

Estimate with increased length

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Prop. bridge & main*

Port of Survey

(Type of Superstructures.)

Date of Survey *24/5/37*

Ship's Name

Nationality and Port of Official Number Gross Tonnage Date of Build

Name of Surveyor

Moulded Dimensions: Length *396.82* Breadth *51* Depth *29.20*
Moulded displacement at moulded draught = 85 per cent. of moulded depth. *11290 estimated*
Coefficient of fineness for use with Tables *.787 estimated*

Particulars of Classification *+100m*
Carrying petroleum in bulk

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>29.20</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(29.25 - 26.46) 3 = + 8.37</i>	Moulded Breadth (B) <i>51.00</i>
Plating on exposed deck <i>.05</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>2.79</i>	Standard Round of Beam = $\frac{B \times 12}{50} = 12.24$
Plating on exposed deck <i>-</i>		Ship's Round of Beam = <i>12.50</i>
$T \left(\frac{L-S}{L} \right) =$		Difference = <i>.26</i>
Depth for Freeboard (D) = <i>29.25</i>	If restricted by superstructures <i>-</i>	Restricted to
		Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.26 \times 567}{4} = 36.825$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<i>102.92</i>	<i>102.92</i>	<i>7.5</i>	<i>-</i>	<i>102.92</i>
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	<i>28.32</i>	<i>28.32</i>	<i>7.75</i>	<i>-</i>	<i>28.32</i>
" overhang aft					
" overhang forward					
F'cle enclosed <i>equivalent</i>	<i>44.68</i>	<i>44.68</i>	<i>7.75</i>	<i>-</i>	<i>44.68</i>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	<i>175.92</i>	<i>175.92</i>			<i>175.92</i>

Standard Height of Superstructure *7.468*
" " R.Q.D. *-*
Deduction for complete superstructure *41.79*
Percentage covered $\frac{S}{L} = 44.33$
" " $\frac{S_1}{L} = 44.33$
" " $\frac{E}{L} = 44.33$
Percentage from Table, Line A. *Tankers* *35.33*
(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 = *41.79 x 35.33 = - 14.76*

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
P.	49.68	1	49.68	48.00	49.68	1	49.68
from A.P. ...	22.11	4	88.44	21.00	22.11	4	88.44
„	54.65	2	10.93	8.50	54.65	2	10.93
amidships ...	—	4	—	—	—	4	—
from F.P. ...	10.93	2	21.86	7.50	7.50	2	15.00
„	44.215	4	176.86	36.75	36.75	4	147.00
P.	99.36	1	99.36	90.00	90.00	1	90.00
Total			447.13				401.05

Mean actual sheer aft = *Even*
Mean standard sheer aft = *Even*
Mean actual sheer forward = *Deficient*
Mean standard sheer forward = *Deficient*
Length of enclosed superstructure forward of amidships = *Tankers*
" " aft of " = *Tankers*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{46.08}{18} \left(.75 - \frac{22.17}{175.92} \right) = + 1.35$

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.

Deduction for Fresh Water.

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Depth to Freeboard Deck = *29.25*
Summer freeboard = *5.12*
Moulded draught (d) = *24.13*

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

Correction for coefficient $\frac{.787 + .68}{1.36} = \frac{1.467}{1.36}$
Depth Correction *8.37*
Deduction for superstructures *14.76*
Sheer correction *1.35*
Round of Beam correction *.04*
Correction for Thickness of Deck amidships *-*
Other corrections, scantlings, etc. *-*

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = *6.03 = 6"*
Addition for Winter North Atlantic Freeboard (if required) = *6.03 + 3.97 = 10"*

Summer Freeboard = *61.54*

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

Tropical Fresh Water Line above Centre of Disc	<i>12"</i>	Tropical Fresh Water Freeboard	<i>5-1 1/2"</i>
Fresh Water Line " "	<i>6"</i>	Fresh Water " "	<i>4-0 1/2"</i>
Tropical Line " "	<i>6"</i>	Tropical " "	<i>4-7 1/2"</i>
Winter Line below " "	<i>6"</i>	Winter " "	<i>5-7 1/2"</i>
Winter North Atlantic Line " "	<i>10"</i>	Winter North Atlantic " "	<i>5-10 1/2"</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	Sides	...	...	...	...	...	...	...	...
	Ends	...	...	...	...	...	...	...	...
HATCH BEAMS	Stiffeners	...	...	...	...	...	...	...	...
	Brackets, Stays	...	...	...	...	...	...	...	...
	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
FORE AND AFTERS	Scantling and Sketch	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
HATCH COVERS	Unsupported Lengths	...	...	...	...	...	...	...	...
	Scantling* and Sketch	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
	Material	...	...	...	...	...	...	...	...
Spacing of Cleats	Thickness	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
	Number of Tarpaulins	...	...	...	...	...	...	...	...

*Are wood fore and afters steel shod at all bearing surfaces?
 Are battens and wedges efficient and in good condition?
 Are tarpaulins in good condition and in accordance with rule requirements?
 Are lashings provided in accordance with rule requirements?

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles :—

Particulars of Companionways :—

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

Particulars of Gangway Cargo and Coaling Ports :—

Particulars of Scuppers and Sanitary Discharge Pipes :—

Particulars of Side Scuttles :—

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. :—

RETAIN

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ...						
Forward Well ...						
State position of each freeing port ... } After Well :— (F. and A. position and height above deck edge) } Forward Well :— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :— Additional 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
Poop Bulkhead ...								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...								
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...								
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks ...								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Deckhouses on Flush Deck Ships ...								
Particulars of Closing Appliances (state if capable of being manipulated from both sides).								
Poop Bulkhead ...								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...								
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks ...								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Deckhouses on Flush Deck Ships ...								

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