

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

32018  
D161

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Flush Deck.

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"AKUNA"	BRITISH MELBOURNE.	151823	953	1911

Moulded Dimensions: Length 193.0 Breadth 31.1 Depth 23'-3 1/2"  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 2308 (estimated) tons  
Coefficient of fineness for use with Tables .68 (lowest in tables)

Port of Survey Melbourne.

Date of Survey 17th & 19th December 1935.

Name of Surveyor B. R. Fielden.

Particulars of Classification 100 A - with Fbd.  
Pilot vessel.

Depth for Freeboard (D)		Depth correction	Round of Beam correction	
Moulded depth	23.291	(a) Where D is greater than Table depth (D - Table depth) R = (23.527 - 12.87) 1.485 = + 15.82	Moulded Breadth (B)	= 31.1
Stringer plate	.34	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50}$	= 7.46
Sheathing on exposed deck			Ship's Round of Beam	= 7.5
$T \left( \frac{L-S}{L} \right) = 2 \frac{1}{2}"$	.208		Difference	Excess = .04
Depth for Freeboard (D) =	23.527	If restricted by superstructures	Restricted to	
			Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$	= $\frac{.04}{4} \times 1 = -.01$

### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...					

Standard Height of Superstructure 6.00

" " R.Q.D. ✓

Deduction for complete superstructure 25.30

Percentage covered  $\frac{S}{L} =$  } Flush Deck.  
 $\frac{S_1}{L} =$   
 $\frac{E}{L} =$

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 = Nil.

### SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	29.30	1	29.30	18.00	18.00	1	18.00
1/8 L from A.P. ...	13.04	4	52.16	4.74	4.74	4	18.96
3/8 L " ...	3.22	2	6.44	1.18	1.18	2	2.36
Amidships ...	✓	4	✓	0	✓	4	✓
3/8 L from F.P. ...	6.44	2	12.88	5.32	5.32	2	10.64
1/8 L " ...	26.08	4	104.32	21.33	21.33	4	85.32
F.P. ...	58.60	1	58.60	57.00	57.00	1	57.00
Total ...			263.70				192.28

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 = Nil  
 " " aft of " = Nil.

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{71.42}{18} \times .75 = + 2.98"$

If limited on account of midship superstructure. ✓

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

Deduction for Tropical Freeboard.  
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 23.53  
Summer freeboard = 8.50  
Moulded draught (d) = 15.03

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

Deduction for Fresh Water.

Displacement in salt water at summer load water line  
Δ =  
Tons per inch immersion at summer load water line  
T =  
Deduction =  $\frac{\Delta}{40 T}$  inches  
 $\frac{d}{4} = 3.76 = 3 \frac{3}{4}"$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient Nil.

Depth Correction ... 15.82 ✓  
Deduction for superstructures ...  
Sheer correction ... 2.98 ✓  
Round of Beam correction ... .01  
Correction for Thickness of Deck amidships ...  
Other corrections, scantlings, position of scuppers & sanitary discharges ... 58.41 ✓

	+	-
21.91 + 2.89		
24.80		✓
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77.21	.01	+ 77.20
Summer Freeboard = 102.00		

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

Tropical Fresh Water Line above Centre of Disc	...	3 3/4"
Fresh Water Line	"	"
Tropical Line	"	"
Winter Line	"	"
Winter North Atlantic Line	"	"

Tropical Fresh Water Freeboard	...	8'-6"
Fresh Water	"	8'-2 1/4"
Tropical	"	"
Winter	"	"
Winter North Atlantic	"	"

10 JUL 1936