

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~ *motor vessel*
having *Bridge & forecastle*
(Type of Superstructures.)

Ship's Name SOMMELSDYK	Nationality and Port of Registry Dutch Rotterdam	Official Number ✓	Gross Tonnage not available	Date of Build 1939
Moulded Dimensions: Length 142.049 x Breadth 18.898 Depth 12.344 Z				
Moulded displacement at moulded draught = 85 per cent. of moulded depth (10490 Z) at 20.670 tons m ³				
Coefficient of fineness for use with Tables .733 ✓				

Port of Survey **Odense**
Date of Survey **September 1939**
Name of Surveyor **S. Sandesen**
Particulars of Classification **+100 A 1**
contemplated

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth 12.344 Z	(a) Where D is greater than Table depth (D - Table depth) R = 2.950	Moulded Breadth (B) 18.898 Z
Stringer plate ... .. .020 Z	8.33 (12.420 - 9.449) 30 = +434 mm.	Standard Round of Beam = $\frac{B \times 12}{50} =$ 348 ✓
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$.046 x .7316 .056	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Ship's Round of Beam = 305 ✓
Depth for Freeboard (D) = ✓ 12.420	If restricted by superstructures	Difference .43 ✓
		Restricted to
		Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ $\frac{.43}{4} \times .7316 = +13$ mm.

✓ to centre of midship block

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed	—	—	—	—	—
„ overhang	—	—	—	—	—
R.Q.D. enclosed	—	—	—	—	—
„ overhang	—	—	—	—	—
Bridge enclosed	2436.6 at sides 25.480	2591 at sides	25.480	25.480	25.480 ✓
„ overhang aft	26040 in ft	2438 in ft	—	—	—
„ overhang forward	no overhangs	—	—	—	—
Fore enclosed	12650 ✓	12.650 ✓	2286 x 2.286	12.628 ✓	12.628 ✓
„ overhang	—	—	2.290	—	—
Trunk aft	—	—	—	—	—
„ forward	—	—	—	—	—
Tonnage opening aft	—	—	—	—	—
„ forward	—	—	—	—	—
Total	38.130 ✓	38.130 ✓	—	—	38.108 ✓

Standard Height of Superstructure **2.290** ✓
„ „ R.Q.D. **✓**
Deduction for complete superstructure **1064** ✓
Percentage covered $\frac{S}{L} =$ **26.84** ✓
„ „ $\frac{S_i}{L} =$ **26.84** ✓
„ „ $\frac{E}{L} =$ **26.83** ✓
Percentage from Table, Line A. **13.41** ✓
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. **14.00** ✓
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required) **13.41 + $\frac{25.48}{28.41} \times 3.59$**
Deduction = **1064 x .1663 = -174 mm** ✓ **3.22**
13.41
16.63

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	1434 ✓	1	1434 ✓	1250 ✓	1250 ✓	1	1250 ✓
$\frac{1}{4}$ L from A.P.	638 ✓	4	2552 ✓	620 ✓	620 ✓	4	2480 ✓
$\frac{2}{4}$ L „	159 ✓	2	318 ✓	205 ✓	205 ✓	2	410 ✓
Amidships	✓	4	✓	0	—	4	✓
$\frac{3}{4}$ L from F.P.	319 ✓	2	638 ✓	330 ✓	330 ✓	2	660 ✓
$\frac{1}{4}$ L „	1244 ✓	4	5108 ✓	1175 ✓	1145 ✓	4	4400 ✓
F.P.	2844 ✓	1	2844 ✓	2630 ✓	2630 ✓	1	2630 ✓
Total	—	—	12924 ✓	—	—	—	12130 ✓

Mean actual sheer aft = **Deficient**
Mean standard sheer aft = **Deficient**
Mean actual sheer forward = **Deficient**
Mean standard sheer forward = **Deficient**
Length of enclosed superstructure forward of amidships = **6158** ✓
„ „ aft of „ =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ **$\frac{1994}{18} \times (.75 - .1342) = +24$ mm.** ✓
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 = 12.364 ✓ Summer freeboard = 2.940 Moulded draught (d) = 9.394 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = 196 mm = 20 cms ✓ Addition for Winter North Atlantic Freeboard (if required) =	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ 18200 M ³ Tons per inch immersion at summer load water line $T =$ 22.24 Deduction = $\frac{\Delta}{40 T}$ inches = 204 mm = 20 cms ✓	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.433 + .68}{1.36} = \frac{1.413}{1.36}$ Depth Correction 434 ✓ Deduction for superstructures 144 ✓ Sheer correction 24 ✓ Round of Beam correction 13 ✓ Correction for Thickness of Deck amidships 56 ✓ Other corrections, scantlings, etc. 444 233 + 544 ✓ Summer Freeboard = 2943 mm. ✓
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	40 cms	Tropical Fresh Water Freeboard	254 "
Fresh Water Line „ „	20 "	Fresh Water „ „	244 "
Tropical Line „ „	20 "	Tropical „ „	244 "
Winter Line below „ „	20 "	Winter „ „	314 "
Winter North Atlantic Line „ „	✓	Winter North Atlantic „ „	✓

" Sommelsdyk.

[illegible]

name ✓

access to crew spaces aft inside deckhouse on fuelboard deck, openings in the deckhouse fitted with 2' plank doors of teak capable of being manipulated from both sides and height of sill 610 ± above wood deck.

all coamings made of steel and securely riveted to steel decks.
all ventilators fitted with steel cowls, wood plugs and canvas covers except where fitted with cast steel swan-necks in which case hinged steel covers are fitted.
For particulars of coamings please see below.

all air pipes made of galv. steel or cast steel and fitted with goose necks, wire gauge and approved closing appliances.

Height of openings above wood decks are:- F'dl deck:- 460-630 Z. Foreb. deck:- 920 Z

(In the case of the forebend deck the height of air pipes are measured to the underside of the bend as these pipes have never been fitted with snifting holes)

name

Appendix :-

For'd :- 2-22" diam. with 36" x 40" coaming ✓
2-18" diam. with 36" x 36" coaming ✓
2-21" " " constructed as derrick posts ✓
4-9" " " } with shore cast steel cross-mechs. ✓
aft :- 6-9" " " } with openings 36" above wood decks. ✓
2-21" " " } constructed as derrick posts ✓
2-24" " " }
2-9" " " with 36" x 32" coaming ✓
2-6" " " " 36" x 30 " " ✓
2-14" " " " 36" x 36 " " ✓

Sumpers: - Forward sumpers each side with screw down in stern valves controlled from upper deck.
 " Upper green decks:- 4-2" sumpers each side leading to bilges and fitted with valves controlled from upper deck ✓
 " Insulated spaces:- 3-2" above " " " " E.R. bilge keels ✓
Sanitary discharge pipes: - From spaces above M.O.S.:- Pipes of steel fitted with back balanced storm valves of bronze ✓
 -- Prop space -- 2" decks:- " " " " ordinary storm valve and one back balanced
 storm valve each (all valves of bronze). ✓

Particulars of Side Scuttles:—

all side scuttles fitted with 28-32 Z glass, hinged steel deadlights and steel plugs.
Vertical distance of sill of lowest side scuttle above top of keel = 9880 Z ✓

upper deck:- open rails 1140 Z high with 4 rods spaced ab. 220 Z and standards spaced ab. 1400 Z except in way of counter where steel bulwark 1150 Z high of 6 Z plate with 130 x 65 x 10 E railbar and 9 Z plate standards with 75 Z flange spaced ab. 1200 Z ✓

Erection:- open rails on deckhouse aft, bridge and f'cle with particular as for open rails on lower deck.

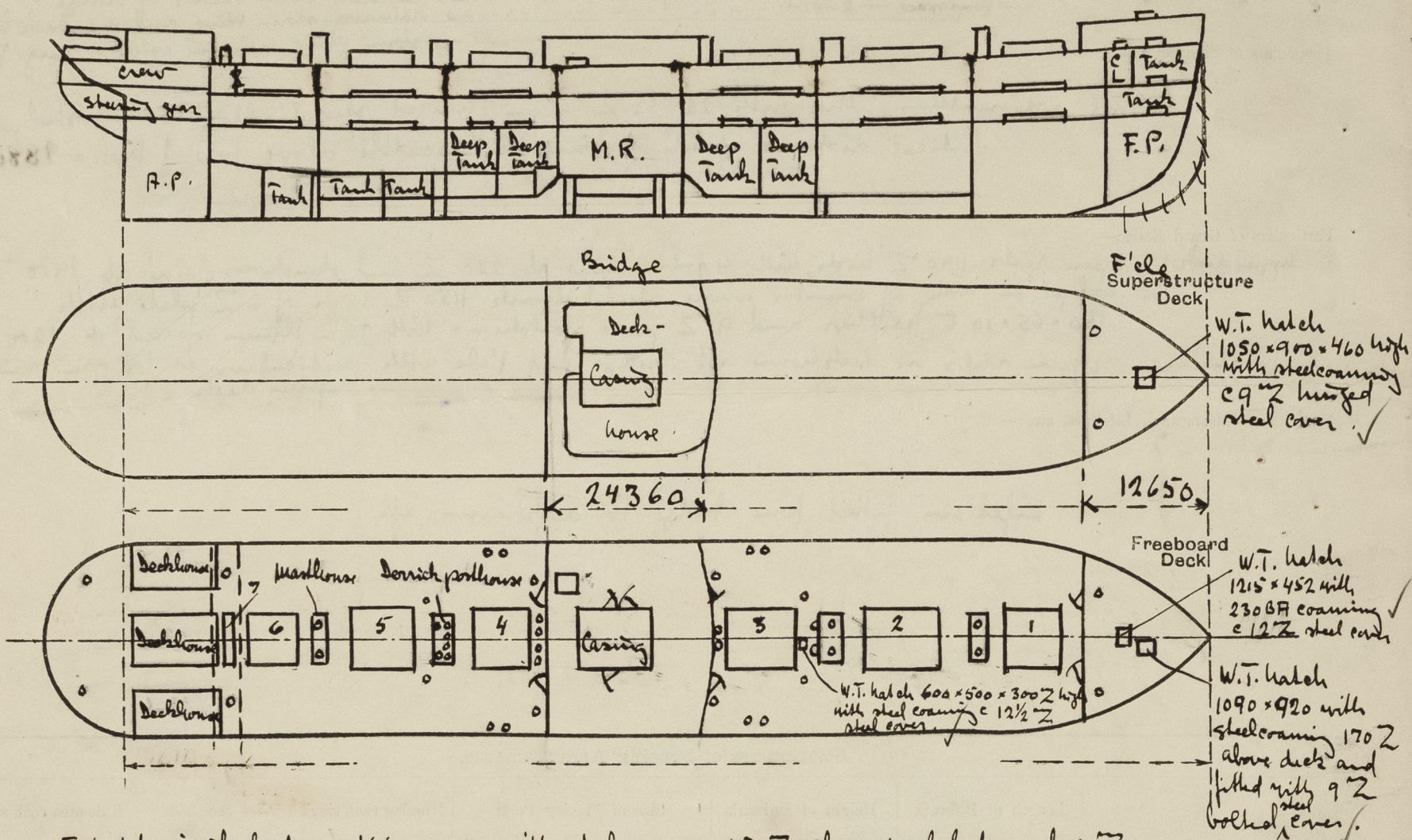
lifelines fitted from bridge to deckhouse aft.

Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming Z	Plating Z	Stiffeners Z	Spacing Z	End Attachments of Stiffeners	Size of Openings Z	Height of Sills Z	Height of Casings Z
Poop Bulkhead	—							
Raised Quarter Deck Bulkhead ...	—							
Bridge, After Bulkhead	7.5 ✓	7.5 ✓	100.75.8 ✓	760 ✓	Lugs {	2 @ 1350 × 750 ✓ 1 @ 1300 × 680 ✓	630 ✓ 670 ✓	
Bridge, Forward Bulkhead	11.0 ✓	11.0 ✓	250.90.13.5 ✓	760 ✓	Lugs	2 @ 1300 × 640 ✓	650 ✓	
Forecastle Bulkhead	7.5 ✓	7.5 ✓	100.75.8 ✓	750 ✓	none	2 @ 1320 × 610 ✓	685 ✓	
Trunk, Aft	—							
Trunk, Forward	—							
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	—							
Exposed Machinery Casings on Super- structure Decks	7.5 ✓	7.5 ✓	90.75.7.5 ✓	840 ✓	brackets at sides none at ends ✓	none ✓	—	2514
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	7.5 ✓	6.5 ✓	90.75.7.5 ✓	840 ✓	none ✓	1 @ 1000 × 1680 ✓ 1 @ 650 × 1680 ✓	300 ✓	2438
Deckhouses on Flush Deck Ships ...	—							

Poop Bulkhead	...	...	—
Raised Quarter Deck Bulkhead	...	—	—
Bridge, After Bulkhead	...	...	weather tight hinged steel doors capable of being manipulated from both sides ✓
Bridge, Forward Bulkhead	...	...	W.T. hinged steel doors — " — — " — — " — " — " — " — " ✓
Forecastle Bulkhead	...	...	— " — " — " — " — " — " — " — " — " ✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks	...	—	—
Exposed Machinery Casings on Super-structure Decks	...	—	—
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	hinged steel doors capable of being manipulated from both sides ✓
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:—



W.T. hatch inside bridge:— 1660 x 1070 with steel casing 150 Z above wood deck and 9 Z steel cover (hinged) fitted with screw down bolts.

~~W.T. hatch on U.D.K.:— 5500 x 1240 with 11 Z steel casing 250 Z above wood deck fitted with wood casing and efficient closing appliances.~~

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

Displacements:—

Drafts	moulded displacement in m ³	Tons in
31'-0"	18.130	57.0
33'-0"	19.500	57.5
34'-0"	20.210	57.8
35'-0"	20.910	58.0

Bridge

Centre	26.040
side	24.360.
	$\frac{1.680 \times 2}{3} = 1.120$
	$\frac{24.360}{25.480}$

Upper deck sheathed with 3" wood clear of erections; inside bridge sheathed with 1" composition.

Builder's name and yard number Mess. Odense Staalskibsværft; Yard no. 79

Names of sister ships ✓

Owners Holland America Line

Fee £ : : Received by me



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