

Britannia 35928
 Germania 35880
 Italia 36049
 Lusitania 36195

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR ~~STEAMER~~, ~~SAILING SHIP~~, TANKER.)

Index No. 36022
 (For London Office only).
 JUN 12 1939

Ship's Name "GALLIA"	Official Number	Nationality and Port of Registry Norwegian Oslo	Gross Tonnage 10,000	Date of Build 1939	Port of Survey Hamburg
Moulded Dimensions: Length 496.25 Breadth 67.00 Depth 34.15					Date of Survey 25th - 30th May, 1939
Moulded displacement at moulded draught = 85 per cent. of moulded depth 21040 tons					Surveyor's Signature J. G. G. Goering
Coefficient of fineness for use with Tables .763					Particulars of Classification +100A1 "carrying petroleum in bulk" (contemplated)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 34.15	(a) Where D is greater than Table depth (D - Table depth) R = (34.22 - 33.08) 3 = + 3.42"	Moulded Breadth (B) 67.00'
Stringer plate07	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 1.14	Standard Round of Beam = $\frac{B \times 12}{50} = 16.08$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 16.14
Depth for Freeboard (D) = 34.22		Difference .06 excess
		Restricted to
		Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.06}{4} \times .5549 = -.01"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	123.12	123.12	8.00		123.12
„ overhang ...	2.39	1.19			1.19
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...	38.32	38.32	7.25	7.25	37.04
„ overhang aft ...	2.39	1.79			1.73
„ overhang forward66	.33			.32
Fore enclosed ...	56.13	56.13	7.51		56.13
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ forward ...					
Total ...	223.01	220.88			219.53

Standard Height of Superstructure **7.5'**
 „ „ R.Q.D.
 Deduction for complete superstructure **42"**
 Percentage covered $\frac{S}{L} = 44.94$
 $\frac{S_1}{L} = 44.51$
 $\frac{E}{L} = 44.24$
 Percentage from Table, Line A. **Tanker 35.24**
 (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 = **42 x .3524 = - 14.80"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	59.62	1		59.62	57.80	57.80	1		57.80
$\frac{1}{4}$ L from A.P. ...	26.53	4		106.12	26.89	26.89	4		107.56
$\frac{3}{4}$ L „ ...	6.56	2		13.12	6.61	6.61	2		13.22
Amidships ...		4					4		
$\frac{3}{4}$ L from F.P. ...	13.12	2		26.24	13.39	13.39	2		26.78
$\frac{1}{4}$ L „ ...	53.06	4		212.24	52.28	52.28	4		209.12
F.P. ...	119.25	1		119.25	118.90	118.90	1		118.90
Total ...				536.59					533.38

Mean actual sheer aft = **Deficient**
 Mean standard sheer aft
 Mean actual sheer forward = **Deficient**
 Mean standard sheer forward
 Length of enclosed superstructure forward of amidships =
 „ „ aft of „ = } **Tanker.**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{3.21}{18} (.75 - .2247) = + .09"$
 If limited on account of midship superstructure. **.5253** 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 = **34.22**
 Summer freeboard = **6.71**
 Moulded draught (d) = **27.51**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **6.88 = 7"**

Addition for Winter North Atlantic Freeboard (if required) = **6.88 + 4.96 = 11.84 = 11 $\frac{3}{4}$ "**

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 19966$
 Tons per inch immersion at summer load water line
 $T = 67.24$
 Deduction = $\frac{\Delta}{40T}$ inches = **7.42**
7 $\frac{1}{2}$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.763 + .68}{1.36} = \frac{1.443}{1.36}$

	+	-
Depth Correction ...	3.42	-
Deduction for superstructures ...	-	14.80
Sheer correction09	-
Round of Beam correction ...	-	.01
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	3.51	14.81

Summer Freeboard = **80.59**

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck: **6' 8 $\frac{1}{2}$ " = 204.5"**

Tropical Fresh Water Line above Centre of Disc	14 $\frac{1}{2}$ " = 36.8"	Tropical Fresh Water Freeboard	5' 6" = 16.77"
Fresh Water Line	7 $\frac{1}{2}$ " = 19.0"	Fresh Water	6' 1" = 18.55"
Tropical Line	7" = 17.8"	Tropical	6' 1 $\frac{1}{2}$ " = 18.67"
Winter Line below	7" = 17.8"	Winter	7' 3 $\frac{1}{2}$ " = 22.23"
Winter North Atlantic Line	11 $\frac{3}{4}$ " = 29.8"	Winter North Atlantic	7' 8 $\frac{1}{4}$ " = 23.43"

13 JUN 1939