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Rpt. C.11.

Index. No. **34392**  
(For London Office only.)

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

18485

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Raised Quarter Deck & Focli

(Type of Superstructures.)

Ship's Name FRANCIS FLADGATE Nationality and Port of Registry UK London Official Number 163396 Gross Tonnage 2267.73 Date of Build 1933-10

Moulded Dimensions: Length 273.0 Breadth 40.9 Depth 21.0  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 4378 tons  
Coefficient of fineness for use with Tables 77175 772

Port of Survey Leith  
Date of Survey while building  
Name of Surveyor Frank Edwards  
Particulars of Classification T100A1

Depth for Freeboard (D) Moulded depth ... 21.0  
Stringer plate ... .03  
Sheathing on exposed deck  $T \left( \frac{L-S}{L} \right) =$  21.05  
Depth for Freeboard (D) = 21.03

Depth correction (a) Where D is greater than Table depth (D - Table depth) R = 21.03 - 18.20 = 2.83  
 $(2.83 \times 1.30) = 3.68$   
(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 5.98  
If restricted by superstructures NO

Round of Beam correction Moulded Breadth (B) 40.75  
Standard Round of Beam =  $\frac{B \times 12}{50} =$  9.78  
Ship's Round of Beam = 9.78  
Difference .03  
Restricted to  
Correction =  $\frac{\text{Diff}^a}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.03}{4} \times .2857 = .0021$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
„ overhang ...					
R.Q.D. enclosed ...	<u>167.86</u>	<u>167.86</u>	<u>5.6</u>		<u>167.86</u>
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
F'cle enclosed ...	<u>27.15</u>	<u>27.15</u>	<u>7.0</u>		<u>27.15</u>
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	<u>195.01</u>	<u>195.01</u>			<u>195.01</u>

Standard Height of Superstructure	<u>6.23</u>
„ „ R.Q.D.	<u>4.307</u>
Deduction for complete superstructure	<u>33.3</u>
Percentage covered $\frac{S}{L} =$	<u>71.423</u>
„ „ $\frac{S_1}{L} =$	„
„ „ $\frac{E}{L} =$	„
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<u>64.746.76</u>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = $33.3 \times 64.746 =$	<u>21.56</u>

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>37.3</u>	1		<u>37.3</u>	<u>29</u>	<u>43.32</u>	1		<u>43.32</u>
$\frac{1}{8}$ L from A.P. ...	<u>16.6</u>	4		<u>66.4</u>	<u>12.90</u>	<u>19.31</u>	4		<u>77.24</u>
$\frac{3}{8}$ L „ ...	<u>4.1</u>	2		<u>8.2</u>	<u>3.19</u>	<u>4.775</u>	2		<u>9.55</u>
Amidships ...	<u>0</u>	4		<u>0</u>	<u>0</u>	<u>0</u>	4		<u>0</u>
$\frac{5}{8}$ L from F.P. ...	<u>8.2</u>	2		<u>16.4</u>	<u>9.68</u>	<u>9.68</u>	2		<u>19.36</u>
$\frac{7}{8}$ L „ ...	<u>33.2</u>	4		<u>132.8</u>	<u>39.16</u>	<u>39.16</u>	4		<u>156.64</u>
F.P. ...	<u>74.6</u>	1		<u>74.6</u>	<u>88</u>	<u>88</u>	1		<u>88</u>
Total ...	<u>335.7</u>			<u>335.7</u>					<u>394.19</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( 75 - \frac{S}{2L} \right) = \frac{58.49}{18} \left( 75 - \frac{195.01}{546} \right) = 3.25 \times 393 = -1.275$

If limited on account of midship superstructure.

Actual Ht. of R.Q.D. = 5.50'  
Standard Ht. of R.Q.D. = 4.307'  
Excess = 1.193'

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

R.Q. Ft.  
Depth to Freeboard Deck = 26.55  
Summer freeboard = 7.40  
Moulded draught (d) = 19.15

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = 4.78Addition for Winter North Atlantic Freeboard (if required) = 2

Deduction for Fresh Water.

Displacement in salt water at summer load water line 19.34  
 $\Delta =$  4749.5  
Tons per inch immersion at summer load water line  
T = 22.12

Deduction =  $\frac{\Delta}{40T}$  inches = 5.78  
= 5.78

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $37.16 \times \frac{77175}{1.36} = \frac{1.452}{1.36}$ 

	+	-
Depth Correction ...	<u>5.98</u>	
Deduction for superstructures ...		<u>21.56</u>
Sheer correction ...		<u>1.27</u>
Round of Beam correction ...		
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. h.t. of R.Q. Deck ...	<u>66.00</u>	

Summer Freeboard = 88.82

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

Tropical Fresh Water Line above Centre of Disc ...	<u>10</u>	Tropical Fresh Water Freeboard ...	<u>6.64</u>
Fresh Water Line „ „ ...	<u>5.4</u>	Fresh Water „ „ ...	<u>6.11</u>
Tropical Line „ „ ...	<u>4.4</u>	Tropical „ „ ...	<u>7.0</u>
Winter Line below „ „ ...	<u>4.4</u>	Winter „ „ ...	<u>7.92</u>
Winter North Atlantic Line „ „ ...	<u>6.4</u>	Winter North Atlantic „ „ ...	<u>7.11</u>



## 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	N <sup>o</sup> 4	Escape Hatches			
Dimensions of Hatchway		36 x 27	36 x 27	36 x 27	36 x 27	2'0" x 2'0"	2'0" x 2'0"	2'0" x 2'0"	2'0" x 2'0"
COAMINGS	Height above Deck	54"	54"	57"	57"	2'6"	1'6"	2'0"	
	Thickness	44	44	44	44	44	36	36	
	Stiffeners	7 x 3 x 4	20	20	20				
	Brackets, Stays	Spaced 9'-0" apart							
HATCH BEAMS	Number	5	5	5	5				
	Spacing	6'-0"	6'-0"	6'-0"	6'-0"				
	Scantling and Sketch	6 x 3 1/2 x 48		6 x 3 1/2 x 48					
	Bearing Surface	Solid 1/2 round 3 1/2 x 1 1/4		Solid 1/2 round					
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
HATCH COVERS	Material	white pine				2 1/2"	2 1/2"	2 1/2"	
	Thickness	3"	3"	3"	3"	W.P.	W.P.	W.P.	
	How fitted	3" x 3 1/2"	3" x 3 1/2"	3" x 3 1/2"	3" x 3 1/2"	16"	14"	14"	
	Bearing Surface	24"	24"	24"	24"	2	2	2	
Spacing of Cleats		24"	24"	24"	24"				
Number of Tarpaulins		2	2	2	2				

\*Are wood fore and afters steel shod at all bearing surfaces? *yes*

Are battens and wedges efficient and in good condition? *yes*

Are tarpaulins in good condition and in accordance with rule requirements? *yes*

Are lashings provided in accordance with rule requirements? *yes*

Particulars of fiddley, funnel and ventilator coamings:—*Fiddley top of steel the openings have steel rod gratings with steel plate covers over same, hinged & secured with metal clips.*

The Engine Room skylight is of steel.

The opening at Coal Trunk 5'-9" x 2'-6" coaming 3" L. hatches 3" x P having 3" bearing surface, cleats 2 1/4" apart, bottom & tarpaulins supplied - the Fuel & Ventilator coamings are efficient -

Particulars of Flush Bunker Scuttles:—

none

Particulars of Companionways:— The companionway to accommodation aft is ~~within~~ <sup>deck house</sup> the engine casing, the opening in the casing 4'-8" x 2'-0", with 18" sill & closed with wood hinged door which can be manipulated from both sides.

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

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On Fore deck	2	②	7" dia	x 36"	above deck to cutthroat.
on Well deck	1	②	18" dia	x 36"	above deck to hold.
" R & D " "	2	②	18" dia	x 36"	above deck to hold.
" " " "	2	②	18" dia	x 30"	above deck to hold
" " " "	2	②	4" dia	x 30"	" " " bunks
" " " "	5	②	5" dia	x 30"	" " " after accommodation.

Wool covers and canvas covers are provided for all ventilator warming

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

on Fore Deck to Fore Peak:	- 1 @ 4" dia, 18" above ceek	(protected by spirtmisting)
on Upper Deck to No 1 DB Tank:	- 1 @ 3" dia, 6'-6" above ceek	(connected to under side of Fore D)
on RQD to No 1 DB Tank:	- 2 @ 3" dia, 2'-6" "	" (combined air & sound)
on " " No 2 " " " " " " " " " "	- 2 @ 3" dia, 2'-6" "	" " " " " "
on " " " " " " " " " " " " " "	- 2 @ 2 1/2" dia 2'-6" "	" " " " " "
on " " " " " " " " " " " " " "	- 1 @ 1 1/2" dia 2'-6" "	" " " " " "
In Hold Head Space No 2 DB Tank:	- 2 @ 3" dia.	
on RQD " " " " " " " " " " " " " "	- 2 @ 2 1/2" "	
on RQD " " " " " " " " " " " " " "	- 2 @ 2 1/2" "	
to after Beam Tank:	- 1 @ 3" " 2'-6" above ceek.	

Particulars of Gangway Cargo and Coaling Ports:—

Wood plugs are provided for all air pipes and holes are drilled at top of

Particulars of Gangway Cargo and Coaling Ports:—

Wood plugs are provided  
for all air pipes and  
holes are drilled at top of  
groove near hands. A.

work



### Particulars of Scuppers and Sanitary Discharge Pipes :—

### Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. :—

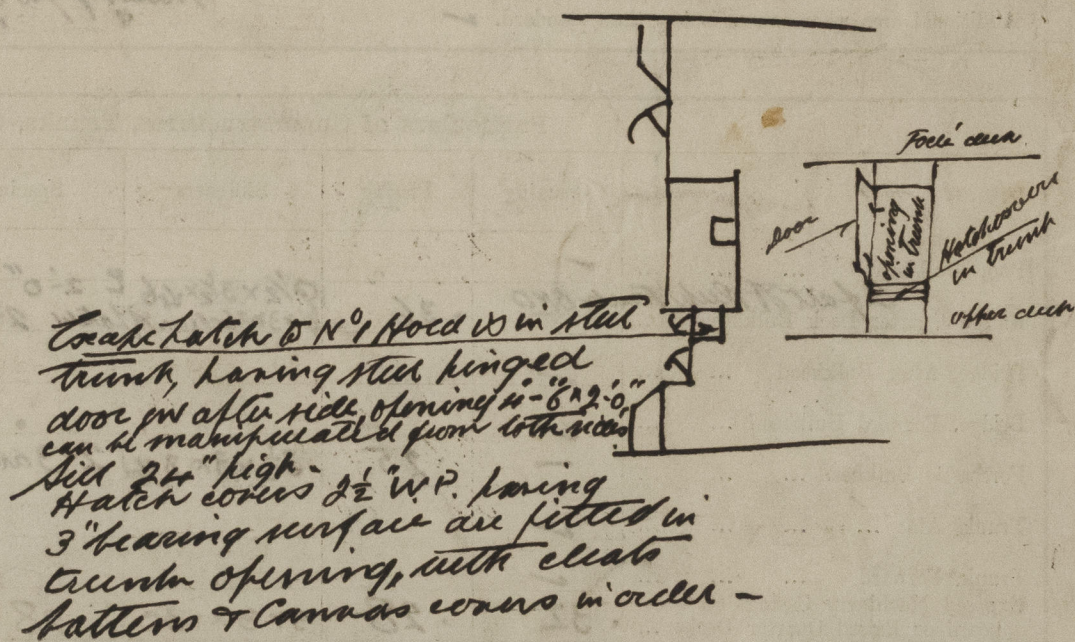
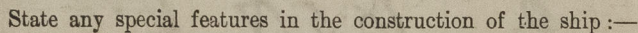
### Particulars of Freeing Arrangements.

Particulars of Superstructures, Trunks, Casings, Deckhouses.Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	...	...	...	✓
Raised Quarter Deck Bulkhead	...	...	...	<i>none</i>
Bridge, After Bulkhead	...	...	...	✓
Bridge, Forward Bulkhead	...	...	...	✓
Forecastle Bulkhead	...	...	...	<i>Wood doors can be manipulated from both sides.</i>
Exposed Machinery Casings on Free-board or Raised Quarter Decks	...	...	...	<i>Steel " " " "</i>
Exposed Machinery Casings on Superstructure Decks	...	...	...	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	...	—
Deckhouses on Flush Deck Ships	...	...	...	—



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:—



Builder's name and yard number Yarns The Burntisland S 13 C<sup>o</sup> h<sup>d</sup>

Names of sister ships ✓

## Owners

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