

URGENT

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 34226
(For London Office only.)

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MAR -8 1939

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>ROTTERDAM</u>	
having <u>POOP & FORECASTLE.</u>					Date of Survey <u>4-6-7/3 '39</u>	
(Type of Superstructures.)					Name of Surveyor <u>W. G. Gifford</u>	
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification <u>T100A1</u> <u>CARRYING PETROLEUM IN BULK.</u>	
<u>"SANDEFJORD"</u>	<u>NORWEGIAN</u> <u>SANDEFJORD</u>	<u>98206</u>	<u>8038</u>	<u>1929-2</u>		
Moulded Dimensions: Length <u>440.00'</u> Breadth <u>59.00'</u> Depth <u>35.00</u>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>17740</u> tons						
Coefficient of fineness for use with Tables <u>.804</u>						
Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth <u>35.0</u>			(a) Where D is greater than Table depth (D - Table depth) R = <u>(35.07 - 29.33) 5.74 = +17.22</u>		Moulded Breadth (B) <u>59.0</u>	
Stringer plate <u>.07</u>			(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50} = \frac{59.0 \times 12}{50} = 14.16$	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$			If restricted by superstructures		Ship's Round of Beam = <u>14.76</u>	
Depth for Freeboard (D) = <u>35.07</u>					Difference <u>.60</u>	
					Restricted to	
					Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.60}{4} \times .699 = -.10$	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	<u>95'-8"</u>	<u>95.67</u>	<u>8'-0"</u>		<u>95.67</u>	Standard Height of Superstructure <u>7.5'</u>
" overhang						" " R.Q.D. <u>✓</u>
R.Q.D. enclosed						Deduction for complete superstructure <u>42"</u>
" overhang						Percentage covered $\frac{S}{L} = \frac{95.67}{312.42} = 30.62\%$
Bridge enclosed... ..						" $\frac{S_1}{L} = 30.10\%$
" overhang aft						" $\frac{E}{L} = 30.10\%$
" overhang forward						Percentage from Table, Line A.
F'cle enclosed	<u>36'-9"</u>	<u>36.75</u>	<u>8'-0"</u>		<u>36.75</u>	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B. <u>TANKER</u> <u>21.10</u>
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = <u>42" x .211 = -8.86"</u>
" " forward						
Total	<u>132.42</u>	<u>132.42</u>			<u>132.42</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<u>54.00</u>	1		<u>54.00</u>	<u>36.50</u>	<u>36.50</u>	1		<u>36.50</u>	Mean actual sheer aft = <u>Deficient</u>
$\frac{1}{2}$ L from A.P.	<u>24.03</u>	4		<u>96.12</u>	<u>4.80</u>	<u>4.80</u>	4		<u>19.20</u>	Mean actual sheer forward = <u>Deficient</u>
$\frac{2}{3}$ L "	<u>5.94</u>	2		<u>11.88</u>	<u>1.5</u>	-	2		-	Mean standard sheer forward
Amidships		4			-	-	4		-	Length of enclosed superstructure forward of amidships =
$\frac{2}{3}$ L from F.P.	<u>11.88</u>	2		<u>23.76</u>	<u>5</u>	-	2		-	" " aft of " = <u>Tanker</u>
$\frac{1}{2}$ L "	<u>48.06</u>	4		<u>192.24</u>	<u>18.00</u>	<u>18.00</u>	4		<u>72.00</u>	
F.P.	<u>108.00</u>	1		<u>108.00</u>	<u>72.00</u>	<u>72.00</u>	1		<u>72.00</u>	
Total				<u>486.00</u>	<u>199.70</u>				<u>199.70</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{286.30}{18} \left(.75 - \frac{1505}{5995} \right) = +9.53$

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 = 35.07

Summer freeboard = 8.08

Moulded draught (d) = 26.99

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = $\frac{26.99}{4} = 6.75 = 6\frac{3}{4}$ "

Addition for Winter North Atlantic Freeboard (if required) = $6.75 + 4.40 = 11.15 = 11\frac{1}{4}$ "

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 16060$

Tons per inch immersion at summer load water line

$T = 53.77$

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

= $\frac{16060}{40 \times 53.77} = 7.47$ "

= $7\frac{1}{2}$ "

= $190 \frac{m}{m}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{804 + .68}{1.36} = \frac{1.484}{1.36}$

Depth Correction 17.22

Deduction for superstructures 8.86

Sheer correction 9.53

Round of Beam correction 10

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

72.50

79.11

26.75

8.96

+ 17.79

Summer Freeboard = 96.90

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

Tropical Fresh Water Line above Centre of Disc $11\frac{1}{4}$ " = $361 \frac{m}{m}$

Fresh Water Line " " $7\frac{1}{2}$ " = 190 "

Tropical Line " " $6\frac{3}{4}$ " = 171 "

Winter Line below " " $6\frac{3}{4}$ " = 171 "

Winter North Atlantic Line " " $11\frac{1}{4}$ " = 285 "

Tropical Fresh Water Freeboard $6'-10\frac{1}{4}" = 2103$ "

Fresh Water " " $7'-5\frac{1}{2}" = 2274$ "

Tropical " " $7'-6\frac{3}{4}" = 2293$ "

Winter " " $8'-7\frac{1}{4}" = 2635$ "

Winter North Atlantic " " $9'-0\frac{1}{4}" = 2749$ "

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway			FORE HOLD	CARGO TANKS CENTRE & SIDE	FORE	SMALL HATCHES POOP				
Dimensions of Hatchway			6'-8" x 9'-0"	2'-3" x 5'-6"	2'-0" x 2'-6"	2'-0" x 2'-6"	3'-0" x 3'-2"			
COAMINGS	{	Height above Deck	32	32"	24"	21"	21"	3 studded manholes are fitted with 3/4" corner or deck (p. 4) in way of forward side tanks & forward coff.		
		Thickness } Sides	3/8"	3/8"	3/8"	3/8"	3/8"			
		Stiffeners	✓	✓	✓	✓	✓			
		Brackets, Stays	✓	✓	✓	✓	✓			
HATCH BEAMS	{	Number						2 studded manholes similar to above at after cofferdam & cross bunker.		
		Spacing								
		Scantling and Sketch								
		Bearing Surface	✓	✓	✓	✓	✓			
FORE AND AFTERS	{	Number								
		Spacing								
		Unsupported Lengths								
		Scantling* and Sketch								
		Bearing Surface	✓	✓	✓	✓	✓			
HATCH COVERS	{	Material	Steel	Steel	Steel	wood	wood	3 studded manholes are fitted with 3/4" corner or deck (p. 4) in way of forward side tanks & forward coff.		
		Thickness	1/2"	1/2"	1/2"	2 1/2"	2 1/2"			
		How fitted	Angled with 5/8" x 3/4" R.	Angled	Angled	2 1/2"	2 1/2"			
		Bearing Surface	✓	✓	✓	✓	✓			
Spacing of Cleats						20"	24"			
Number of Tarpaulins						2	2			
*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? yes										
Are lashings provided in accordance with rule requirements? ✓										

Particulars of fiddle, funnel and ventilator coamings:—
 Stokhold gratings have hinged steel covers
 Engine room skylight of steel on raised casing 16 feet above poop
 Pump room skylight of steel strongly constructed
 Ventilator and funnel efficient

Particulars of Flush Bunker Scuttles:— none

Particulars of Companionways:—
 Pump room steel watertight door manipulated both sides
 Engine room doors on poop steel hinged, manipulated both sides
 Engine room doors in poop steel hinged, manipulated both sides
 Companion to accommodation 2 poop of wood manipulated both sides
 Portable steel protection plate provided for accommodation doors.

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

Fore Deck:
 4 @ 12" diam 36" high 3/8 thick
 3 C.L. 4" diam 7" — to store
 Pump room 2 @ 20" diam 10" high 3/8 thick
 5 C.L. 4" diam 7" — to ballast we.
 Poop:
 6 @ 12" diam 36" high
 1 @ 9" diam 36" —
 5 C.L. 4" diam 7" — to ballast we.
 Closing appliances are provided.

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

Fore Deck:
 1. 3 1/2" dia 19" high
 Forward 2. 6" dia 24" —
 aft deck 2. 6" dia 24" —
 4. 5 1/2" dia 7'-6" —
 Poop:
 4 @ 2 1/2" dia 19" high F.W. Tank
 2 @ 2" dia 19" — A Deck

Particulars of Gangway Cargo and Coaling Ports:—

none

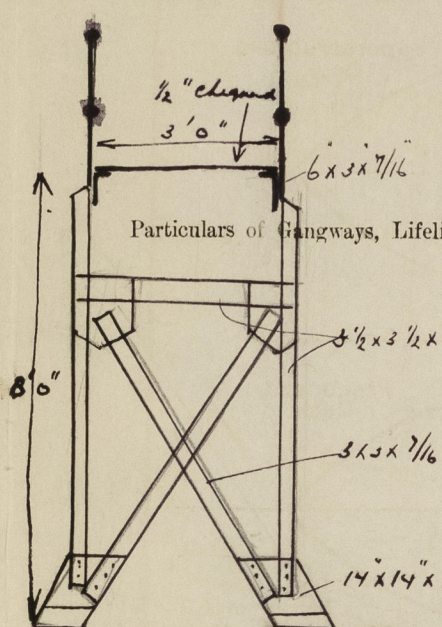
Particulars of Scuppers and Sanitary Discharge Pipes:—

1 (p. 4) Toole 6 ft below H. deck single valve
 2 (p. 4) Midships 6 ft — " — " —
 2 (p. 4) Poop 6 ft — " — " —

Particulars of Side Scuttles:—

3 P.A.S. Fore and 16 p. 17.5 poop
 12" dia 20" below deck
 Hinged glass and hinged deadlight fitted.

Particulars of Guard Rails:—



Poop and forecastle
 3 rails & stanchion 3'-6" high 4'-2" apart.

Particulars of Gangways, Lifelines, etc.:—

For and aft gangway from poop to bridge house is supports about 10 feet apart
 bridge to Forecastle 9 " —

Guard rail
 2 rail & stanchion 3'5" high 6" apart

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	} 309 ft	average 4'6"	19 @ 5'0" x 2'-0"	28	446 sqft	309 sqft
Forward Well			9 @ 8'0" x 2'-0" average			
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: 32 bars, 1 1/8" thick Additional area where sheer is less than standard. 2 bars fitted where height of p. port not exceeding 29", other wise 3 rods.						

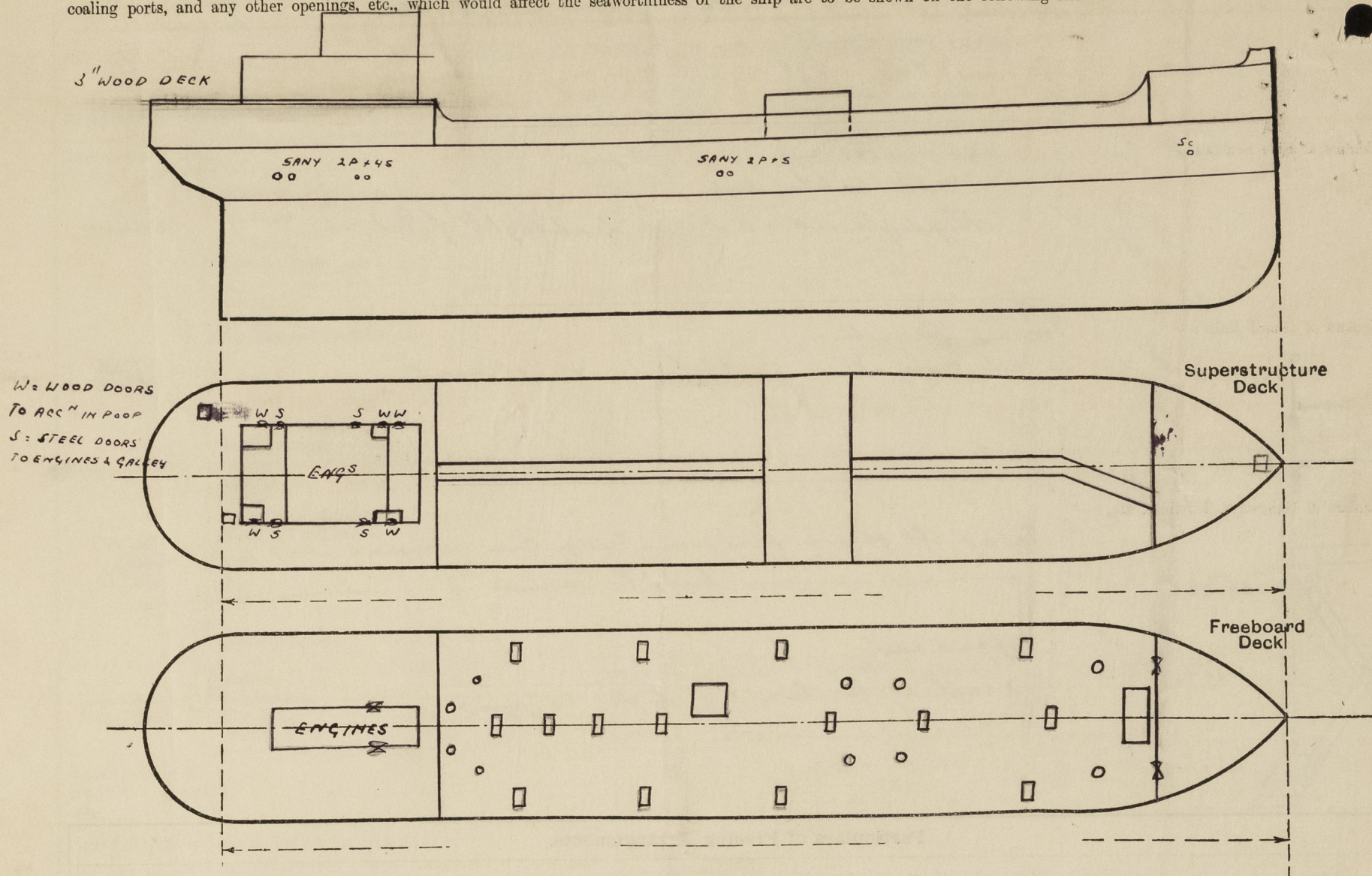
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	...	7/16"	10 x 3 1/2 x 1/2 B.P.	27"	lugs 4 x 6.	none	4"	8'-0"
Raised Quarter Deck Bulkhead	...	✓						
Bridge, After Bulkhead	...	✓						
Bridge, Forward Bulkhead	...	✓						
Forecastle Bulkhead	...	5/16"	3 1/2" Flange	20"	none	5'-1" x 2'-1"	14"	0'-0"
Trunk, Aft	...	✓						
Trunk, Forward	...	✓						
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...	3/8"	5 x 3 x 3/8	32"	none	5'-1" x 2'-1"	11"	8'-0"
Exposed Machinery Casings on Superstructure Decks	...	3/8"	5 x 3 x 3/8	32"	none	5'-1" x 2'-4"	12"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	5/16"	5 x 3 x 3/8	32"	none	5'-1" x 2'-4"	12"	8'-0"
Deckhouses on Flush Deck Ships	...							

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	...	None No openings
Raised Quarter Deck Bulkhead	...	✓
Bridge, After Bulkhead	...	✓
Bridge, Forward Bulkhead	...	✓
Forecastle Bulkhead	...	Hinged doors of steel manipulated both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...	P. room — " — W.T. — " —
Exposed Machinery Casings on Superstructure Decks	...	Hinged — " — " —
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:—



State any special features in the construction of the ship:— The vessel has been placed in dry dock for condition.

The freeing port area has been made in accordance with Rule 103, 1st paragraph stating that where bulwarks only are fitted the freeing port area should be at least 25% of the area of the bulwarks.

The Owners have requested to receive the new preboard assignment by cablegram to enable them to have the preboard marked and verified before the vessel leaves this port.

Builder's name and yard number A.B. GOTAWERKEN GOTHENBURG

Names of sister ships

Owners VIRIKS REDERI A/S (H. VIRIKS, MGR)

Fee 228.-

Received by me



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