

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **25877**
(For London Office only.)

18 OCT 1932

Computation of Freeboard for Steamer, Sailing Ship, Tugboat
having Bridge & Forecastle on Shelter Deck. Port of Survey Falmouth

(Type of Superstructures.) 8749 Date of Survey 28/9/32 29/9/32 30/9/32 1/10/32

Ship's Name KENT Nationality and Port of Registry British London Official Number 142611 Gross Tonnage 8694 Date of Build 1918-6

Moulded Dimensions: Length 460 Breadth 62.5 Depth 29.9 Main 37.75 Shelter

Moulded displacement at moulded draught = 85 per cent. of moulded depth 20450 tons

Coefficient of fineness for use with Tables .776 Particulars of Classification +100A1.
Shelter Deck with freeboard
S.S. No. 3-4-30

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	37.75	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	62.5
Stringer plate	.04	(37.75 - 30.67) 3.0 =	21.36	Standard Round of Beam = $\frac{B \times 12}{50}$	15.00
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	13
Depth for Freeboard (D) =	37.79	If restricted by superstructures		Difference	2.00
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{2.00}{4} \times .2958 = +.15$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	275.00	275.00	8.00	-	275.00
" overhang aft ...					
" overhang forward ...					
Forecastle enclosed ...	48.11	48.92	8.00	-	48.92
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	323.92	323.92			323.92

Standard Height of Superstructure 7.50

" " R.Q.D.

Deduction for complete superstructure 42.0Percentage covered $\frac{S}{L} =$ 70.42" $\frac{S_1}{L} =$ 70.42" $\frac{E}{L} =$ 70.42

Percentage from Table, Line A.

(corrected for absence of forecastle (if required))

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = - 26.68

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	56.00	1	56.00	42.00	42.00	1	42.00
$\frac{1}{2}$ L from A.P. ...	24.92	4	99.68	18.17	18.17	4	72.68
$\frac{3}{4}$ L " ...	6.16	2	12.32	4.54	4.54	2	9.08
Amidships ...		4				4	
$\frac{1}{4}$ L from F.P. ...	12.32	2	24.64	11.06	11.06	2	22.12
$\frac{1}{2}$ L " ...	49.84	4	199.36	44.24	44.24	4	176.96
F.P. ...	112.00	1	112.00	102.00	102.00	1	102.00
Total ...			504.00				424.84

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{79.16}{18} (.75 - .3521) = +1.75$

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 = 37.79 Ft.

Summer freeboard = 8.83

Moulded draught (d) = 28.96

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7.24 7/4

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 18316

Tons per inch immersion at summer load water line

T = 59.89Deduction = $\frac{\Delta}{40T}$ inches= 7.64= 7 3/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.776 + .68}{1.36} = \frac{1.456}{1.36}$ Depth Correction ... 21.36Deduction for superstructures ... 26.68Sheer correction ... 1.75Round of Beam correction15

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ... 12.87Summer Freeboard = 106.00

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

Tropical Fresh Water Line above Centre of Disc ... 15"

Fresh Water Line " " ... 7 3/4"

Tropical Line " " ... 7 3/4"

Winter Line below " " ... 4 1/4"

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard 8' - 10"

Fresh Water 7' - 7 1/4"

Tropical 8' - 2 3/4"

Winter 9' - 5 1/4"

Winter North Atlantic

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Description of Hatchway	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Bunker	Bunker	Small Hatchways
Dimensions of Hatchway	Shelter Dk. 27'0" x 20'0"	32'1" x 20'0"	27'6" x 20'0"	27'6" x 20'0"	27'6" x 20'0"	27'6" x 20'0"	13'9" x 20'0"	13'9" x 20'0"	Fele Dk. 3'9" x 2'6" 8" high
COAMINGS	Height above Deck 30"	30"	30"	30"	30"	30"	30"	30"	3/8 Bolted Steel Cover
Thicknes	44	44	44	44	44	44	44	44	Bridge Dk. 2'0" x 4'6" 18" high
Stiffeners	7 x 3" BA	on all	hatches on	weather	deck				3/8" thick
Brackets, Stays									2'0" x 2'9" x 2'9"
HATCH BEAMS	Number 5	6	5	5	5		2		1'0" x 4'0" x 3'9"
Spacing	4'6"	4'7"	4'7"	4'7"	4'7"		11'2" x 6'6"		18" high 3/8" thick
Scantling and Sketch	16 1/2 x 8 1/2 x 34	13'6" x 6 1/2' x 34	12 1/2 x 6 1/4 x 34	16 1/2 x 8 1/4	16 1/2 x 8 1/4		angles 4 x 3 x 44		3" wood covers
Bearing Surface	3"	3"	3"	3"	3"		3"		2 1/4" bearers
FORE AND AFTERS									15" cleats
Number									3 Tarpaulins
Spacing									Side Bunkers
Unsupported Lengths									in Bridge Dk.
Scantling and Sketch									6'0" x 6'6" x 3'0"
Bearing Surface									9 x 3" BA coaming
HATCH COVERS	Material Wood	Wood	Wood	Wood	Wood		Wood	Wood	2 1/2" wood covers
Thickness	3"	3"	3"	3"	3"		3"	3"	2" bearers
How fitted	FTA	FTA	FTA	FTA	FTA		FTA	FTA	22" cleats
Bearing Surface	3"	3"	3"	3"	3"		3"	3"	1 Tarpaulin
Spacing of Cleats	22"								
Number of Tarpaulins	3 on	weather	deck	1 in	bridge	space	to	each	hatch
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>yes</i></p> <p>Are battens and wedges efficient and in good condition? <i>yes</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>yes</i></p> <p>Are lashings provided in accordance with rule requirements? <i>yes</i></p>									

Particulars of fiddle, funnel and ventilator coamings:— *Stokehold gratings fitted with hinged steel covers.*
Engine Room skylights steel strongly constructed.
Funnel & ventilator coamings efficient.

Particulars of Flush Bunker Scuttles:— *2 on Port side & 1 starboard side of Bridge deck. 26" diam*
on 9 x 3" BA coamings. 2 1/2" wood covers. Bolted ring battens, 4 cleats
2 tarpaulins.

Particulars of Companionways:— *1 Port side aft to Crews quarters in Shelter deck with*
hinged steel door 18" coaming manipulated both sides
Engine & Stokehold doors on bridge deck hinged steel
Stokehold doors in Bridge space hinged steel now permanently closed by
bars & through bolts
Tunnel escape wood door 18" sill manipulated both sides

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
Fele Dk. 1 @ 9" dia 32" high 3/8" thick.
1 @ 18" 4'6" 3/8" stayed
For'd well 1 @ 18" 3'0" 3/8" stayed
Bridge 5 @ 18" 4'6" 3/8" 1 stayed
2 @ 11" 6'0" 3/8" 1 stayed
2 @ 5" 3'0" 1/4" 1 stayed
Wood plugs & canvas covers provided for all ventilators
aft deck 2 @ 18" dia 4'6" high 3/8" thick
2 @ 12" 10'0" 3/8"
1 @ 6" stayed.

Particulars of All Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
Fele Dk. 1 @ 3 1/2" dia 20" high covered canvas
1 @ 3 1/2" 21" gauge.
Bridge 1 @ 3 1/2" 21"
4 @ 6" 15"
aft deck 1 @ 3 1/2" dia 20" high covered canvas
1 @ 3 1/2" 21" canvas
2 @ 2" 21"

Particulars of Gangway Lugs and Coaling Ports:—

1 Port Bridge Space 5'0" x 3'0"
fastened by strongbacks & bolts.



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Deck Scuppers.

2 P+S. For^d well 8 P+S. Bridge Deck

2 P+S. after deck. - no valves fitted
4 P+S. Bridge Tween deck no valves fitted

Scuppers and Sanitary Discharge Pipes :-

Discharges. Midships. 4 P + 3 Starb 2'-6" above shelter deck. Single valves -
* 5 P+S. aft 2'-6" " main " " "

* See note page 4.

Side Scuttles :-

Side scuttles in superstructures have hinged glassess -
without deadlights -
6 P+S aft in shelter deck. 9" dia with hinged -
glassess and hinged deadlights fitted.

Guard Rails :-

Fele. 1- 2 Rails & Stanchions 3'-0" high 5'-4" apart
For^d well, Bridge Deck & after deck. 3 Rails & Stanchions
3'-6" high 5'-6" apart.
Docking Bridge 2 Rails & Stanchions 3'-0" high 5'-4" apart

Gangways, Lifelines, etc. :-

Crew berthed aft.

~~no lifelines fitted.~~

Suitable provision is made for rigging lifelines
for use in any part of the ship during the working
of the vessel

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
... ..	69'-3" 1/2 after house See Sketch Page 4.	3'-6"	62'-3" 6 open rails -	"	"	
Well	43'-0"	3'-6"	29'-0" open rails -	"	"	

of each freeing port } After Well :-
position and height above deck edge) } Forward Well :-

Whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :-

al 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
Bulkhead	✓							
Quarter Deck Bulkhead ...	✓							
After Bulkhead	3/8 -	7/16 -	3 1/2" x 3" x 3/8"	36" -	none.	5'-6" x 3'-0"	18" -	8'-0"
Forward Bulkhead	7/16 -	7/16 -	10" x 3 1/2" BA.	30" -	Bkts Tr B.	none -	✓	8'-0"
le Bulkhead	7/16 -	7/16 -	Partial Bulkheads 3 x 3 x 3/8	8'-0" - 2'-6" -	none -	5'-6" x 4'-0"	18" -	8'-0"
Aft	✓							
Forward	✓							
d Machinery Casings on Free- d or Raised Quarter Decks ...	✓							
d Machinery Casings on Super- structure Decks	3/8 -	7/16 -	3 1/2" x 3" x 3/8"	24" to 27" -	none -	4'-6" x 2'-0"	21" -	7'-0"
ery Casings within Superstruc- es not fitted with Class I Closing planes		7/16 -	3 1/2" x 3" x 3/8"	24" to 27" -	none -	4'-6" x 2'-0"	18" -	8'-0"
on Flush Deck Ships ...								

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

Bulkhead	✓
Quarter Deck Bulkhead ...	✓
After Bulkhead	Steel plates with hook bolts not passing through Bulkhead
Forward Bulkhead	✓ no openings
le Bulkhead	Steel plates with hook bolts not passing through Bulkhead -
d Machinery Casings on Free- d or Raised Quarter Decks ...	✓
d Machinery Casings on Super- structure Decks	Hinged doors of steel manipulated both sides
ery Casings within Superstruc- es not fitted with Class I Closing planes	Hinged doors of steel permanently closed by bars & bolts

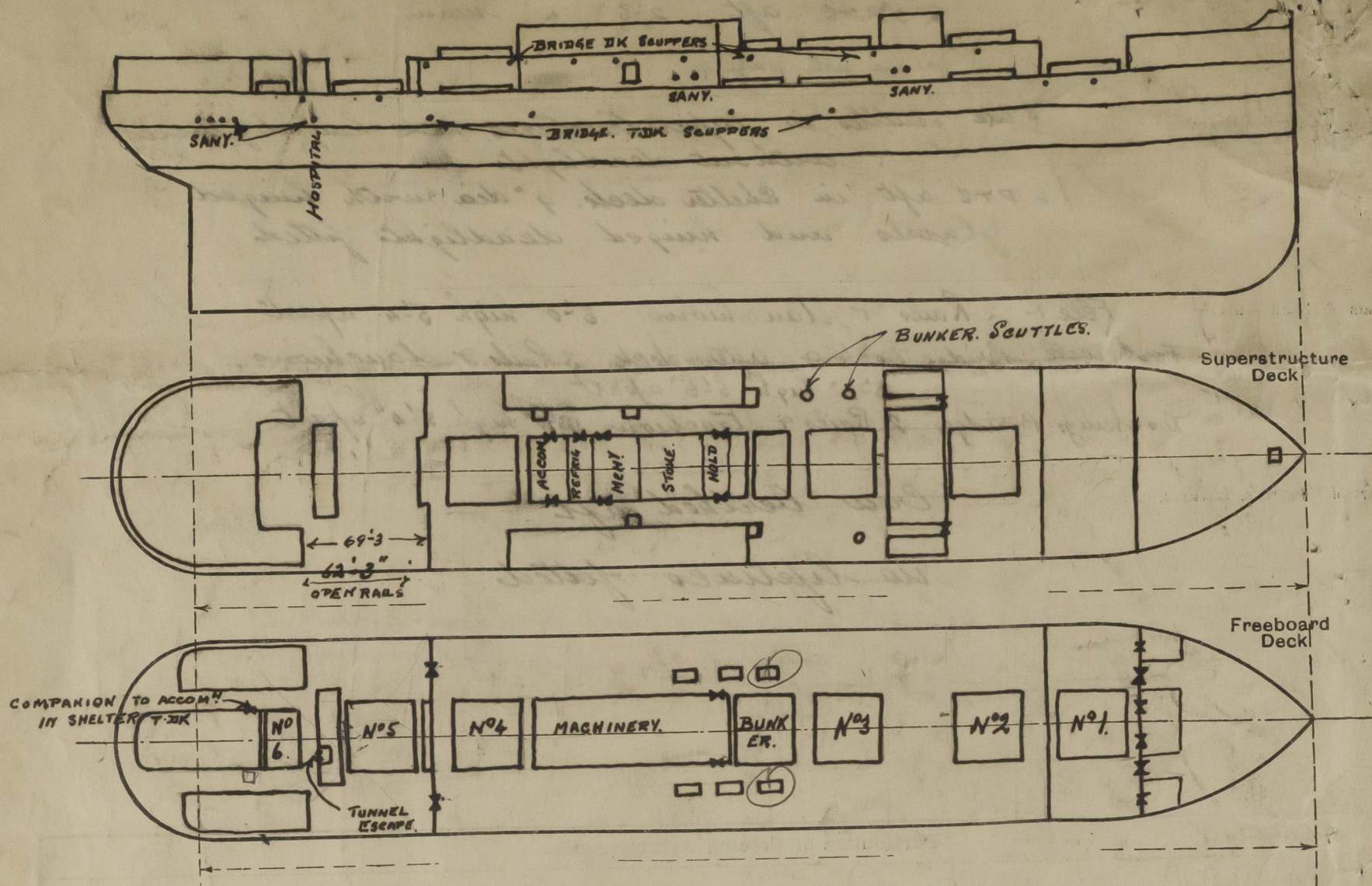


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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the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



State any special features in the construction of the ship:— *Alterations now in progress, to oil fuel deep tanks, modify the hatch to the bunkers in bridge space, which becomes the crown of the new tank*
Sanitary discharge P&S, marked HOSPITAL in above sketch are to be dispensed with & the holes plated over in way of new insulation in shelter deck.

28-11 1/2
 1 3/4
 29-1 1/4
 + 1 1/4 x 59.86 = 18241
 75
 18316

Builder's name and yard number *Palmer's Co Ltd.*
 Names of sister ships
 Owners *Federal Steam Navigation Co Ltd.*

Fee £ *16 : 3 : 0* Received by me *[Signature]*