

AGRA
3120

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

9 MAY 1932

Index. No. 31820
(For London Office only.)

5800-48500-0085
003377-005386-0085

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Complete superstructure with tonnage opening
off.
(Type of Superstructures.)

Port of Survey Göteborg

Date of Survey 4th 26th May 1932

Name of Surveyor C. Jerngirth

Particulars of Classification * 100 A.1.
with freeboard.

Ship's Name GEILA Nationality and Port of Registry Swedish
Stockholm Official Number 7229 Gross Tonnage 4571 Date of Build 1925
10 mo.

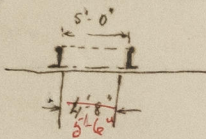
Moulded Dimensions: Length 390' 0" Breadth 32' 6" Depth 28' 0"

Moulded displacement at moulded draught = 85 per cent. of moulded depth. 10510 tons

Coefficient of fineness for use with Tables .755

Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth	...	28.00	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	52.50
Stringer plate	...	0.03	(28.04 - 26.00) 3 = +6.12		Standard Round of Beam = $\frac{B \times 12}{50}$	12.60
Sheathing on exposed deck	...	0.4	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	12.5
$T \left(\frac{L-S}{L} \right) =$					Difference	.10
Depth for Freeboard (D) =	28.04		If restricted by superstructures		Restricted to	
					Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{.10}{4} (1 - .9934) = \text{NIL}$

TONNAGE OPENING.



DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	33.75	33.75	9' 0"	-	33.75
" overhang	25	13			13
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward	350.75	350.75	9' 0"	-	350.75
Forecastle enclosed	350.75	19			19
" overhang	25				
Trunk aft	4' 8"				
" forward					
Tonnage opening aft	5.0	2.59	2 DIFF.		2.59
" forward					
Total	390.00	387.41			387.41

Standard Height of Superstructure 7.40

" " R.Q.D. ✓

Deduction for complete superstructure 41.33

Percentage covered $\frac{S}{L} = 100$

" " $\frac{S_1}{L} = 99.34$

" " $\frac{E}{L} = 99.34$

Percentage from Table, Line A. 99.19

(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) C.S.S.

Deduction = $41.33 \times .9919 = -40.99$

SHEER CORRECTION.

Actual Tween deck height 9.0

Standard " " 7.4

Mean actual sheer aft = excess

Mean standard sheer aft = 19.2

Mean actual sheer forward = excess

Mean standard sheer forward = excess

Length of enclosed superstructure forward of amidships =

" " aft of " = C.S.S.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	49.00	1		49.00	52.5	52.0	1		71.20
$\frac{1}{4}L$ from A.P.	21.80	4		87.20	13.5	15.99	4		126.72
$\frac{2}{4}L$ "	5.39	2		10.78	0.25	4.00	2		15.66
Amidships	-	4		-	0.0	-	4		-
$\frac{3}{4}L$ from F.P.	10.78	2		21.56	12.5	11.35	2		27.88
$\frac{1}{4}L$ "	43.60	4		174.40	45.0	45.41	4		225.52
F.P.	98.00	1		98.00	108.0	107.5	1		126.70
Total				440.94					593.68

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{152.74}{18} \left(.75 - .50 \right) = -2.12$

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 = 28.04

Summer freeboard = 2.93

Moulded draught (d) = 25.14

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.28 = 6.4

Addition for Winter North Atlantic Freeboard (if required) = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 11176$

Tons per inch immersion at summer load water line

$T = 441$

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

$\frac{11176}{40 \times 441} = 6.82 = 6.4$

75% = 85% 95% of load

9160 10530 11920 tons

40.5 41.0 41.7 tons

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{755+68}{1.36} \frac{1.435}{1.36}$

Depth Correction ... 6.12

Deduction for superstructures ... 40.99

Sheer correction ... 2.12

Round of Beam correction ... -

Correction for Thickness of Deck amidships ... -

Other corrections, scantlings, etc. ... -

6.12 43.11 - 36.99

Summer Freeboard = 35.18

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

Tropical Fresh Water Line above Centre of Disc 13.10 = 333

Fresh Water Line " " 6.82 = 173

Tropical Line " " 6.28 = 160

Winter Line below " " 6.28 = 160

Winter North Atlantic Line " " ✓

35.18" = .893 METRES

22.08" = .560 "

28.36" = .720 "

28.90" = .733 "

41.46" = 1.053 "

Winter North Atlantic ✓

21 SEP 1932

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		SH. DECK	UPPER DECK	LOWER DECK					
Dimensions of Hatchway		27'10" x 16'11"	3'8" x 2'8"	3'11" x 3'6"	17'10" x 15'11"				
COAMINGS	Height above Deck	32"	9"	18"	9'2"				
	Thickness	44"	9'3" x 48"	40"	9'3" x 48"				
	Stiffeners	8' x 3' x 48"							
	Brackets, Stays								
HATCH BEAMS	Number	5	5		5				
	Spacing								
	Scantling and Sketch								
	Bearing Surface	3"	3"		3"				
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling and Sketch								
HATCH COVERS	Material	Wood	Wood	Steel	Wood				
	Thickness	3 1/2"	4 1/2"	40"	2 1/2"				
	How fitted	For 1 aft	For 1 aft	Hinged	For 1 aft				
	Bearing Surface	3"	3"	3"	3"				
Spacing of Cleats		24"		31"	21"				
Number of Tarpaulins		2		2	2				

Particulars of fiddle, funnel and ventilator coamings:— *No fiddle (motor ship) Tunnel and ventilators on top of a 8'-0" high casing strongly constructed and supported engine room skylight of steel.*

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

None

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

*18 vent @ 16" diam 6'-2" high coaming 40 thick } to hold fitted with steel covers and canvas covers.
2 " " 24" " 12'-0" " " "
All ventilators efficient supported.
1 vent @ 12" diam 36" high coaming 40 thick to fore peak steel fitted with steel cover and canvas cover.*

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

All air pipes to dbl bottom tanks 2 1/2'-3 1/2' diam steel pipe goose neck 39" high and fitted with means of closing

Particulars of Gangway Cargo and Coaling Ports:—

None

Gella

Particulars of Scuppers and Sanitary Discharge Pipes — *4 scuppers from tween deck space and one from foremast opening space led overboard fitted with non return valves and strong back covers at inner end.
Sanitary discharge pipes led over board above freeboard deck fitted with non return valve and efficient trap at inner end.*

Particulars of Side Scuttles: *No side scuttles below freeboard deck.
Side scuttle in crew space aft fitted with hinged deadlights.*

Particulars of Guard Rails:— *Bulwark in way of crews accommodation 41" high open rails elsewhere 41" high with 3 rods and stanchion spaced 4' 2" apart.*

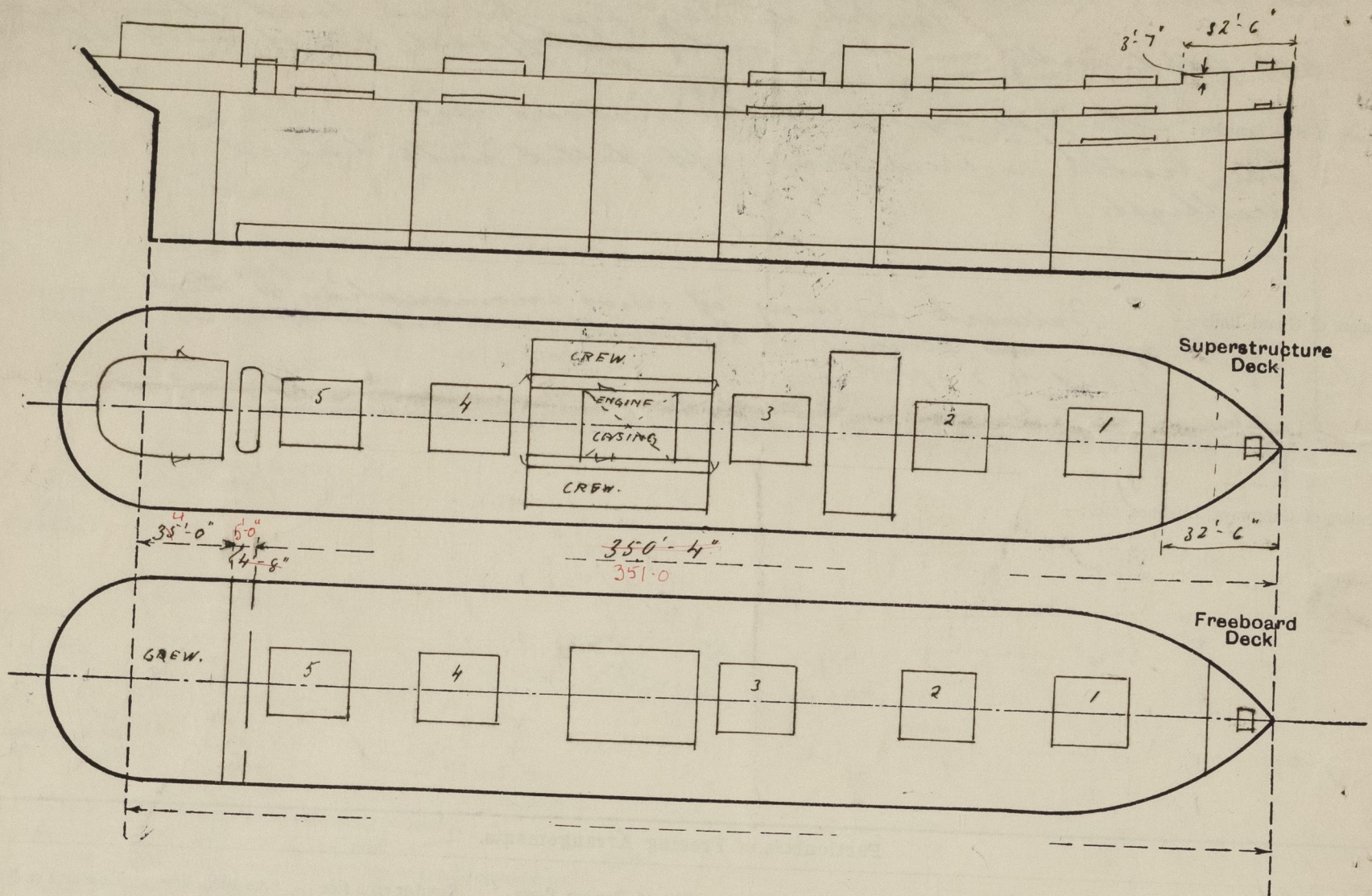
Particulars of Gangways, Lifelines, etc.:—

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	Open rails					
Forward Well	Open rails					
State position of each freeing port (F. and A. position and height above deck edge) } After Well:— 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	None	.32	Wood lining			None		9'-0"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead	None	.32	3 1/2" x 3' x 32 L	28"	None	8'-9" x 3'-0"	None	9'-0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Protected all round by deckhouse							
Exposed Machinery Casings on Superstructure Decks	None	.28	Flanged plate 3' x 3' x 28 L	28"	Permit top to beam bottom	5'-2" x 2'-4"	12"	8'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	"	.28	Flanged plate 3' x 3' x 28 L	28"	Permit top to beam bottom	None		9'-0"
Deckhouses on Flush Deck Ships	"	.26	Wood lining			5'-2" x 1'-11"	13"	8'-0"

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	No opening
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	Sliding boards in riveted channels full height
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Steel doors capable of being manipulated from both sides
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	No opening
Deckhouses on Flush Deck Ships	Wood doors (Teak) capable of being manipulated from both sides

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:—

Tonnage opening hatch 5'-0" x 17'-0" coaming 9" x 3 1/2" x 48" wood covers 2 1/2" thick tarpaulins and temporary means of closing.

Freeing port in tonnage opening space 2'-10" x 1'-9" port & starboard with hinged shutters.

This vessel has been surveyed on floating dock and condition examined in general.

Builder's name and yard number *A.B. Lindholmens Motala N° 923*

Names of sister ships

Owners *Arkiv. Prenska Ostasiatiska Komp.*

Fee *kr 390-*

Received by me



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