

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. 35780.
(For London Office only.)

SEP -6 1936

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Complete Superstructure Deck without Tonnage Opening
Deck and Bridge on Superstructure Deck
(Type of Superstructures.)

Port of Survey Copenhagen (Nakskov).

Date of Survey 2nd 6th 1936

Name of Surveyor V. J. Lyderseu.

Particulars of Classification 100 A.1
with freeboard
(Class contemplated).

Ship's Name "SELANDIA"
(Nakskov Yard No 86)

Nationality and Port of Official Number Danish British
Copenhagen-Nakskov

Gross Tonnage 16570

Date of Build 1938

Moulded Dimensions: Length 425.0' Breadth 63.0' Depth 36.0'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 16570 tons

Coefficient of fineness for use with Tables 714

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	36.00'	(a) Where D is greater than Table depth (D-Table depth) R = (36.04 - 28.33) 3 = + 23.13"		Moulded Breadth (B)	63.0'
Stringer plate (.44")	.04	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓		Standard Round of Beam = $\frac{B \times 12}{50}$	15.12"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures ✓		Ship's Round of Beam	6"
Depth for Freeboard (D) =	36.04			Difference = Deficient	9.12"
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$= \frac{9.12}{4} \times .4420 = + 1.01$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
" overhang ...	✓				
R.Q.D. enclosed ...	✓				
" overhang ...	✓				
Bridge enclosed <u>Equival.</u>	175.17	175.17	9.0'		175.17
" overhang aft ...	1.51	1.13			1.13
" overhang forward					
F'cle enclosed ...	60.50	60.50	7.5'		60.50
" overhang ...					
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" " forward	✓				
Total ...	237.18	236.80			236.80

Standard Height of Superstructure 7.50'

" " R.Q.D. ✓

Deduction for complete superstructure 42.00"

Percentage covered $\frac{S}{L} = 55.80\%$

" " $\frac{S_1}{L} = 55.72$

" " $\frac{E}{L} = 55.72$

Percentage from Table, Line A. ✓
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 39.99
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) ✓

Deduction = $42.00 \times .3999 = - 16.80$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	52.50	1		52.50	53.5"	53.50	1		53.50
$\frac{1}{2}$ L from A.P. ...	23.36	4		93.44	24.5"	24.50	4		98.00
$\frac{3}{8}$ L " ...	5.775	2		11.55	5.03"	5.03	2		10.06
Amidships ...	—	4		—	0	—	4		—
$\frac{3}{8}$ L from F.P. ...	11.55	2		23.10	12.03"	12.03	2		24.06
$\frac{1}{2}$ L " ...	46.73	4		186.92	48"	48.00	4		192.00
F.P. ...	105.00	1		105.00	107.5"	107.50	1		107.50
Total ...				472.51					485.12

Mean actual sheer aft = Excess
Mean standard sheer aft = Excess

Mean actual sheer forward = Excess
Mean standard sheer forward = Excess

Length of enclosed superstructure forward of amidships = $> .1L$

" " aft of " = $> .1L$

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{12.61}{18} (.75 - .2790) = - .33"$$

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.

Ft.

Depth to Freeboard Deck = 36.04

Summer freeboard = 11.08

Moulded draught (d) = 24.96

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.24 = 6 $\frac{1}{4}$ "

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 Fresh Deck (if required)

Correction for coefficient $\frac{.74 + .68}{1.36} = \frac{1.394}{1.36}$

	+	-
Depth Correction ...	23.13	—
Deduction for superstructures ...	—	16.80
Sheer correction ...	—	.33
Round of Beam correction ...	1.01	—
Correction for Thickness of Deck amidships ...	—	—
Other corrections, scantlings, etc. ...	44.66	—
	68.80	17.13

Summer Freeboard = 123.00

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

Tropical Fresh Water Line above Centre of Disc ...	...
Fresh Water Line " " ...	...
Tropical Line " " ...	...
Winter Line below " " ...	...
Winter North Atlantic Line " " ...	...

Tropical Fresh Water Freeboard ...	...
Fresh Water " " ...	...
Tropical " " ...	...
Winter " " ...	...
Winter North Atlantic " " ...	...

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	File	Upp. Deck	Upp. Deck	Boat Deck	Upp. Deck	Upp. Deck	Upp. Deck	Upp. Deck	Hatch
Dimensions of Hatchway	25'3" x 18'0"	25'3" x 18'0"	29'8" x 22'0"	24'11" x 18'0"	Trunk	34'11" x 16'0"	14'11" x 18'0"	14'11" x 18'0"	2'6" x 2'6"
COAMINGS	Height above Deck	32 1/4"	18"	32 1/4"	34 1/2"	Plating	32 1/4"	32 1/4"	18"
	Thickness	44"	44"	44"	44"	26"	44"	44"	40"
	Stiffeners	7'3" x 40"	44"	7'3" x 40"	44"	26"	7'3" x 40"	7'3" x 40"	40"
	Brackets, Stays	3 off	✓	2 off	2 off	skiffed	3 off	1 off	✓
HATCH BEAMS	Number	4	4	5	4	by	6	3	✓
	Spacing	ab. 5'	ab. 5'	ab. 5'	ab. 5'	3 1/2' x 1 1/2'	ab. 5'	ab. 5'	✓
	Scantling and Sketch	4'3" x 44"	4'3" x 44"	5'3" x 46"	4'3" x 44"	spaced	4'3" x 46"	4'3" x 44"	✓
	Angles	16 1/8" x 36"	12" x 32"	14" x 34"	12" x 32"	21" sp.	13" x 34"	12" x 32"	✓
FORE AND AFTERS	Webbs	16 1/8" x 36"	12" x 32"	14" x 34"	12" x 32"	✓	13" x 34"	12" x 32"	✓
	Bearing Surface	3"	3"	3"	3"	✓	3"	3"	✓
	Number	✓	✓	✓	✓	✓	✓	✓	✓
	Spacing	✓	✓	✓	✓	✓	✓	✓	✓
HATCH COVERS	Material	Wood	Wood	Wood	Wood	Wood	Wood	Wood	✓
	Thickness	3"	3"	3"	3"	3"	3"	3"	✓
	How fitted	For. & aft.	For. & aft.	For. & aft.	For. & aft.	For. & aft.	For. & aft.	For. & aft.	✓
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	✓
Spacing of Cleats	24"	24"	24"	24"	24"	24"	24"	24"	✓
Number of Tarpaulins	3	3	3	3	3	3	3	3	✓

*Are wood fore and afters steel shod at all bearing surfaces? *None fitted.*
 Are battens and wedges efficient and in good condition? *yes.*
 Are tarpaulins in good condition and in accordance with rule requirements? *yes.*
 Are lashings provided in accordance with rule requirements? *yes.*

Particulars of fiddle, funnel and ventilator coamings:— *No fiddle openings. No funnel.*
Machinery skylight of steel substantially constructed.

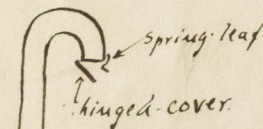
Particulars of Flush Bunker Scuttles:— *None fitted.*

Particulars of Companionways:— *None fitted.*

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

File	Draw.	Coaming	Bridge Deck	Upp. Deck
1	12"	36" x 34"	2 off 12" diam 36" x 34" coam.	4 off 16 1/2" diam 36" x 40" coam.
2	21"	36" x 40"	2 off 12" - 36" x 36"	
3	12"	36" x 34"	2 off 15" diam 30" x 36" coam.	Wood Plugs & canvas covers supplied.
Forw. Well			2 off 9" - 30" x 34"	to all ventilators.
1	21"	16 1/8" x 40" well skiffed	2 - 10" - 30" x 34"	

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
To all F.W. tanks. Opening 36" above deck. *To Oil fuel tanks. All air pipes fitted with "Tiro" vacuum & Relief Valve "D" type.*



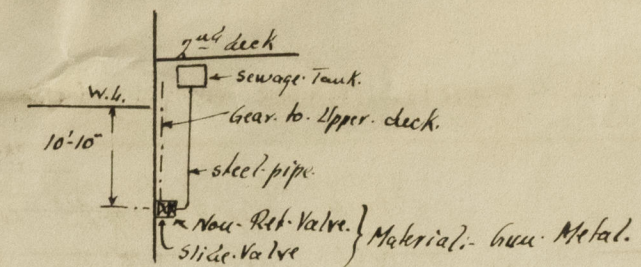
Particulars of Gangway Cargo and Coaling Ports:— *None fitted.*

Particulars of Scuppers and Sanitary Discharge Pipes:—

No scuppers through ship's sides from 2nd & 3rd decks.

Sanitary pipes carried to sewage tank in motor space.

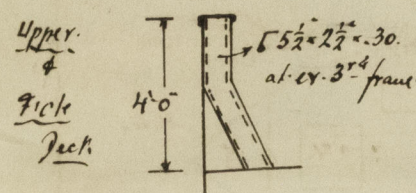
Two off port & starb.



Particulars of Side Scuttles:—

Side scuttles through ship's sides efficiently constructed & all fitted with a permanently attached hinged dead light.

Particulars of Guard Rails:—



Bridge deck steel bulwark 4' high & well skiffed.

Boat & Fore deck 4' railing rods sp. 8" apart.

Particulars of Gangways, Lifelines, etc.:— *None fitted.*

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	61'11"	4'0"	3'3" x 0'11"	7	20.93 sq	6.10 sq
State position of each freeing port (F. and A. position and height above deck edge) After Well:— <i>Bridge bld</i> 6'6" 16'0" 23'9" 31'3" 38'0" 44'10" 51'10"						
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— <i>Bar rail bar fitted.</i>						
Additional area where sheer is less than standard.						

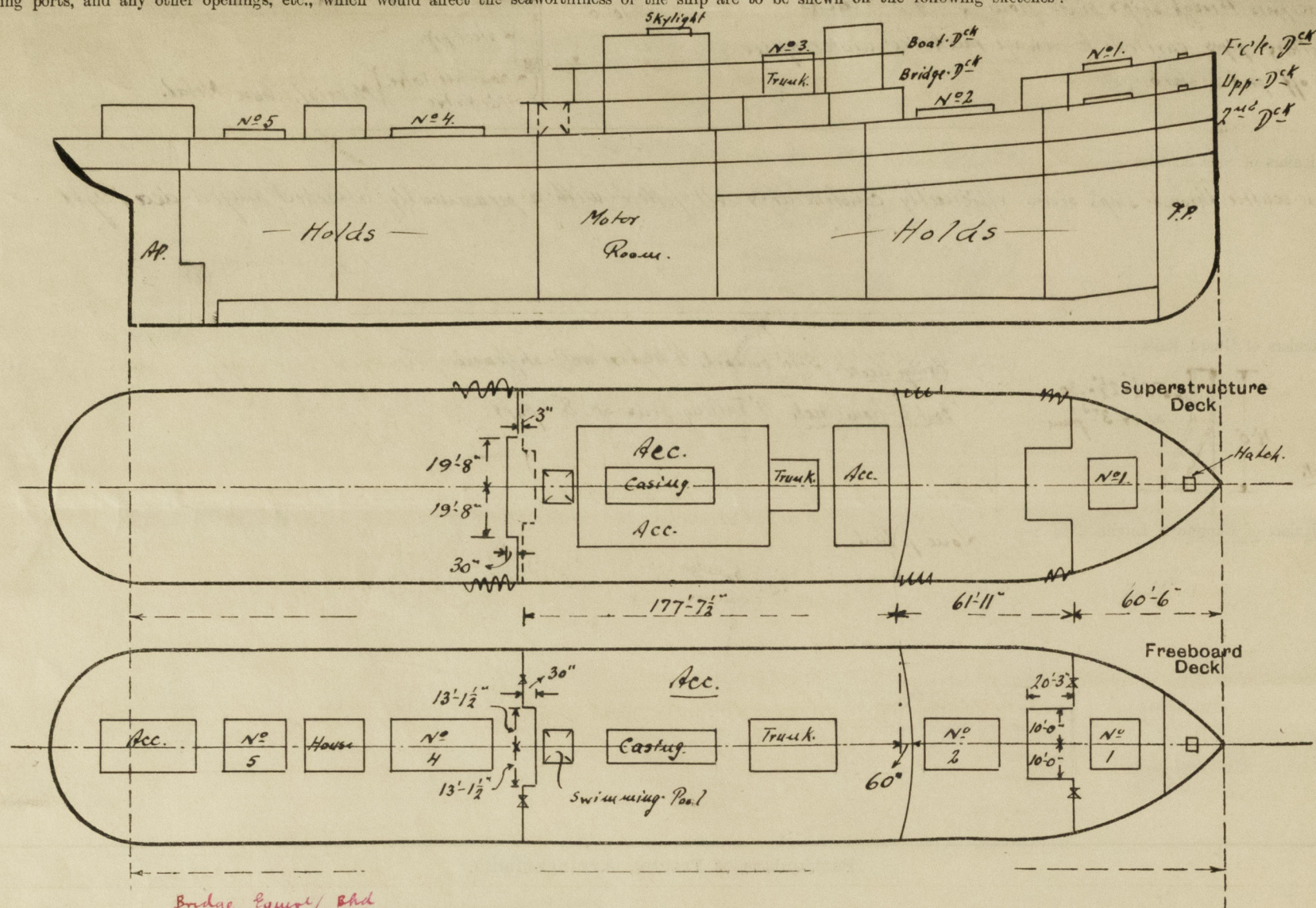
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	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	32"	32"	5" x 2 1/2" x 36"	27"	Take boundary bars.	5'11" x 2'9"	18"	9'0"
Bridge, Forward Bulkhead	44"	44"	9" x 3 1/2" x 48"	27"	Lugs top and bottom.	None	✓	9'0"
Forecastle Bulkhead	32"	32"	5" x 2 1/2" x 36"	21" x 26"	Take boundary bars.	5'8" x 3'1" p.s.	15" p.s.	7'6"
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	Hinged hard wood doors, manipulated from both sides.
Bridge, Forward Bulkhead	No openings.
Forecastle Bulkhead	Wood boards in riveted channels for full height.
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	✓

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:—



Bridge Equival. Bld

$$\begin{aligned} \text{Length of Bridge} &= 177.625 \\ \text{Recess} &= \frac{26.25 \times 3.00}{62.50} = \frac{1.260}{176.365} \\ &= \frac{3.333}{179.698} \end{aligned}$$

$$\begin{aligned} \text{Swimming bath} &= \frac{16.58 \times 17.08}{62.50} = \frac{179.698}{4.53} \\ &= \frac{175.168}{175.168} = \text{equiv. length.} \\ \text{Overhang} &= .25 + 1.26 = 1.51' \end{aligned}$$

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

Deck sheathing. Upper deck. within bridge:— $1\frac{1}{2}$ " Litosilo, outside bridge—no sheathing. ✓
Bridge deck:— $2\frac{1}{2}$ " Teak. ✓
Flick. " :— No sheathing. ✓

Vessel is classed "with freeboard".

Vessel has cruiser stern.

Vessel carries Passenger Certificate.

Swimming pool on bridge deck. $16'-7" \times 17'-1"$ and full depth of bridge. No covering. ✓

Builder's name and yard number *Messrs. Nakskov Skibsværft. Yard N° 86.*

Names of sister ships *None.*

Owners *A/S. Det Østasiatiske Kompagni, Copenhagen.*

Fee £ *No fee.*

Received by me ✓



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