

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Index. No. 34677
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having _____

(Type of Superstructures.) _____

Ship's Name Mitsui Bussan Kaisha
Vessel No. 216/17

Nationality and Port of Registry _____

Official Number _____

Gross Tonnage _____

Date of Build _____

Port of Survey _____

Date of Survey 12-4-35

Name of Surveyor _____

Particulars of Classification 1000T with 100 (Contingent)

Dimensions: Length 420.0 Breadth 57.41 Depth 36.09

Displacement at moulded draught = 85 per cent. of moulded depth

Percentage of fineness for use with Tables 74 assumed

Depth for Freeboard (D) 36.09

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = $(36.15 - 28.00) \times 3 = 24.45$

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

Round of Beam correction

Moulded Breadth (B) 57.41

Standard Round of Beam = $\frac{B \times 12}{50} = 13.78$

Ship's Round of Beam = 11.81

Difference 1.97

Restricted to

Correction = $\frac{\text{Diff}^2}{4} \times (1 - \frac{S_1}{L}) = \frac{1.97^2}{4} \times 0.959 = +0.457$

Depth for Freeboard (D) = 36.15

If restricted by superstructures

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
enclosed ...					
overhang ...					
enclosed ...					
overhang ...					
enclosed ...	14.33	10.75	8.0		10.75
overhang aft ...	4.00	2.00	8.0		2.00
overhang forward ...					
enclosed ...	37.00	26.79	7.0	7.5	25.00
overhang ...					
aft ...					
forward ...					
opening aft ...					
" forward ...					
Total ...	55.83	39.54			37.75

Standard Height of Superstructure 7.5

" " R.Q.D.

Deduction for complete superstructure 42

Percentage covered $\frac{S}{L} = 13.29$

" " $\frac{S_i}{L} = 9.41$

" " $\frac{E}{L} = 8.99$

Percentage from Table, Line A. 4.49

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 5.66

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) $4.49(1.17 \times \frac{12.75}{84}) = 4.67$

Deduction = $42 \times 0.467 = -1.96$

SHEER CORRECTION.

	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
...	52.00	1		32.0		1	32.00
P. ...		4		14.0		4	56
...		2		2.0		2	4
...		4		-		4	-
P. ...	11.44	2		4.0		2	8
...	46.28	4		32.0		4	128
...	104.00	1		90.0		1	90
...	468		468				318

Mean actual sheer aft = Defiant

Mean standard sheer aft

Mean actual sheer forward = Defiant 714.48 standard

Mean standard sheer forward

Length of enclosed superstructure forward of amidships =

" " aft of " =

Sheer forward standard

actual

11.44 3 34.32 12.0 3 36.0 198

46.28 3 138.84 32.0 3 96.0 277.16

104.00 1 104.00 90.0 1 90.0 277.16

1836 277.16

limited to maximum allowance of 1 1/2 ins. per 100 ft.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) = \frac{150(75 - 0.664)}{18} = +5.70$

limited on account of midship superstructure.

Correction for Tropical Freeboard.

Correction for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 36.15

Summer freeboard = 9.14

Moulded draught (d) = 27.01

Correction for Tropical freeboard and addition for summer freeboard = $\frac{d}{4}$ inches =

Correction for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

T =

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... 24.45

Deduction for superstructures ... 1.96

Sheer correction ... 5.70

Round of Beam correction ... 0.45

Correction for Thickness of Deck amidships

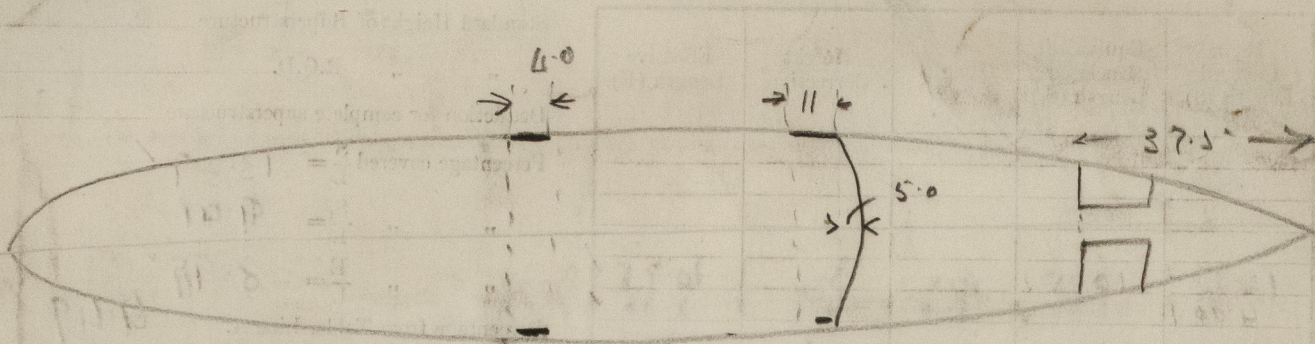
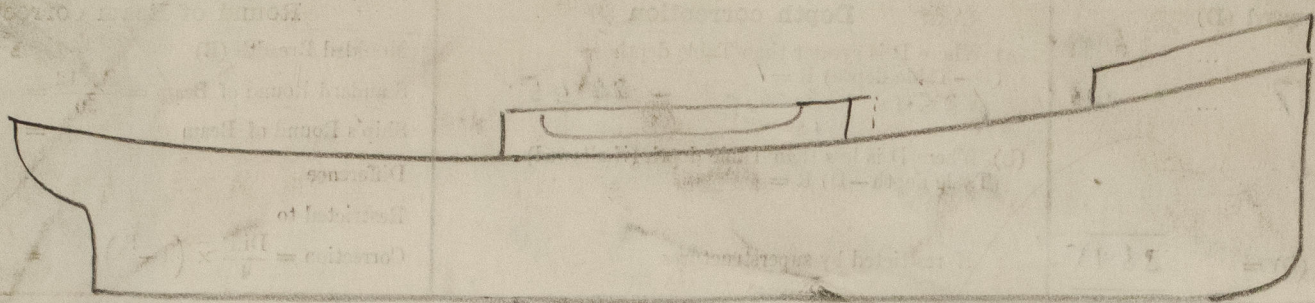
Other corrections, scantlings, etc. ...

Summer Freeboard = 109.86

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

Tropical Fresh Water Line above Centre of Disc ...	Tropical Fresh Water Freeboard ...
Fresh Water Line " " ...	Fresh Water " " ...
Tropical Line " " ...	Tropical " " ...
Winter Line below " " ...	Winter " " ...
Winter North Atlantic Line " " ...	Winter North Atlantic " " ...

Draught required = 25.25' MW



$$\begin{aligned} 11.0 \\ \frac{2}{3} \times 5 = 3.33 \\ \hline 14.33 \end{aligned}$$

Area	Perimeter	Volume	Weight	Length	Width	Height
1.0	1.0	1.0	1.0	1.0	1.0	1.0
2.0	2.0	2.0	2.0	2.0	2.0	2.0
3.0	3.0	3.0	3.0	3.0	3.0	3.0
4.0	4.0	4.0	4.0	4.0	4.0	4.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0
6.0	6.0	6.0	6.0	6.0	6.0	6.0
7.0	7.0	7.0	7.0	7.0	7.0	7.0
8.0	8.0	8.0	8.0	8.0	8.0	8.0
9.0	9.0	9.0	9.0	9.0	9.0	9.0
10.0	10.0	10.0	10.0	10.0	10.0	10.0