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Rpt. C.11.

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

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Bridge & Forecastle on Shelter Deck.

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"KENT"	British London	142611	869H	1918·6

Moulded Dimensions: Length 460 Breadth 62·5 Depth 37·75

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

Coefficient of fineness for use with Tables ·776

Port of Survey Falmouth

Date of Survey 28/9/32, 29/9/32. 3/10/32 5/10/32

Name of Surveyor R Moffitt

Particulars of Classification + 100 A1.
Shelter Dk with freeboard
S.S. Agt No 3-4-30.

Depth for Freeboard (D)

Moulded depth	37·75
Stringer plate	·04
Sheathing on exposed deck $T\left(\frac{L-S}{L}\right)$ =	-
Depth for Freeboard (D) =	37·79

Depth correction

(a) Where D is greater than Table depth
(D—Table depth) R =
(37·79 − 30·67) 3·0 = 21·36

(b) Where D is less than Table depth (if allowed)
(Table depth—D) R =

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B)	62·5
Standard Round of Beam $= \frac{B \times 12}{50}$ =	15·00
Ship's Round of Beam =	13"
Difference	2·00
Restricted to	
Correction $= \frac{\text{Diff}^e}{4} \times \left(1-\frac{S_1}{L}\right)$	$= \frac{200}{4} \times$ ·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... ...	275-0	275·00	8·0"	-	275·00
„ overhang aft ...					
„ overhang forward					
F'cle enclosed	48'-11"	48·92	8'·0"	-	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 42·00

Percentage 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. 63·51
(corrected for absence of forecastle (if required))

Interpolation for bridge less than ·2L (if required)

Deduction = − 26·68

SHEER CORRECTION.

Station	Standard Ordinate	SM	Product	Actual Ordinate	Effective Ordinate	SM	Product
A.P.	56·00	1	56·00	42·00	42·00	1	42·00
$\frac{1}{6}$L from A.P. ...	24·92	4	99·68	18·17	18·17	4	72·68
$\frac{2}{6}$L „ ...	6·16	2	12·32	4·54	4·54	2	9·08
Amidships ...		4				4	
$\frac{2}{6}$L from F.P. ...	12·32	2	24·64	11·06	11·06	2	22·12
$\frac{1}{6}$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 ...							424·84

Mean actual sheer aft / Mean standard sheer aft = Deficient

Mean actual sheer forward / Mean standard sheer forward = Deficient

$\frac{\text{Length of enclosed superstructure}}{L}$ forward of amidships = ·300

„ „ aft of „ = ·298

Correction = $\frac{\text{Difference between sums of products}}{18}\left(\cdot75-\frac{S}{2L}\right)$ = $\frac{79·16}{18}(\cdot75-\cdot3521)$ = + 1·45

If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

	Ft.
Depth to Freeboard Deck =	37·79
Summer freeboard =	7·71
Moulded draught (d) =	30·02

Deduction for Tropical freeboard and addition for Winter freeboard $= \frac{d}{4}$ inches = 7·50 = 7½"

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ = 19085

Tons per inch immersion at summer load water line

T = 60·17

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

= 7·92

= 8"

TABULAR FREEBOARD corrected for Flush Deck (if required) 90·20

Correction for coefficient $\frac{\cdot776+68}{1·36} = \frac{1·456}{1·36}$ 96·55

	+	−
Depth Correction	21·36	-
Deduction for superstructures	-	26·68
Sheer correction	1·75	-
Round of Beam correction	·15	-
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc.	-	-
	23·26	26·68

(−) 3·42

Summer Freeboard = 93·13

J. M. M. 14-12-32

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

Tropical Fresh Water Line above Centre of Disc	...	15½"	Tropical Fresh Water Freeboard	7'-9¼"
Fresh Water Line	„ „	8"	Fresh Water „	6'-5¾"
Tropical Line	„ „	4½"	Tropical „	7'-1¼"
Winter Line	below „	7½"	Winter „	8'-4¾"
~~Winter North Atlantic Line~~	„ „	-	~~Winter North Atlantic~~ „	—

15 DEC 1932

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