

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 25 JUN 1932 3.
 Index. No.
 (For London Office only.)

10.880

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Poop, Bridge & Forecastle

(Type of Superstructures.)

Port of Survey Belfast

Date of Survey June 23rd 1932

Name of Surveyor Jas. Rennie

Particulars of Classification +100A1

Ship's Name "KING WILLIAM"

Nationality and Port of Registry British London

Official Number 160 516

Gross Tonnage 5284

Date of Build 30/1/48

Moulded Dimensions: Length 400' Breadth 54.5' Depth 29.62'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 12 280 tons

Coefficient of fineness for use with Tables .783

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <u>29.62'</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(29.66 - 26.67) 3 = 8.97</u>	Moulded Breadth (B) <u>54.5</u>
Stringer plate ... <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>13.08</u>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>13.5</u>
Depth for Freeboard (D) = <u>29.66</u>		Difference <u>.42</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>$\frac{.42}{4} \times 4875 = .05$</u>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)	
Poep enclosed ...	<u>22.66</u>	<u>22.66</u>	<u>8' 2"</u>		<u>22.66</u>	Standard Height of Superstructure <u>7.5</u>
" overhang ...						" " R.Q.D.
R.Q.D. enclosed ...						Deduction for complete superstructure <u>42</u>
" overhang ...						Percentage covered $\frac{S}{L} =$ <u>51.25</u>
Bridge enclosed...	<u>142.33</u>	<u>142.33</u>	<u>8' 6"</u>		<u>142.33</u>	" " $\frac{S_1}{L} =$ <u>51.25</u>
" overhang aft ...						" " $\frac{E}{L} =$ <u>51.25</u>
" overhang forward						Percentage from Table, Line A.
F'cle enclosed ...	<u>35'</u>	<u>35.00</u>	<u>8' 0"</u>		<u>35.00</u>	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B.
Trunk aft ...						(corrected for absence of forecastle (if required)) <u>37.25</u>
" forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = <u>42 x 37.25% = 15.65</u>
" forward						
Total ...	<u>204.99</u>	<u>204.99</u>			<u>204.99</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<u>50.00</u>	1		<u>50.00</u>	<u>55"</u>	<u>50.00</u>	1		<u>50.00</u>	Mean actual sheer aft = <u>Excess</u>
$\frac{1}{8}L$ from A.P. ...	<u>22.25</u>	4		<u>89.00</u>	<u>23.7</u>	<u>22.25</u>	4		<u>89.00</u>	Mean actual sheer forward = <u>Defic</u>
$\frac{3}{8}L$ " ...	<u>5.50</u>	2		<u>11.00</u>	<u>6.0</u>	<u>5.50</u>	2		<u>11.00</u>	Mean standard sheer forward
Amidships ...		4					4			Length of enclosed superstructure forward of amidships = <u>7.1L</u>
$\frac{5}{8}L$ from F.P. ...	<u>11.00</u>	2		<u>22.00</u>	<u>8.79</u>	<u>9.58</u>	2		<u>19.16</u>	" " aft of " = <u>7.1L</u>
$\frac{7}{8}L$ " ...	<u>44.50</u>	4		<u>178.00</u>	<u>38.3</u>	<u>38.31</u>	4		<u>153.24</u>	
F.P. ...	<u>100.00</u>	1		<u>100</u>	<u>91"</u>	<u>91.00</u>	1		<u>91.00</u>	
Total ...				<u>450.00</u>					<u>413.40</u>	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{36.60}{18} \left(.75 - \frac{2562}{20499} \right) = 1.00$$

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.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 29.66

Summer freeboard = 5.94

Moulded draught (d) = 23.72

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 5.936Addition for Winter North Atlantic Freeboard (if required) = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 11633

Tons per inch immersion at summer load water line

T = 45.4Deduction = $\frac{\Delta}{40T}$ inches= 6.42

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient .783 + .68136

Depth Correction ... 8.97

Deduction for superstructures ... 15.65

Sheer correction ... 1.00

Round of Beam correction05

Correction for Thickness of Deck amidships ... -

Other corrections, scantlings, etc. ... -

997 1570 - 5.73

Summer Freeboard = 71.17SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ... 12 1/2

Fresh Water Line " " ... 6 1/2

Tropical Line " " ... 6

Winter Line below " " ... 6

Tropical Fresh Water Freeboard ... 5-11 1/4

Fresh Water " " ... 4-10 3/4

Tropical " " ... 5-4 3/4

Winter " " ... 5-5 1/4

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
			Freeboard Deck			Fore Dk.		Bridge Dk.	Bridge Dk.	
Description of Hatchway	...	...	No 1	No 2, 4, 5	No 3	Deep Tank	Trimming Hatch	Fore Peak	No 3 Cargo	Galley Bunker
Dimensions of Hatchway	...	...	27' x 20'	30' 4" x 20'	14' x 18'	9' 4" x 9' 0"	8' 2" x 2' 2" 2' 2" x 2' 3"	3' x 3'	28' x 18'	2' 3" x 2' 3"
COAMINGS	Height above Deck	...	30"		9" B.A.	5	9" B.A.	12"	30"	15"
	Thickness	Sides	44					35"	44	44
	Stiffeners	...	7" B.A.	As No 1					44	35"
	Buckets, Stays	...	3. ✓	✓	✓	✓	✓	✓	✓	✓
HATCH BEAMS	Number	...	5	6	2				5	
	Spacing	...	4'-6"	4'-4"	5'-6" 14'-9"				4'-8"	
	Scantling and Sketch	...	16 1/2 x 34	As No 1	As No 1				As No 1	
	Bearing Surface	...	3" ✓	✓	✓					
FORE AND AFTERS	Number	...								
	Spacing	...								
	Unsupported Lengths	...								
	Scantling* and Sketch	...								
HATCH COVERS	Material	...	Wood.			Steel W.T.	Wood. W.T.	Wood.	Wood.	Wood.
	Thickness	...	3"	As No 1		50.	2 1/2"	2 1/2"	3"	3"
	How fitted	...	Laid in			Noted.	hinged	Laid in	Laid in	Laid in
	Bearing Surface	...	3" ✓	✓		1 1/2" ✓	1 1/2" ✓	2 1/2"	3"	3"
Spacing of Cleats	...	...	21"	24"	24"	✓	15"	22"	22"	15"
Number of Tarpaulins	...	...	4	4	2	✓	✓	3	3	3
*Are wood fore and afters steel shod at all bearing surfaces? none. 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. fittings for lashings provided. V steel locking bars in use. ✓										

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle, funnel & ventilator coamings of steel, efficient. rivetted.
 (Hinged steel door in funnel coaming 24" all, running from outside)
 Engine room skylight steel, strong.
 No fiddle openings. ✓

Particulars of Flush Bunker Scuttles:—

none.

Particulars of Companionways:—

none.

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

Position.	Space to.	No.	Height.	dia.	thickness.	decks at height.	closing appl.
Fore Dk.	Below Freeboard Dk.	3.	36" 32"	22" 9"	36" 30"	Rule.	wooden plug & canvas cover.
Freeboard Dk.	do.	10.	36"	22"	40.	"	do.
Bridge Dk.	do.	6.	30"	22" 11"	40" 35"	"	do.
Boat Dk.	do.	2.	54"	21"	40	"	✓ ✓

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

Position.	Space to.	Height opening.	dia.	material.	No. of	closing appl.
Fore Dk.	F.P.T. & d/b tank	19"	3" 2"	W.I.	2.	Canvas covers & wood plugs provided for all air pipes not already fitted with gauge. ✓
Freeboard Dk.	d/b tank	7 1/2"	2"	"	1.	
"	do.	24" 20"	4"	"	6.	
"	offshore	20"	2"	"	2.	
Bridge Dk.	O.F. Air, Deep Tank, d/b tanks	24"	4" 3" 2"	"	26.	
Boat Dk.	A.P. Tank	14"	3"	"	1.	
Casing Top.	Sitting Tanks	27" 17"	2"	"	2.	

Particulars of Gangway Cargo and Coaling Ports:—

none.



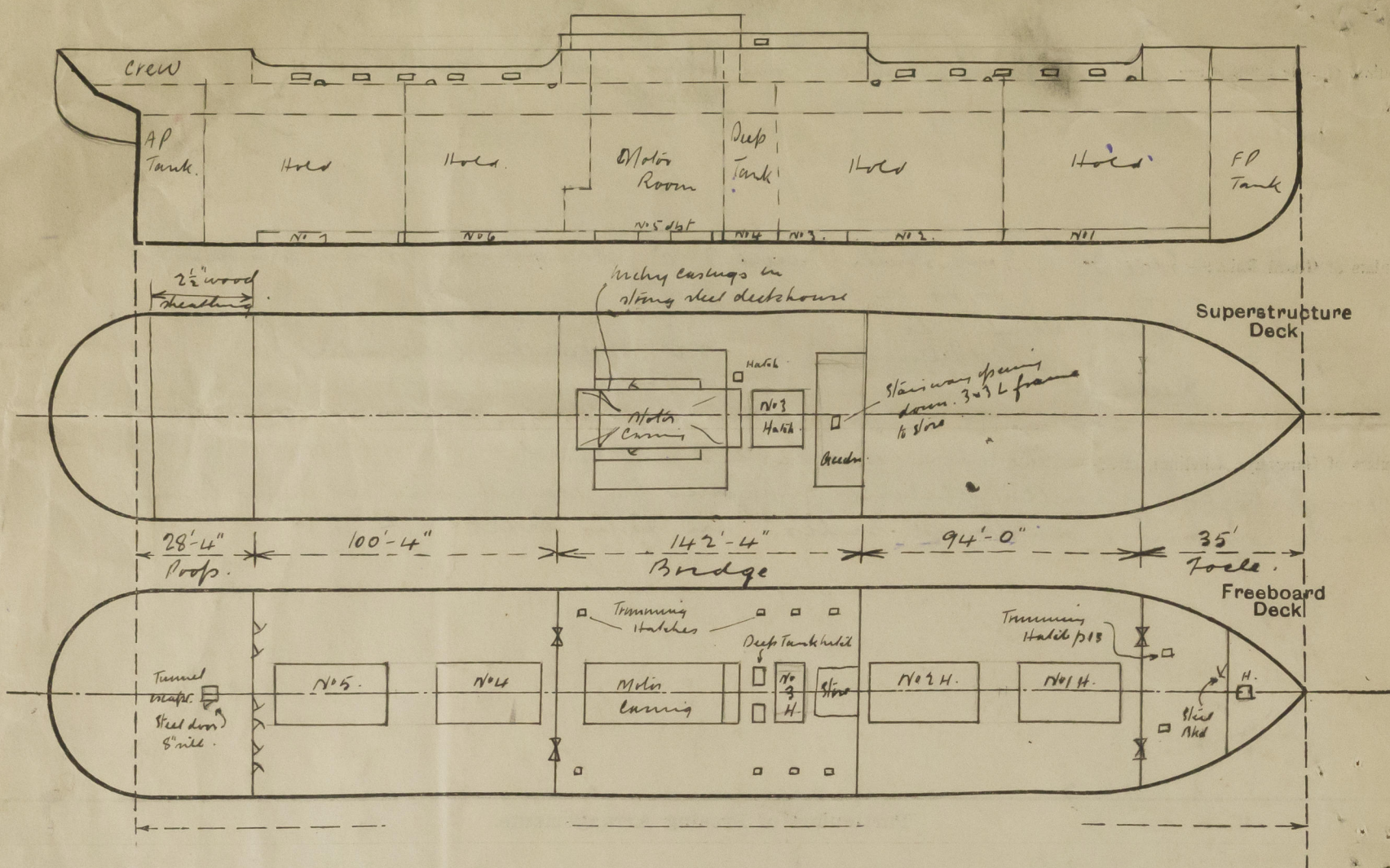
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King William

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:—



This vessel has been surveyed afloat.

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

23'-0" draft.

Extreme Depth.

11,169 tons.

Tonnage P. Limit

45-11

24'-0" "

11,712 "

45-41

Timber Load Line

Double bottom tanks Nos 2, 3, 4, 5, 6 are longitudinally subdivided. Bulwarks in wells 3'-9" high with B.A. rail bar, & strong strops approx 6' apart.

The sheering arrangements are effectively protected from damage by cargo. ~~As eyeplates for lashings or fittings for uprights at present fitted, but arrangements have been made to fit same in fore & after wells to convenience requirements.~~

Efficient provision made for steering by hand gear in the event of ^{a breakdown in} ~~the~~ main steering arrangements.

Eyeplates for lashings are riveted to the sheerstrake at intervals of not more than 10 feet apart, the distance from the end bulkheads of the superstructure to the first eyeplate being not more than 6'-6".

Strong forged flat iron sockets, spaced not more than 10 feet apart, are effectively secured to the sheerstrake and bulwark rail for the purpose of securing uprights.

Builder's name and yard number

Harland Wolff Ltd. Yard No 765.

Names of sister ships

"King Stephen"

Owners

King Line Ltd.

Fee £

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Received by me



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