

Reg. 9 attached.

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CARDIFF, 51035.

30 MAY '35 33823  
Index No.  
(For London Office only.)

Rpt. C.11.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, <del>Sailing Ship, Tug</del> having <u>FLUSH DECK.</u>					Port of Survey <u>PENARTH.</u>
(Type of Superstructures.)					Date of Survey <u>29-5-35.</u>
Ship's Name <u>"THE EARL"</u>	Nationality and Port of Registry <u>BRITISH.</u> <u>CARDIFF.</u>	Official Number <u>162090</u>	Gross Tonnage <u>149.</u>	Date of Build <u>1931.</u> <u>3Mo.</u>	Name of Surveyor <u>John Sheetham</u>
Moulded Dimensions: Length <u>90.00</u> Breadth <u>24.00</u> Depth <u>12.00</u>					Particulars of Classification <u>+100 A1.</u> <u>FOR TOWING SERVICES.</u>
Moulded displacement at moulded draught = 85 per cent. of moulded depth ) tons					
Coefficient of fineness for use with Tables <u>not available.</u>					

<b>Depth for Freeboard (D)</b> Moulded depth ... .. <u>12.00</u> Stringer plate ... <u>.30</u> ... .. <u>.025</u> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) = .21 \times \frac{34.83}{90.00} = .08$ Depth for Freeboard (D) = <u>12.10</u>	<b>Depth correction</b> (a) Where D is greater than Table depth $\frac{6}{10}$ (D-Table depth) R = $(12.10 - 6.00) \cdot 692$ $= + 4.22''$ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = $\checkmark$ If restricted by superstructures $\checkmark$	<b>Round of Beam correction</b> Moulded Breadth (B) <u>24.00</u> Standard Round of Beam = $\frac{B \times 12}{50} = \frac{5.76}{50} = 5.76''$ Ship's Round of Beam = <u>6''</u> Difference <u>Excess</u> <u>.24''</u> Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.24}{4} = -.06''$
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### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ... ..						Standard Height of Superstructure
„ overhang ... ..						„ „ R.Q.D.
R.Q.D. enclosed ... ..						Deduction for complete superstructure
„ overhang ... ..						Percentage covered $\frac{S}{L} =$
Bridge enclosed ... ..						„ „ $\frac{S_1}{L} =$ } <u>Flush</u>
„ overhang aft ... ..						„ „ $\frac{E}{L} =$ } <u>decks.</u>
„ overhang forward ... ..						Percentage from Table, Line A.
F'cle enclosed ... ..						(corrected for absence of forecastle (if required))
„ overhang ... ..						Percentage from Table, Line B.
Trunk aft ... ..						(corrected for absence of forecastle (if required))
„ forward ... ..						Interpolation for bridge less than .2L (if required)
Tonnage opening aft ... ..						Deduction = <u>Nil.</u>
„ „ forward ... ..						
Total ... ..						

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ... ..	19.00	1		19.00	30.00	19.00	1		19.00	Mean actual sheer aft = <u>Excess</u>
$\frac{1}{8}$ L from A.P. ... ..	8.45	4		33.80	13.43	8.45	4		33.80	Mean actual sheer forward = <u>Deficient</u>
$\frac{2}{8}$ L „ ... ..	2.09	2		4.18	3.35	2.09	2		4.18	Mean standard sheer forward
Amidships ... ..	-	4		-	-	-	4		-	Length of enclosed superstructure forward of amidships =
$\frac{2}{8}$ L from F.P. ... ..	4.18	2		8.36	3.35	3.35	2		6.70	„ „ aft of „ =
$\frac{1}{8}$ L „ ... ..	16.91	4		67.64	13.43	13.43	4		53.72	
F.P. ... ..	38.00	1		38.00	36.00	36.00	1		36.00	
Total ... ..	171			170.98					153.40	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{17.58}{18} (.75) = + .73''$$

If limited on account of midship superstructure.

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

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Ft. Depth to Freeboard Deck = Summer freeboard = Moulded draught (d) = Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = Addition for Winter North Atlantic Freeboard (if required) =	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line T = Deduction = $\frac{\Delta}{40T}$ inches =	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) Correction for coefficient Depth Correction ... .. Deduction for superstructures ... .. Sheer correction ... .. Round of Beam correction ... .. Correction for Thickness of Deck amidships ... .. Other corrections, scantlings, etc. ... .. Summer Freeboard = <u>14.28</u>
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### SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc ... ..	<u>3<math>\frac{1}{2}</math>''</u>	Tropical Fresh Water Freeboard ... ..	<u>0'-10"</u>
Fresh Water Line „ „ ... ..	<u>2<math>\frac{1}{2}</math>''</u>	Fresh Water „ „ ... ..	<u>0'-11"</u>
Tropical Line „ „ ... ..	<u>1</u>	Tropical „ „ ... ..	<u>1'-0<math>\frac{1}{2}</math>''</u>
Winter Line below „ „ ... ..	<u>1</u>	Winter „ „ ... ..	<u>1'-2<math>\frac{1}{2}</math>''</u>
Winter North Atlantic Line „ „ ... ..	<u>3</u>	Winter North Atlantic „ „ ... ..	<u>1'-4<math>\frac{1}{2}</math>''</u>



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	Sides	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...
HATCH BEAMS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
FORE AND AFTERS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...
	Scantling* and Sketch	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...
<p>*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> Yes</p> <p>Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Yes</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Yes</p> <p>Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/> Yes</p>									

Particulars of fiddle, funnel and ventilator coamings:—

Stokehold gratings covered by strong steel hinged covers. ✓  
 Fiddle, funnel and Ventilator Coamings in efficient condition. ✓  
 Engine Skylights of steel, strongly constructed. ✓

Particulars of Flush Bunker Scuttles:—

None. ✓

Particulars of Companionways:—

1. Combined Companion and Skylight to After Accommodation. ✓  
 of 1 1/4" Teak with steel coamings, 5' 3" x 6' 0" wide x 4' 3" high. ✓  
 Teak doors and sliding cover 1 1/4" thick. Sill 2 1/2". ✓

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

On Fbd. DR. 1. Vent. 8 1/2" dia. 36" x 30 to forward accommodation. ✓  
 Constructed in accordance with rules, with wood plug and canvas cover. ✓

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

On Fbd. DR. 3. Cast. Iron, 2 1/4" dia, 6 1/2" high to mouth. To peak tanks and feed tanks. ✓  
 No closing appliances. provided

Particulars of Gangway Cargo and Coaling Ports:—

None. ✓





Particulars of Scuppers and Sanitary Discharge Pipes :— 3. Scuppers P. 45. through stringer angle.  
1. Soil pipe S. 40. with Stem Valve.

Particulars of Side Scuttles :— In Sides of Engine R. Casing.  
All of substantial construction, and fitted with deadlights.

Particulars of Guard Rails :— Steel bulwarks fore and aft 3'-0" high,  
efficiently constructed and supported.

Particulars of Gangways, Lifelines, etc. :—  
None.

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ... ..	Full length of vessel.	3'-0"	24" x 16"	3P. 3S.	7.98 sq ft	12.80
Forward Well ... ..	63.0					
State position of each freeing port ... .. { After Well. 1 forward, 1 amidships, 1 aft. Sills 7". (F. and A. position and height above deck edge) { Forward Well. Steel hinged shutters. State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :— Additional area where sheer is less than standard.						

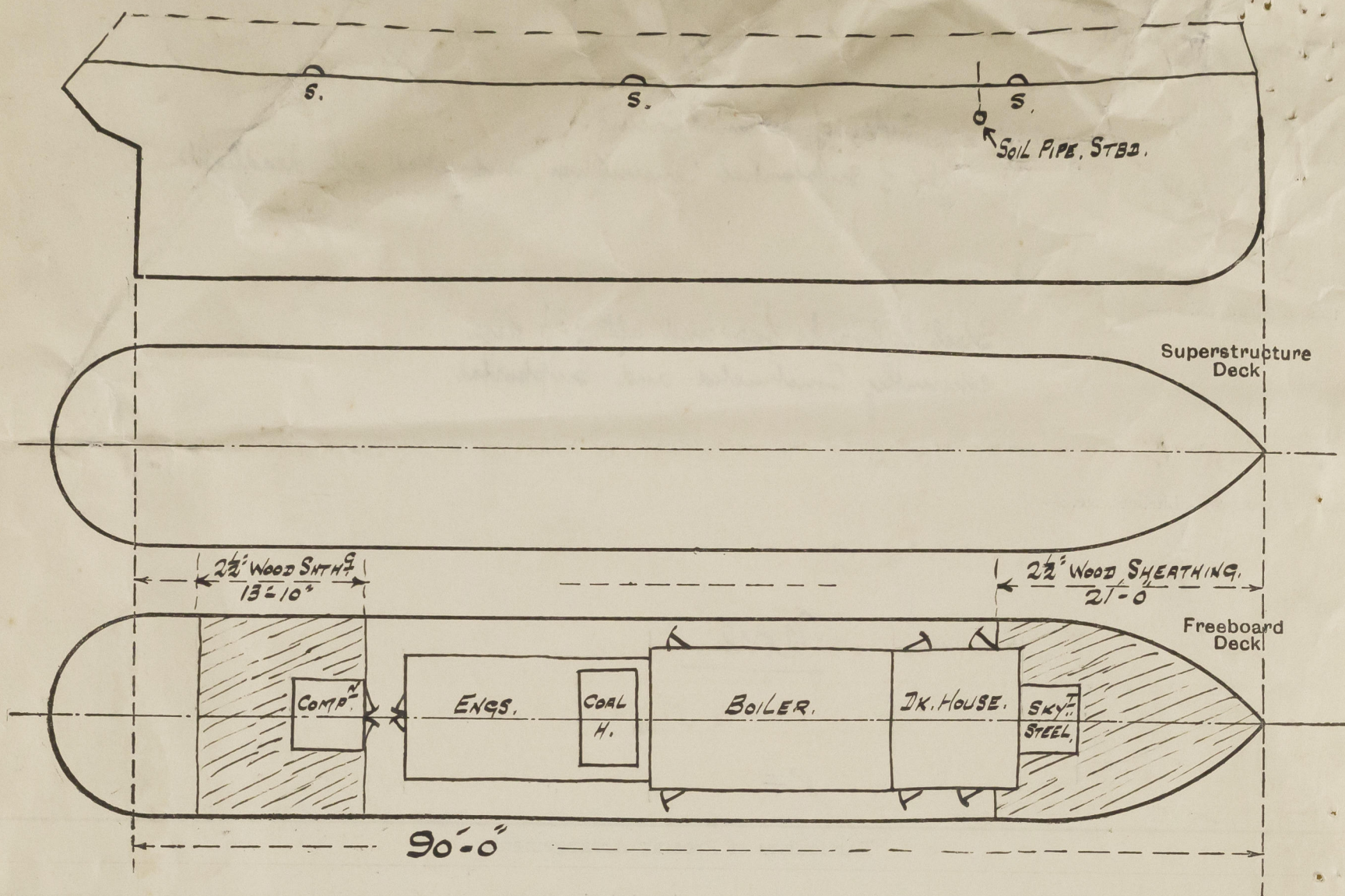
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ... ..								
Bridge, Forward Bulkhead ... ..								
Forecastle Bulkhead ... ..								
Trunk, Aft ... ..								
Trunk, Forward ... ..								
Exposed Machinery Casings on Free-board or Raised Quarter Deck ...	.30 ✓	.25 ✓	3 x 2 1/2 x 30 7	28"	Brackets at top	E.R. 44" 2'-3" x 22" B.R. 15" 5'-0" x 23"	17" 16"	E.R. 3'-6" B.R. 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 ...	.35 ✓	.30 ✓	3 x 2 1/2 x 35 7	30" + 24" S.H. 40"	None.	2P. 23" 5'-0" x 23"	15"	7'-0" high.

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead ... ..	
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ... ..	
Bridge, Forward Bulkhead ... ..	
Forecastle Bulkhead ... ..	
Exposed Machinery Casings on Free-board or Raised Quarter Deck ...	To Eng R. hinged doors 1/4" Teak Sliding Cover Steel. To B.R. hinged Steel doors. ✓ All worked both sides.
Exposed Machinery Casings on Super-structure Decks ... ..	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	
Deckhouses on Flush Deck Ships ...	Hinged Steel doors, worked both sides. ✓ 1 Teak door worked both sides. ✓



The Earl

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:—



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

Vessel measured on Pontoon Dock.  
Special Survey No. 1. in hand.

It is desired that the owners Assignment Letter  
be forwarded to the Marine Superintendent's Dept.  
Great Western Railway, Docks, Cardiff.

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Builder's name and yard number

Names of sister ships

Owners

Great Western Railway Co.

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