

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

CLASSIFICATION SOCIETY

THU. FEB. 13. 1913

RECOGNISED BY THE FRENCH GOVERNMENT DECREE OF THE 5TH SEPTEMBER, 1908.

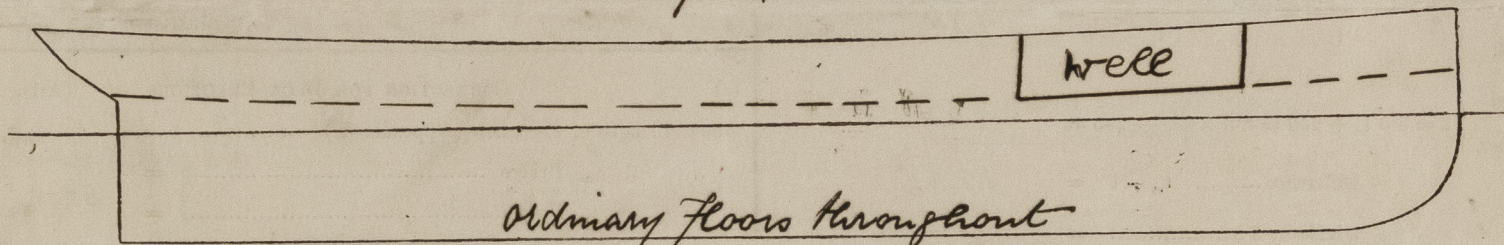
SURVEYS FOR FREEBOARD.—FRENCH VESSELS.

(All measurements to be given in the Metric system.)

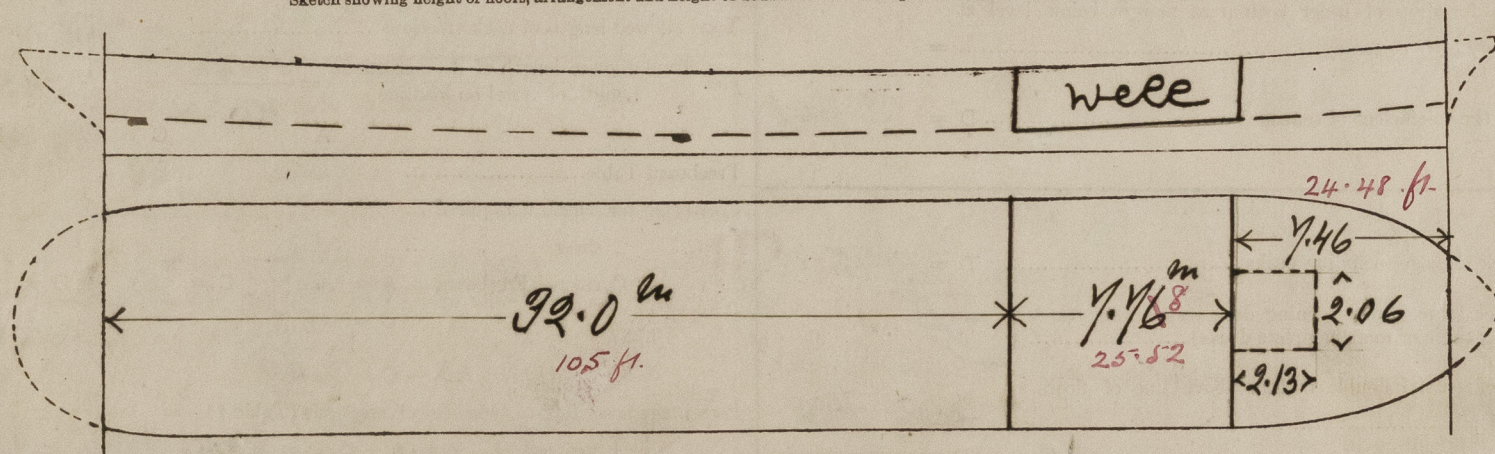
Ship's Name. SAINT MICHEL	Port of Registry. Bordeaux	Date of Build. 1913	Particulars of Classification. +100 A1	Port of Survey Hull
Number in Register Book <input checked="" type="checkbox"/>	Where Built. Alblaserdam		Contemplated	Date of Survey 11-2-1913
Owners Cie. Havale de l'Océanie			Name of Surveyor G. Demarest	
Date of request for assignment 10-2-13			Type of vessel Well deck - simple deck	
Duration of time assigned to the freeboard. (In the case of unclassified vessels.) <input checked="" type="checkbox"/>			Number of freeboard certificate <input checked="" type="checkbox"/>	

Particulars taken from Ship's Register.	LENGTH. 155.2' 47.246	BREADTH. 26.15' 7.96	DEPTH. 11.1' 3.352	Under Deck Tonnage, including Peaks 332.12
				Tonnage of 'tween decks if tonnage measured below second deck. <input checked="" type="checkbox"/>

Length of Ship on Loadline 155		PARTICULARS TAKEN ON BOARD.		Sheer of Upper or Spar deck. (Main deck in Awning deck vessels.)	
Moulded Breadth	25.98			At Stem	1.409 55.47
Extreme Breadth to outside of planking or plating	26.11			" $\frac{1}{8}$ length from Stem	.610 24.01
Breadth at Gunwale amidships	25.98			" $\frac{1}{8}$ " " Sternpost	.242 9.53
Moulded Depth to Upper deck	12.50			" Sternpost	.483 19.01
" " Main " (Spar and Awning deck vessels)				" front of Bridge (Well deck vessels)	.140 5.51
Rise of floor (Iron or Steel sailing ships only)				Fall in sheer abaft amidship	.025 .98
Drop of inner bottom at margin below level line at centre (if any)				Distance of lowest point of sheer abaft midship section	4.57 covered by Long Ref.
Rise " " " above " " "				Round of Upper deck beam	.152 5.98
Extent of ceiling fitted on inner bottom				" Main " " (Awning deck vessels.)	<input checked="" type="checkbox"/>
Height of 'Tween decks in Spar and Awning deck vessels) measured from top of beam to top of beam at side				Thickness of sparring or side ceiling	.038
Depth of Frame	5"				



Sketch showing height of floors, arrangement and height of double bottom arrangement of peaks and watertight bulkheads.



Sketch showing the arrangement of the deck erections and position of end and intermediate bulkheads in relation to the deck and sides of the superstructures, dimensions of hatchways, engine and boiler openings, tonnage openings in Shelter deck, deckhouses and continuous trunks and turrets. The sketch must also indicate the extent of wood sheathing on iron or steel deck.

Dimensions of the Deck erections.	Forecastle	Length = 7.46 24.48	Height = 2.134
	Bridge	" = 32.00 105 ft.	" = 2.134
	Poop	" = <input checked="" type="checkbox"/>	" = <input checked="" type="checkbox"/>
	Raised Quarter Deck	" = <input checked="" type="checkbox"/>	" = <input checked="" type="checkbox"/>
	Partial Awning Deck	" = <input checked="" type="checkbox"/>	" = <input checked="" type="checkbox"/>

DETAILS OF CONSTRUCTION OF THE END BULKHEADS OF THE DECK ERECTIONS.					
	Forecastle.	Bridge, fore end.	Bridge, after end.	Poop.	Raised Quarter Deck.
Thickness	Coaming..... 6 in	9 in	8 in		
	Other Plates..... 5 in	8 in	8 in		
Vertical Stiffeners	Scantlings..... 2.76 x 76 x 11 in	10 x 12 x 63 x 8 in	5 x 2 1/2 x 31 1/2		
	Spacing..... .610	.584 = 23" apart			
Spacing of Vertical Brackets	<input checked="" type="checkbox"/>	top & bottom			
Horizontal Stiffeners	Scantlings..... <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
	Number..... <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Remarks:— <input checked="" type="checkbox"/>					

CALCULATION OF

FREEBOARD.

PARTICULARS NECESSARY FOR USE WITH THE TABLES.

Moulded depth 3.81

Correction for iron uncovered deck if required..... ✓

„ „ rise of floor if required ✓

Moulded depth to be used with Tables c = 3.81

Breadth extreme to outside of planking or plating B = 4.96

In Ship.	Rule.
Thickness of planking =	
Depth of framing = 127	76
Thickness of ceiling or sparring =	
Total = 127 =	
..... = 76	
Difference..... d = 51	2 d = 102

Breadth for the co-efficient of tonnage (B - 2 d) = 4.858

Depth of Hold (Registered) c = 3.566

For Steamers add thickness of ceiling if necessary h = ✓

c + h =

Gradual mean shear at ends. $t_m = \frac{t_2 + t_3}{1.1} = \frac{610 + 242}{1.1} = 775$

Standard mean shear. $t = 8.3 L + 255 = 8.3 \times 44.24 + 255 = 647$

Difference..... $t_m - t = 128$

Divide by 3 = s = + 0.42

Correction for drop of inner bottom at margin below level at middle line if necessary ✓

Depth for the co-efficient of tonnage D = 3.608

Under deck tonnage including peaks T = 332.12

"Tween deck tonnage (for Awning deck vessels and vessels having three or more complete decks) T₀ =

Tonnage of partial double bottom above line of floors of rule depth T₁ = 4.5

Tonnage for the co-efficient of tonnage (T + T₁) = 332.62

Co-efficient of Tonnage

$$K = \frac{2.83 (T + T_1)}{L \times (B - 2d) \times D} = \frac{2.83 \times 332.62}{44.24 \times 4.858 \times 3.608} = 4.70$$

Correction for continuous double bottom if required K = 4.70

Freeboard in the Table = 549

CORRECTIONS TO THE

(a) CORRECTION FOR LENGTH. (Art. 19.)

Length of Ship on Loadline L = 44.24

Length in Table L₁ = 45.42

Difference L - L₁ = 1.52

Correction for 1 metre..... c = 4.5

Total Correction a = (L - L₁) c = 11.4

For Steamers having 1/10th length or more covered by deck erections 11.4 x .5 = 5.7

Net Correction a = + 6

(b) CORRECTION FOR SHEER. (Art. 20.)

(For vessels other than Spar and Awning deck.)

Vessels without superstructures or with bridge closed both ends.

Mean Gradual shear. $t_m = \frac{t_1 + t_2}{2} = \frac{1409 + 483}{2} = 946$

Not gradual. $t_m = \frac{t_2 + t_3}{1.1} = \frac{610 + 242}{1.1} = 775$

Sheer of Vessel.

Gradual shear. $t_m = \frac{t_2 + t_3}{2} = \frac{610 + 242}{2} = 426$

Not gradual. $t_m = \frac{t_2 + t_3}{1.1} = \frac{610 + 242}{1.1} = 775$

Vessels having forecastle only.

Vessels having Poop and forecastle with or without open bridge.

Standard mean shear $t = \begin{cases} 8.3 L + 255 = 8.3 \times 44.24 + 255 = 647 \\ 5.81 L + 175 = 5.81 \times 44.24 + 175 = 464 \\ 4.98 L + 150 = 4.98 \times 44.24 + 150 = 372 \end{cases}$

Difference..... $t_m - t = 128$

Correction..... $b = \frac{t_m - t}{4} = \frac{128}{4} = 32$

If limited, " " " " = 2 x 4 = 8

Fall in shear = x .5 = - 16

Correction..... b = - 32

(c) CORRECTION FOR DECK ERECTIONS. (Arts. 21 to 27.)

Allowed length of Forecastle (Appendix A.) = 7.46

" " " Bridge = 32.0

" " " Poop =

" " " Raised Quarter Deck =

Total allowed length of deck erections = 39.46

Total allowed length of deck erections = 39.46

Length of vessel on loadline = 44.24

p = $\frac{39.46}{44.24} = .895$

Freeboard Table..... 549

Correction for length if required ...

" shear " " = -32

Corrected Freeboard ... A = 517, C = 88, D =

A - C = 429

Percentage according to type of deck erections (Table 1) =

Correction Steamers ... c = (A - C) P = 429 x .77% = 330

Sailers ... c = D x P =

If Engine and Boiler openings not covered by Poop or Raised Quarter deck or strong iron or steel deckhouse (Arts. 24 & 25) x .6

Correction c =

Correction for Raised Quarter deck if Engine and Boiler openings not covered by Bridge (Art. 26) c =

Correction for scantlings of deck erections if necessary c =

Correction c = - 330

(d) CORRECTION FOR IRON UNCOVERED DECK. (Art. 28.)

Allowed length of deck erections = 39.46

Length on loadline = 44.24

Rule thickness of wood deck..... T = 89

" " " stringer plate... t = 10

T - t = 79

Correction d = (4 p - 1.80) (T - t) =

p (T - t) =

Correction d = - 79

(e) CORRECTION FOR ROUND OF BEAM. (Art. 29.)

Round of Beam B = 152

Normal round... B₁ = Breadth at gunwale amidst. = 7.92 = 165

Difference B - B₁ = d = 13

Percentage p (deck erections)..... = .835

Correction c = $\frac{d}{2} \times \frac{100 - p}{100} = \frac{13 \times 165}{2 \times 100} = + 10.7$

(f) CORRECTION FOR HEIGHT OF 'TWEEN DECK. (Art. 30.)

(For Spar deck vessels.)

Height of 'Tween decks h =

Rule (Ship B + C =

Numbers (With 'tween deck 2m.13 B + C = L x B x C =

Correction..... f =

(g) CORRECTION FOR AREA OF FREEING PORTS. (Art. 31.)

(For Well deck steamers and steamers less than 4m.50 moulded depth having Poop, Bridge, and Forecastle.)

Total area on each side = 418

Area per rule = 82.9

Correction..... g = 1 % moulded depth = + 38

(h) CORRECTION FOR NON-FITTING OF GANGWAY FOR CREW. (Art. 32.)

(In Well deck steamers and steamers less than 4m.50 moulded depth having Poop, Bridge, and Forecastle.)

Correction..... h = % moulded depth =

(i) CORRECTION FOR SCANTLINGS. (Art. 33.)

(For steam vessels.)

Freeboard. Table A corrected A =

" " " B " B =

" " " C " C =

Spar Deck Steamers. K =

Correction..... k = K (B - A) =

Awning Deck Steamers. Freeboard. Table C corrected C =

" " " B " B =

Height of 'Tween decks h =

K =

Correction..... i = K (h + C - B) =

(j) CORRECTION FOR CLASS. (Art. 34.)

Class of the vessel j =

(k) CORRECTION FOR SUMMER FREEBOARD. (Art. 35.)

Steamers without deck erections, Spar and Awning deck k =

Correction given in Table A..... a = 25

Steamers having deck erections. " " " C..... c = 51

Percentage p (deck erections) =

k = a + p (c - a) = 25 + .835 x 26 = 47

(l) CORRECTION FOR SUMMER FREEBOARD IN TROPICAL SEAS. (Art. 36.)

l = 2 k =

(m) CORRECTION FOR WINTER NORTH ATLANTIC FREEBOARD. (Art. 35.)

Steamers less, or equal to, 100m.50 in length m = .050

All sailing vessels m = .075

Well deck steamers, percentage p (deck erections) =

m (Table No. 7) =

(n) CORRECTION FOR FRESH WATER. (Art. 35.)

Moulded depth c = 3.810

Freeboard f = 1.06

c - f = 3.404

Correction n = .022 (c - f) = 81

TABULAR FREEBOARD.

(e) CORRECTION FOR ROUND OF BEAM. (Art. 29.)

Round of Beam B = 152

Normal round... B₁ = Breadth at gunwale amidst. = 7.92 = 165

Difference B - B₁ = d = 13

Percentage p (deck erections)..... = .835

Correction c = $\frac{d}{2} \times \frac{100 - p}{100} = \frac{13 \times 165}{2 \times 100} = + 10.7$

(f) CORRECTION FOR HEIGHT OF 'TWEEN DECK. (Art. 30.)

(For Spar deck vessels.)

Height of 'Tween decks h =

Rule (Ship B + C =

Numbers (With 'tween deck 2m.13 B + C = L x B x C =

Correction..... f =

(g) CORRECTION FOR AREA OF FREEING PORTS. (Art. 31.)

(For Well deck steamers and steamers less than 4m.50 moulded depth having Poop, Bridge, and Forecastle.)

Total area on each side = 418

Area per rule = 82.9

Correction..... g = 1 % moulded depth = + 38

(h) CORRECTION FOR NON-FITTING OF GANGWAY FOR CREW. (Art. 32.)

(In Well deck steamers and steamers less than 4m.50 moulded depth having Poop, Bridge, and Forecastle.)

Correction..... h = % moulded depth =

(i) CORRECTION FOR SCANTLINGS. (Art. 33.)

(For steam vessels.)

Freeboard. Table A corrected A =

" " " B " B =

" " " C " C =

Spar Deck Steamers. K =

Correction..... k = K (B - A) =

Awning Deck Steamers. Freeboard. Table C corrected C =

" " " B " B =

Height of 'Tween decks h =

K =

Correction..... i = K (h + C - B) =

(j) CORRECTION FOR CLASS. (Art. 34.)

Class of the vessel j =

(k) CORRECTION FOR SUMMER FREEBOARD. (Art. 35.)

Steamers without deck erections, Spar and Awning deck k =

Correction given in Table A..... a = 25

Steamers having deck erections. " " " C..... c = 51

Percentage p (deck erections) =

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(l) CORRECTION FOR SUMMER FREEBOARD IN TROPICAL SEAS. (Art. 36.)

l = 2 k =

(m) CORRECTION FOR WINTER NORTH ATLANTIC FREEBOARD. (Art. 35.)

Steamers less, or equal to, 100m.50 in length m = .050

All sailing vessels m = .075

Well deck steamers, percentage p (deck erections) =

m (Table No. 7) =

(n) CORRECTION FOR FRESH WATER. (Art. 35.)

Moulded depth c = 3.810

Freeboard f = 1.06

c - f = 3.404

Correction n = .022 (c - f) = 81

SUMMARY OF THE CALCULATION.

Winter Freeboard by the Tables 549

Correction for length a = 6

" " shear b = 32

" " deck erections c = 330

" " iron uncovered deck d = 79

" " round of beam e = 1

" " height of 'tween decks f =

" " deficiency of freeing port area g = 38

" " non-fitting of gangway for crew... h =

" " scantlings i =

" " class j =

Other corrections, if any =

Total..... = + 45 - 441

Net correction..... = 396

Winter Freeboard measured from the upper surface of the upper deck (and iron) = 153

Correction for Summer Freeboard k = 47

Summer Freeboard (centre of disc)..... = 106

Correction for Summer Freeboard in Tropical Seas l = 2k = 94

Summer Freeboard Tropical Seas = 59

Correction for Winter North Atlantic Freeboard m =

Winter North Atlantic Freeboard..... =

Correction for Summer Freeboard in Fresh Water n = 81

Summer Freeboard in Fresh Water = 25

Limitation of the Freeboard on account of openings in the vessel's sides. (Art. 36.)

Steel upper deck at side

Corresponding to Freeboards measured from steel bridge deck stringer plate

(This space for use in London Office only.)

It is submitted the above Freeboards merit approval.

14 Feb 1913.

Date of Committee's Minute 18th February, 1913.

The Freeboard marks have been placed on the vessel's sides at Hull on the 18th February, 1913.

Attestation signed by Lloyd's Register

Mr. Demaree, Hull, 20.2.13

W1336 01612

Well Deck Steamers and Steamers
less than 4m.50 Moulded Depth
having Poop, Bridge and Forecastle.

Length of Bulwarks in Well
Number and Dimensions of Freeing Ports each side
Total Area of Freeing Ports on each side
Breadth and Type of Gangway for Crew over Well
State if the Crew are Berthed in Bridge House or Forecastle

$7.46 = 25.52$
 $2 \times 1.610 \times .343 = .418 m^2$
 $(2.00 \times 1.5) = 3.00$
 4.500
along top of hatchway in forecastle.

Rpt. 11b.

PARTICULARS
TOP GALLANT
WITH TOP GALLANT

Number in Register

Registered dimensions from Ship's Register.

Length on LOADLINE.

CORRECTED DIMENSIONS.

Co-efficient of f
Any modification
[Para. 4 (a)]
Co-efficient as c

Sheer (Stem...
at (Sternpo

Sheer at $\frac{1}{2}$ of t
Gradual mean
Standard mean

§ If limited as

Rise in Sheer
from amidship
[Para. 18 (e)]

¶ Fall in Sheer
Para. 18 (d)
Length uncovered

Freeboard, Tal
Correction for

Freeboard by

Difference ...
Percentage as

Correction for
covered l
Allowance for

Forecastle....
Bridge House
+ Raised Qr.
Poop.....
Total

Length of Shi
Corresponding
(Para. 11, I
FREEBOARD

¶ If the frames,
of ceiling &
+ In vessels obta
ships the h
In flush-deck
post. In v
one eighth
m. 12. T.

DETAILS OF CONSTRUCTION OF THE WEATHER DECK HATCHWAYS.				
	No. 1.	No. 2.	No. 3.	No. 4.
Length and Breadth	17-11 x 12-0	19-8 1/2 x 12-0		
Height and Thickness of Coaming...	5.43 x 3.66	6.00 x 3.66		
Shifting Beams	.81 x .012	.81 x .011		
Number and Material..	1 steel	1 steel		
Scantlings	.010	.010		
Fore and Afters	1. Pitch Pine. 2	1. Pitch Pine. 2		
Number and Material..	165 x 2039	178 x 140		
Scantlings	.060	.054		
Thickness of Hatches				
Remarks:—	8 x 6 1/2 + 7 x 5 1/2	8 x 6 1/2 + 4 x 5 1/2		

Do all the Frames extend to the top height in the Poop? *Yes*
To what height do the Reverse Frames extend? *Across top of floors - to hoop in way of after hatch.*
Has the Poop ~~Raised Quarter Deck~~ an efficient Iron Bulkhead at the fore end? *Joined to bridge*
Give particulars of the means for closing the openings in Bulkhead *Yes*
Is the Poop ~~Raised Quarter Deck~~ connected with the Bridge House? *Yes*
Has the Bridge House an efficient Bulkhead at the fore end? *Yes*
Give particulars of the means for closing the openings in Bulkhead *No openings.*
Are bracket plates fitted at each end of the Stiffeners? *Yes*
Are hor'l. brackets fitted connecting Bridge Bulk'h'd. with Bulwarks? *Yes*
Has the Bridge House an efficient Iron Bulkhead at the after end? *Yes*
How are the openings closed? *Yes*
Is the Forecastle at least as high as the main or top-gallant rail? *Yes*
Are the Engine and Boiler openings covered by a Bridge, Poop, Raised Quarter Deck, or enclosed by a Strong Iron or Steel Deckhouse? *Yes*
If the openings are not so protected are the exposed parts of the Casings efficiently constructed? *Yes*
Give thickness of plating; scantlings and spacing of Stiffeners. *Yes*
What is the height of the exposed Casings? *Yes*
Are suitable means provided for closing all openings in them in bad weather? *Yes*
State vertical distance from top of deck at side amidships or above base line at top of keel to lower edge of lowest side scuttle. *None below main deck*
State if any cargo ports or scuppers through sides of vessel below Upper deck. *Yes*
State any special features in the construction of the Vessel. *Constructed in accordance with the approved plans as reported in Rotterdam Report No. 8244. A request form is forwarded herewith.*

SKETCHES.

Show by sketch, if necessary, details of construction of the means for closing the openings in the end bulkheads of the deck erections, also details of hatchways, engi and boiler casings, side scuttles, cargo ports, freeing ports, scuppers, &c. *Yes*

G. Demarest
Surveyor to Lloyd's Register of British and Foreign Shipping.



Fee £ New Vessel.

Received by me