = -.01$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Roop enclosed	<i>✓</i>					Standard Height of Superstructure <i>6'</i>
" overhang	<i>✓</i>					" " R.Q.D. <i>3.402'</i>
R.Q.D. enclosed	<i>95.44'</i>	<i>95.44'</i>	<i>3'-6"</i>		<i>95.44'</i>	Deduction for complete superstructure <i>22.025'</i>
" overhang	<i>none.</i>					Percentage covered $\frac{S}{L} = \frac{79.92\%}{79.92\%}$
Bridge enclosed	<i>9'-0"</i>	<i>9.00'</i>	<i>7'-3"</i>		<i>9.00'</i>	" " $\frac{S_1}{L} = \frac{79.46\%}{79.46\%}$
" overhang aft	<i>none.</i>					" " $\frac{E}{L} = \frac{79.46\%}{79.46\%}$
" overhang forward	<i>none.</i>					Percentage from Table, Line A.
File enclosed	<i>21'-3"</i>	<i>22.14'</i>	<i>7'-3"</i>		<i>22.14'</i>	(corrected for absence of forecastle (if required))
" overhang	<i>2'-5"</i>	<i>.76'</i>			<i>.76'</i>	Percentage from Table, Line B. <i>74.63%</i>
Trunk aft	<i>1.53'</i>					(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than .2L (if required)
Tonnage opening aft						Deduction = $22.025 \times .7463 = 16.44$
" " forward						
Total	<i>128.11'</i>	<i>127.34'</i>			<i>127.34'</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<i>49.4'</i>	<i>1</i>		<i>26.02</i>	<i>48.00</i>	<i>49.18</i>	<i>1</i>		<i>49.18</i>	Mean actual sheer aft = <i>Excess</i>
1/4 L from A.P.	<i>22.5'</i>	<i>4</i>		<i>41.32</i>	<i>21.33</i>	<i>21.89</i>	<i>4</i>		<i>87.56</i>	Mean actual sheer forward = <i>Excess</i>
1/2 L "	<i>6.4'</i>	<i>2</i>		<i>5.72</i>	<i>5.33</i>	<i>5.41</i>	<i>2</i>		<i>10.82</i>	Mean standard sheer aft = <i>Excess</i>
Amidships	<i>—</i>	<i>4</i>					<i>4</i>			Mean standard sheer forward = <i>Excess</i>
3/4 L from F.P.	<i>9"</i>	<i>2</i>		<i>11.46</i>	<i>7.80</i>	<i>7.80</i>	<i>2</i>		<i>15.60</i>	Length of enclosed superstructure forward of amidships = <i>.15</i>
1/4 L "	<i>32.5'</i>	<i>4</i>		<i>92.64</i>	<i>31.21</i>	<i>31.21</i>	<i>4</i>		<i>124.84</i>	" " aft of " = <i>.50</i>
F.P.	<i>72"</i>	<i>1</i>		<i>52.05</i>	<i>70.00</i>	<i>70.00</i>	<i>1</i>		<i>70.00</i>	
Total				<i>234.21</i>					<i>358.00</i>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{123.79}{18} \left(.75 - \frac{3996}{18} \right) = -2.41$

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.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.738 + .680}{1.36} = \frac{1.418}{1.36}$
Depth to Freeboard Deck = <i>15.21</i> Ft.	$\Delta = 1006$	Depth Correction <i>1.27</i>
Summer freeboard = <i>3.67</i>	Tons per inch immersion at summer load water line	Deduction for superstructures <i>16.44</i>
Moulded draught (d) = <i>11.54</i>	T = <i>8.1</i>	Sheer correction <i>2.41</i>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $2.82 = 3"$	Deduction = $\frac{\Delta}{40T}$ inches = $\frac{1006}{40 \times 8.1} = 3.1$	Round of Beam correction <i>.01</i>
Addition for Winter North Atlantic Freeboard (if required) = <i>+2</i>	= <i>3"</i>	Correction for Thickness of Deck amidships <i>42.00</i>
		Other corrections, <i>RAISED QUARTER DECK, etc.</i> <i>42.00</i>
		Summer Freeboard = <i>16.93</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>3'</i>	Tropical Fresh Water Freeboard <i>3-5</i>
Fresh Water Line " " <i>3'</i>	Fresh Water " " <i>3-5</i>
Tropical Line " " <i>—</i>	Tropical " " <i>3-5</i>
Winter Line below " " <i>3'</i>	Winter " " <i>3-5</i>
Winter North Atlantic Line " " <i>5'</i>	Winter North Atlantic " " <i>3-5</i>

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28 JUL 1932

MARKING FORM
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Evelyn

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways :—

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—

Bridge
R. Q. D.

Bars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

Seaway Cargo and Coaling Ports :—

Particulars of Scuppers and Sanitary Discharge Pipes :—

Mo. scuppers or sanitary discharges ^{from spaces below} main or RQ decks or ^{scuppers} from enclosed superstructures.

1 sanitary discharge from steel house within forecabin. Discharge overboard below main deck.

Particulars of Side Scuttles:—

Soucasalle 3 each side. Dead lights fitted.
2 each side below main deck in peak space. Fitted with dead lights.
Bridge. 1 each side. No dead lights fitted.

Particulars of Guard Rails :—

Towncastle ok. 34" high. 4'-4" spaced stanchions, 2 rails.
Bridge. Steel bulwark 33" high.

Particulars of Gangways, Lifelines, etc. :—

Lifeline capable of being fitted on either side provided
for fore well.

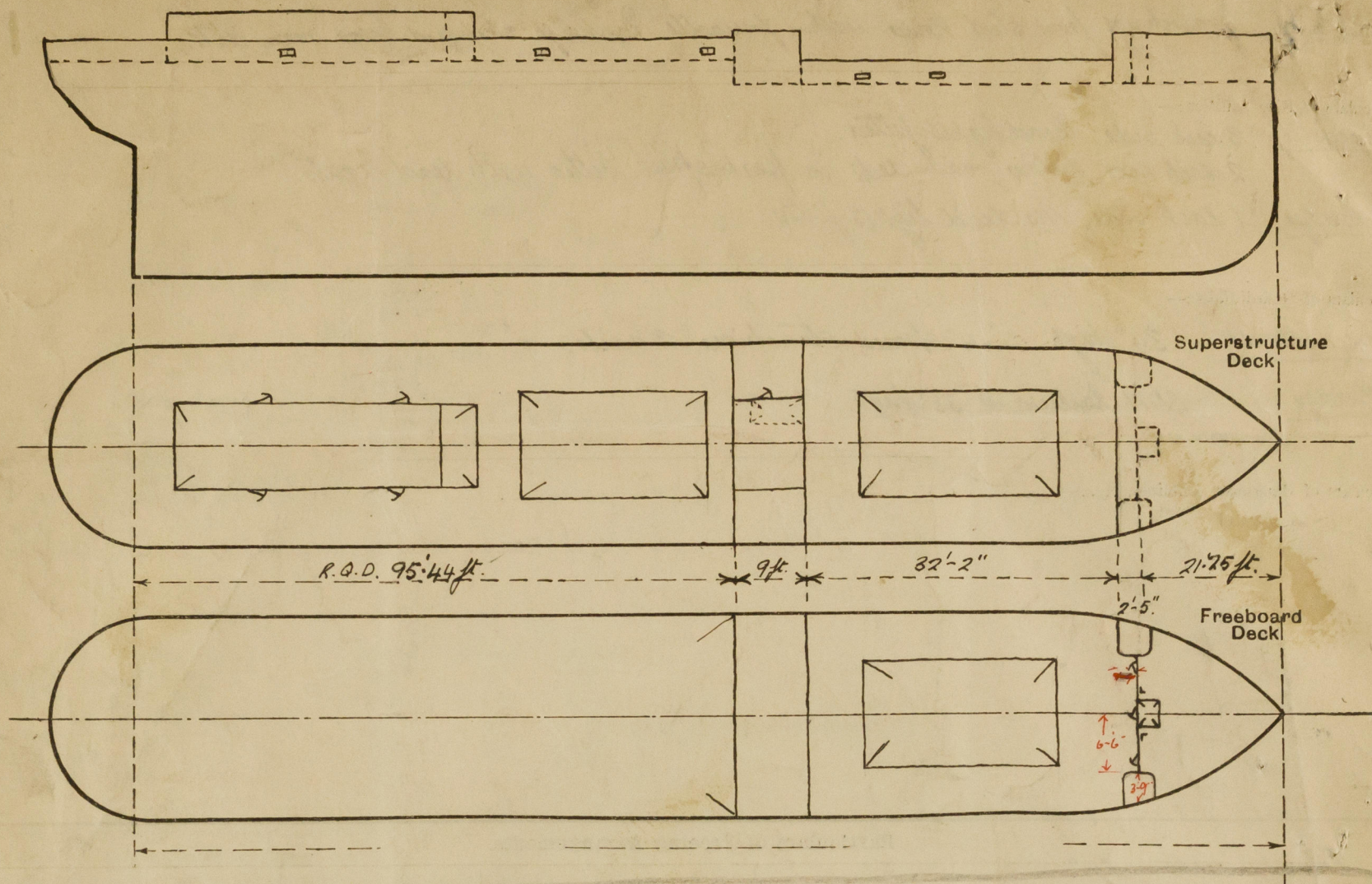
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead ...	$\frac{1}{4}$ "	single plate	stiffened by deep brackets on hold side + brackets in way of mast in cabin + intermediate angles. the panneling in cabin was not removed & angle sizes could not be noted.			none	✓	✓
Bridge, After Bulkhead	$\frac{1}{4}$ "	"						
Bridge, Forward Bulkhead	$\frac{3}{8}$ "	$\frac{1}{4}$ "	6x3x $\frac{3}{8}$ " BA.	30"	bracketed top & legs to support casings	none bottom	✓	✓
Forecastle Bulkhead	$\frac{1}{4}$ "	$\frac{1}{4}$ "	See sketch on back page.			$\frac{3}{4}$ " 5' x 24"	17"	✓
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	$\frac{5}{16}$ "	$\frac{1}{4}$ "	3x2 $\frac{1}{2}$ x $\frac{3}{8}$ " ANGLES.	24"	brackets top. none bottom.	2 each side. 4'-5" x 22"	22"	7'-0"
Exposed Machinery Casings on Super-structure Decks ...	✓							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships ...	✓							

Particulars of Closing Appliances (state if capable of being manipulated from both sides)

Poop Bulkhead	...	...	✓
Raised Quarter Deck Bulkhead	...	...	✓	} no openings
Bridge, After Bulkhead	...	...	✓
Bridge, Forward Bulkhead	...	...	✓	no openings
Forecastle Bulkhead	...	...	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...	...	✓	Teakwood panelled door 1½" thick 1" thick panels. Manipulate both sides.
Exposed Machinery Casings on Superstructure Decks	...	...	✓	Single plate steel door, ¼" thick. No fastenings effective from both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	
Deckhouses on Flush Deck Ships	✓	

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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



Vessel examined in dry dock.

State any special features in the construction of the ship:—

gun ports ASD.
 $23.67 - \frac{(13 \times 2.42)}{20.5}$
 $= 23.67 - 1.58$
 $= 22.14$
overhang 1.53

Builder's name and yard number.

Names of sister ships.

Owners.

Fee £ 5 : 2 : 0

Received by me



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