

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <i>Hull</i>	
having <i>Coop, Bridge &amp; Forecastle</i>					Date of Survey <i>May 7th &amp; 8th 1935</i>	
<i>CANELOS</i> (Type of Superstructures.)					Name of Surveyor <i>R. Malcolm A. Watt</i>	
Ship's Name <i>Sonja</i>		Nationality and Port of Registry <i>Danish Esbjerg</i>	Official Number <i>✓</i>	Gross Tonnage <i>2061</i>	Date of Build <i>1930-9</i>	
Moulded Dimensions: Length		Breadth	Depth	Moulded displacement at moulded draught = 85 per cent. of moulded depth tons		
Coefficient of fineness for use with Tables		Particulars of Classification <i>+100A1</i>				

<b>Depth for Freeboard (D)</b>	<b>Depth correction</b>	<b>Round of Beam correction</b>
Moulded depth ... ..	(a) Where D is greater than Table depth (D - Table depth) R =	Moulded Breadth (B)
Stringer plate ... ..	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50}$ =
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam =
Depth for Freeboard (D) =		Difference
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) =$

### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ... ..						Standard Height of Superstructure
„ overhang ... ..						„ „ R.Q.D.
R.Q.D. enclosed ... ..						Deduction for complete superstructure
„ overhang ... ..						Percentage covered $\frac{S}{L} =$
Bridge enclosed ... ..						„ „ $\frac{S_1}{L} =$
„ overhang aft ... ..						„ „ $\frac{E}{L} =$
„ overhang forward ... ..						Percentage from Table, Line A. (corrected for absence of forecastle (if required))
F'cle enclosed ... ..						Percentage from Table, Line B. (corrected for absence of forecastle (if required))
„ overhang ... ..						Interpolation for bridge less than 2L (if required)
Trunk aft ... ..						Deduction =
„ forward ... ..						
Tonnage opening aft ... ..						
„ „ forward ... ..						
Total ... ..						

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ... ..		1					1			Mean actual sheer aft =
$\frac{1}{2}$ L from A.P. ... ..		4					4			Mean standard sheer aft =
$\frac{2}{3}$ L „ ... ..		2					2			Mean actual sheer forward =
Amidships ... ..		4					4			Mean standard sheer forward =
$\frac{2}{3}$ L from F.P. ... ..		2					2			Length of enclosed superstructure forward of amidships =
$\frac{1}{2}$ L „ ... ..		4					4			„ „ aft of „ =
F.P. ... ..		1					1			
Total ... ..										

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

If limited on account of midship superstructure.

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 = Ft.  
Summer freeboard =  
Moulded draught (d) =

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

$\Delta =$

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 ... ..		
Deduction for superstructures ... ..		
Sheer correction ... ..		
Round of Beam correction ... ..		
Correction for Thickness of Deck amidships ... ..		
Other corrections, scantlings, etc. ... ..		

Summer Freeboard =

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 „ „ ... ..



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
<i>Freeboard Deck</i> <i>Bridge Deck</i> <i>Poop</i>										
Description of Hatchway	1	2	3	4	Coal Hatchways	2	3	5	Trimming Hatchways	
Dimensions of Hatchway	25' x 18'	30' x 18'	30' x 18'	25' x 18'	20' x 2'-6"	30' x 18'	30' x 18'	8' x 8'	23' x 2'-3"	
COAMINGS	Height above Deck	48"	9"	9"	48"	9"	32"	32"	18"	9"
	Thickness	11 m/m	11 m/m	11 m/m	11 m/m	11 m/m	11 m/m	11 m/m	11 m/m	48"
	Sides	7" B.A.	✓	✓	7" B.A.	✓	✓	✓	✓	
	Ends	7" B.A.	✓	✓	7" B.A.	✓	✓	✓	✓	
HATCH BEAMS	Number	4	5	5	4		5	5	1	
	Spacing	44" x 9"	as No 1	as No 1	as No 1	✓	310 x 8 m/m	310 x 8	250 x 7 1/2	✓
	Scantling and Sketch	7 1/2 x 6 x 60	as No 1	as No 1	as No 1	✓	6 x 4 x 60	6 x 4 x 60	17 1/2 x 7 1/2 x 10	✓
	Bearing Surface	100 x 75 x 11					100 x 75 x 11	100 x 75 x 11		
FORE AND AFTERS	Number									
	Spacing									
	Unsupported Lengths									
	Scantling* and Sketch									
HATCH COVERS	Material									
	Thickness	65 m/m	65 m/m	65 m/m	65 m/m	65	65	65	65	65
	How fitted									
	Bearing Surface									
Spacing of Cleats										
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?										

*Distance of stem to front coaming of hatchway No 2 Bde dk. 88'*  
*No 3 " 183'*  
*No 5 Poop dk. 278'*

*The closing appliances of the hatchways comply with the provisions of the Convention.*

Particulars of fiddle, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles :—

*— none —*

Particulars of Companionway :— *25 feet from stem : Steel: sill 13"*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :— *30" x 28" ht. of coamings within 1/4 of stem. Ht. of coamings on Bde & Poop 30". no vents in wells. Coaming angles riveted to decks.*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :— *no air pipes in well aft. 3'-6" high in fwd well. 3'-0" on side & poop 18' high: 8'-0" high on bridge. Efficient means of closing provided.*

Particulars of Gangway Cargo and Coaling Ports :—

Particulars of Scuppers and Sanitary Discharge Pipes:—

Openings in sides of ship below freeboard deck are fitted with efficient means of closing. Distance of lowest opening from plating deck 25". Scuppers from main deck under bridge have brass non-return valves at ship's sides.

Particulars of Side Scuttle:—

Particulars of Guard Rails:—

Height of bulwark on freeboard deck 4'-6"  
" " " " Superstructure deck 3'-3½" on B deck.  
" " Guard rails on fore end 3'-3"; sides & ends of poops 3'-3".

Particulars of Gangways, Lifelines, etc.:—

Temporary gangway from bridge ladder to hatch;  
Lifeline rigged when necessary from bridge ladder to fore.

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 ... ..	35'				12.31	
Forward Well ... ..	34'				12.31	

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 ... ..		7.5 mpm	75x78x7.5 m	30"			173"	7-6
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 ... ..	Stomboards, full height, in riveted channels.
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ... ..	Stomboards, full height, in riveted channels.
Bridge, Forward Bulkhead ... ..	Hinged steel doors.
Forecastle Bulkhead ... ..	Hinged steel doors.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks ... ..	Hinged steel and hard wood doors. Sills 22". Springlocks & clips.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	
Deckhouses on Flush Deck Ships ...	

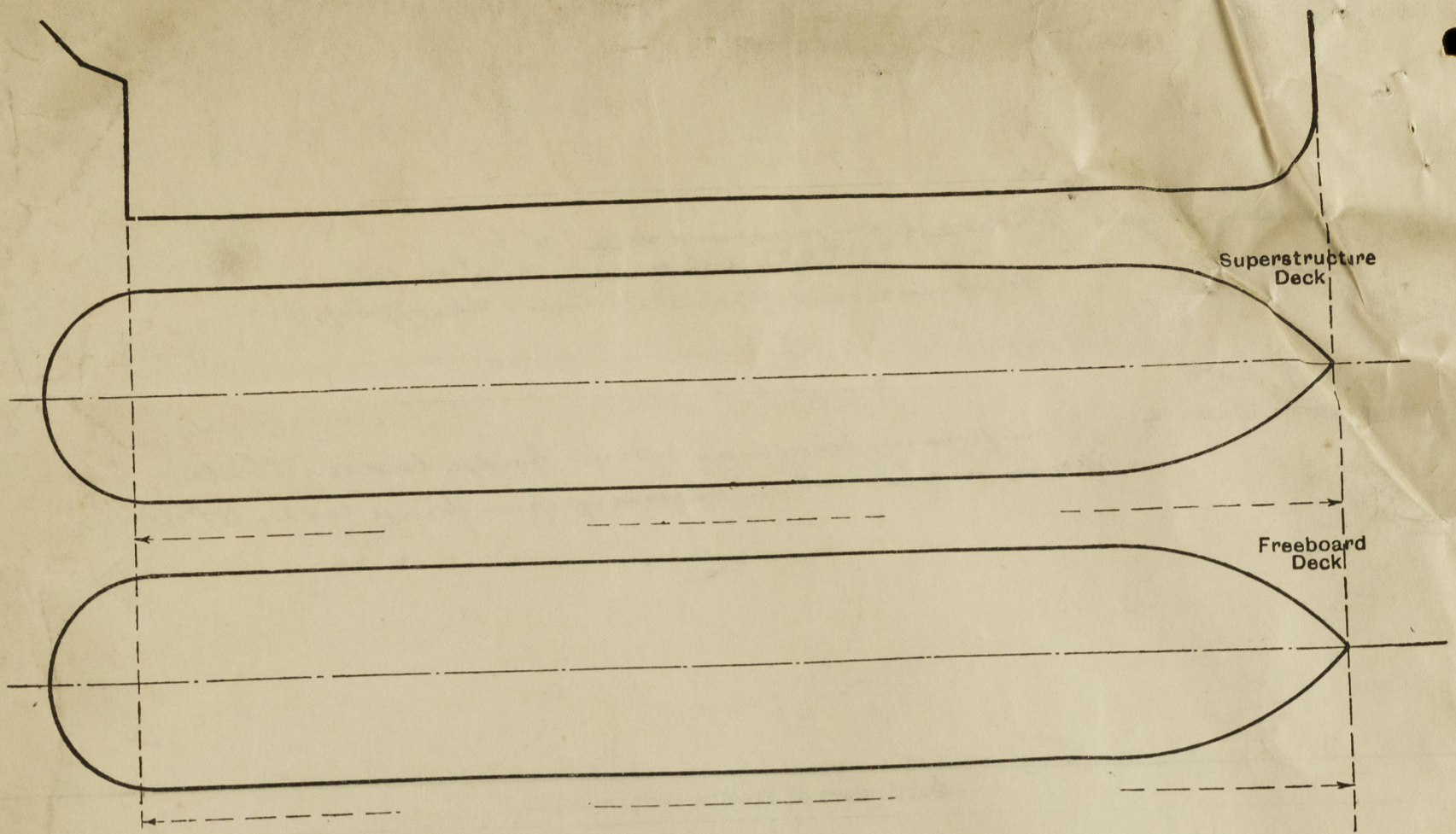


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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



State any special features in the construction of the ship:—

*Timber deck cargo:—*  
 Has the deck sufficient strength to carry the weight of the deck cargo: *Yes*  
 How is the steering arrangement protected: *Steel covers in aft well; Steel covers on bow deck; open on poop but no deck cargo carried on poop.*  
 Is the arrangement satisfactory: *Yes.*  
 Is the bulwark specially stiffened with a view to a timber cargo: *On bridge and keels—yes.*  
 Is the ship fitted with a double bottom within the midship half length: *Yes.*  
 Has this part of the double bottom adequate longitudinal subdivision: *Yes.*  
 Spacing of eye plates for lashings: *Fb. well 8'-0" max; aft well 7'-6" max.*  
 Distance from end bulkhead to first eye plates: *3'-9" in fb. well; 10'-0" ft 6" in aft well.*  
 — The arrangements are considered satisfactory —

From the Danish Certificate on board — *N.C. 553.*

{	From Ugh.	T	420 mm.	a)	118 mm. over b)	T.T. 291 m. m.
	at Side.	S	538 m. m.	b)	—	T.S. 412 m. m.
		V	656 m. m.	c)	118 mm. under b)	T.V. 373 mm.
		VNA	707 mm	d)	169 mm under b)	T.VNA 707 mm.
all F.W. 133 mm.						

*Cert. issued 23/11/31 at Copenhagen.  
 Revised 29/10/34 & was extended  
 on 11/9/34 at Rotterdam by the Danish  
 Consul until 25/10/34.*

Builder's name and yard number

Names of sister ships

Owners

Fee £ *12* : — : —  
 (F. 1/5/35)

Received by me

*9<sup>th</sup> May/35*  
*Kil.*



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