

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 34455
(For London Office only.)

4 APR 1934

JUN 21 1934

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Prop and Forecastle

(Type of Superstructures.)

Ship's Name <u>M/S SENATOR</u>	Nationality and Port of Registry <u>German</u> <u>Hamburg</u>	Official Number <u>6589</u>	Gross Tonnage <u>3-1934</u>	Date of Build <u>3-1934</u>
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Moulded Dimensions: Length 407.0, Breadth 55.0, Depth 33.7

Moulded displacement at moulded draught = 85 per cent. of moulded depth 14600 tons

Coefficient of fineness for use with Tables .800

Port of Survey Gothenburg

Date of Survey 8th March 1934

Name of Surveyor G. Ferngrist

Particulars of Classification 100 A.1.
Carrying petroleum in bulk
Contemplated

<p>Depth for Freeboard (D)</p> <p>Moulded depth ... <u>33.58</u></p> <p>Stringer plate ... <u>.06</u></p> <p>Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$</p> <p>Depth for Freeboard (D) = <u>33.64</u></p>	<p>Depth correction</p> <p>(a) Where D is greater than Table depth (D - Table depth) R = <u>$(33.64 - 27.13) \times 3 = +19.53$</u></p> <p>(b) Where D is less than Table depth (if allowed) (Table depth - D) R =</p> <p>If restricted by superstructures</p>	<p>Round of Beam correction</p> <p>Moulded Breadth (B) <u>55.0</u></p> <p>Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>13.20</u></p> <p>Ship's Round of Beam = <u>13.75</u></p> <p>Difference <u>.55</u></p> <p>Restricted to</p> <p>Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>$\frac{.55}{4} \times .6796 = -.09$</u></p>
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>90.33</u>	<u>90.33</u>	<u>8.0</u>	<u>✓</u>	<u>90.33</u>
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
F'cle enclosed ...	<u>40.05</u>	<u>40.05</u>	<u>8.0</u>	<u>✓</u>	<u>40.05</u>
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	<u>130.38</u>	<u>130.38</u>			<u>130.38</u>

Standard Height of Superstructure 7.5

„ „ R.Q.D. ✓

Deduction for complete superstructure 42

Percentage covered $\frac{S}{L} =$ 32.04

„ „ $\frac{S_1}{L} =$ 32.04

„ „ $\frac{E}{L} =$ 32.04

Percentage from Table, Line A. Tanker 23.04

(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)

Deduction = $42 \times .2304 = -9.68$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<u>50.70</u>	<u>1</u>	<u>50.70</u>	<u>36.2</u>	<u>36.20</u>	<u>1</u>	<u>36.20</u>
$\frac{1}{8}$ L from A.P. ...	<u>22.56</u>	<u>4</u>	<u>90.24</u>	<u>4.5</u>	<u>4.50</u>	<u>4</u>	<u>18.00</u>
$\frac{2}{8}$ L „ ...	<u>5.57</u>	<u>2</u>	<u>11.14</u>	<u>0.0</u>	<u>-</u>	<u>2</u>	<u>-</u>
Amidships ...	<u>-</u>	<u>4</u>	<u>-</u>	<u>0.0</u>	<u>-</u>	<u>4</u>	<u>-</u>
$\frac{2}{8}$ L from F.P. ...	<u>11.15</u>	<u>2</u>	<u>22.30</u>	<u>0.0</u>	<u>-</u>	<u>2</u>	<u>-</u>
$\frac{1}{8}$ L „ ...	<u>45.12</u>	<u>4</u>	<u>180.48</u>	<u>20.2</u>	<u>20.20</u>	<u>4</u>	<u>80.80</u>
F.P. ...	<u>101.40</u>	<u>1</u>	<u>101.40</u>	<u>73.4</u>	<u>73.40</u>	<u>1</u>	<u>73.40</u>
Total ...			<u>456.26</u>				<u>208.40</u>

Mean actual sheer aft = Deficient

Mean standard sheer aft

Mean actual sheer forward = Deficient

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = ✓

„ „ aft of „ = ✓

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ $\frac{247.86}{18} \left(.75 - \frac{.1602}{.5898} \right) = +8.12$

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 = 33.64

Summer freeboard = 7.31

Moulded draught (d) = 26.33

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.58 = 6.12

Addition for Winter North Atlantic Freeboard (if required) = 4.07

Deduction for Fresh Water.

Displacement in salt water at summer load water line 13446

Tons per inch immersion at summer load water line 46.54

T = 46.54

Deduction = $\frac{\Delta}{40T}$ inches = 7.26

= 7.22 = 7.14

75% of M. depth 12800 46.34

85% 14700 47.04

95% 16620 47.84

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{.80 + .68}{1.36} = \frac{1.48}{1.36}$

	+	-
Depth Correction ...	<u>19.53</u>	<u>-</u>
Deduction for superstructures ...	<u>-</u>	<u>9.68</u>
Sheer correction ...	<u>8.12</u>	<u>-</u>
Round of Beam correction ...	<u>-</u>	<u>0.09</u>
Correction for Thickness of Deck amidships ...	<u>-</u>	<u>-</u>
Other corrections, scantlings, etc. ...	<u>✓</u>	<u>✓</u>
	<u>27.65</u>	<u>9.77</u>

Summer Freeboard = 87.72SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, and, Steel, Deck:

Tropical Fresh Water Line above Centre of Disc ...	<u>13.34</u> = <u>349</u>	Tropical Fresh Water Freeboard ...	<u>6.2</u> = <u>1880</u>
Fresh Water Line „ „ ...	<u>7.14</u> = <u>184</u>	Fresh Water „ „ ...	<u>6.8 1/2</u> = <u>2045</u>
Tropical Line „ „ ...	<u>6.12</u> = <u>165</u>	Tropical „ „ ...	<u>6.9 1/4</u> = <u>2064</u>
Winter Line below „ „ ...	<u>6.12</u> = <u>165</u>	Winter „ „ ...	<u>7.10 1/4</u> = <u>2394</u>
Winter North Atlantic Line „ „ ...	<u>10.12</u> = <u>267</u>	Winter North Atlantic „ „ ...	<u>8.2 1/4</u> = <u>2496</u>

6 APR 1934

MARKING FORM
21 JUN 1934
RECEIVEDLloyd's Register
MARKING FORM
RECEIVED 4 APR 1934

005756-005778-0210 1/2

Senator

Particulars of fiddle, funnel and ventilator coamings:—
 Fiddle, funnel and ventilators on top of a 2300 mm
 high casing above poop deck.
 Fiddle fitted with hinged steel covers 1880 x 700 with 100 mm casing
 Funnel and ventilators efficiently constructed and
 supported.

Particulars of Companionways :—

Forecastle deck: 32 11" diam 156" high and 40 thick, 2 gooseneck 225 mm high steel pipes led to paint- and lamp room.

Upper deck.

Deep deck	20	11"	536	2	"	"
	10	9"	54	"	"	"

All my children ^{1st} ^{2^d} ^{3^d} ^{4th} ^{5th} ^{6th} ^{7th} ^{8th} ^{9th} ^{10th} ^{11th} ^{12th} ^{13th} ^{14th} ^{15th} ^{16th} ^{17th} ^{18th} ^{19th} ^{20th} ^{21st} ^{22nd} ^{23rd} ^{24th} ^{25th} ^{26th} ^{27th} ^{28th} ^{29th} ^{30th} ^{31st} ^{32nd} ^{33rd} ^{34th} ^{35th} ^{36th} ^{37th} ^{38th} ^{39th} ^{40th} ^{41st} ^{42nd} ^{43rd} ^{44th} ^{45th} ^{46th} ^{47th} ^{48th} ^{49th} ^{50th} ^{51st} ^{52nd} ^{53rd} ^{54th} ^{55th} ^{56th} ^{57th} ^{58th} ^{59th} ^{60th} ^{61st} ^{62nd} ^{63rd} ^{64th} ^{65th} ^{66th} ^{67th} ^{68th} ^{69th} ^{70th} ^{71st} ^{72nd} ^{73rd} ^{74th} ^{75th} ^{76th} ^{77th} ^{78th} ^{79th} ^{80th} ^{81st} ^{82nd} ^{83rd} ^{84th} ^{85th} ^{86th} ^{87th} ^{88th} ^{89th} ^{90th} ^{91st} ^{92nd} ^{93rd} ^{94th} ^{95th} ^{96th} ^{97th} ^{98th} ^{99th} ^{100th} ^{101st} ^{102nd} ^{103rd} ^{104th} ^{105th} ^{106th} ^{107th} ^{108th} ^{109th} ^{110th} ^{111st} ^{112nd} ^{113rd} ^{114th} ^{115th} ^{116th} ^{117th} ^{118th} ^{119th} ^{120th} ^{121st} ^{122nd} ^{123rd} ^{124th} ^{125th} ^{126th} ^{127th} ^{128th} ^{129th} ^{130th} ^{131st} ^{132nd} ^{133rd} ^{134th} ^{135th} ^{136th} ^{137th} ^{138th} ^{139th} ^{140th} ^{141st} ^{142nd} ^{143rd} ^{144th} ^{145th} ^{146th} ^{147th} ^{148th} ^{149th} ^{150th} ^{151st} ^{152nd} ^{153rd} ^{154th} ^{155th} ^{156th} ^{157th} ^{158th} ^{159th} ^{160th} ^{161st} ^{162nd} ^{163rd} ^{164th} ^{165th} ^{166th} ^{167th} ^{168th} ^{169th} ^{170th} ^{171st} ^{172nd} ^{173rd} ^{174th} ^{175th} ^{176th} ^{177th} ^{178th} ^{179th} ^{180th} ^{181st} ^{182nd} ^{183rd} ^{184th} ^{185th} ^{186th} ^{187th} ^{188th} ^{189th} ^{190th} ^{191st} ^{192nd} ^{193rd} ^{194th} ^{195th} ^{196th} ^{197th} ^{198th} ^{199th} ^{200th} ^{201st} ^{202nd} ^{203rd} ^{204th} ^{205th} ^{206th} ^{207th} ^{208th} ^{209th} ^{210th} ^{211st} ^{212nd} ^{213rd} ^{214th} ^{215th} ^{216th} ^{217th} ^{218th} ^{219th} ^{220th} ^{221st} ^{222nd} ^{223rd} ^{224th} ^{225th} ^{226th} ^{227th} ^{228th} ^{229th} ^{230th} ^{231st} ^{232nd} ^{233rd} ^{234th} ^{235th} ^{236th} ^{237th} ^{238th} ^{239th} ^{240th} ^{241st} ^{242nd} ^{243rd} ^{244th} ^{245th} ^{246th} ^{247th} ^{248th} ^{249th} ^{250th} ^{251st} ^{252nd} ^{253rd} ^{254th} ^{255th} ^{256th} ^{257th} ^{258th} ^{259th} ^{260th} ^{261st} ^{262nd} ^{263rd} ^{264th} ^{265th} ^{266th} ^{267th} ^{268th} ^{269th} ^{270th} ^{271st} ^{272nd} ^{273rd} ^{274th} ^{275th} ^{276th} ^{277th} ^{278th} ^{279th} ^{280th}


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

All air 860 mm. high above deck of steel pipes and fitted with means of closing

Particulars of Gangway Cargo and Coaling Ports :—

Scupper and sanitary discharges pipe led overboard
about 8'-6" below foreboard deck and fitted with non
return valve at ship side. *↓* *fin spaces above foreboard deck*

Side muller in poop fitted with hinged deadlights.

8: 

Open rails all fore and aft fitted with rods and
hunchions spaced about 5'-0" apart. I

Technical drawing of a wooden frame structure, likely a bed or a small cabinet. The drawing includes the following dimensions and labels:

- Top horizontal dimension: $6' 3'' \times 40L$
- Left vertical dimension: $1' 11''$
- Right vertical dimension: $4'' \times 4'' \times 4$
- Right vertical dimension: $3\frac{1}{2}'' \times 3\frac{1}{2}'' \times 4$
- Right vertical dimension: $3' \times 3' \times 3$
- Bottom horizontal dimension: $6' 0''$
- Bottom right corner dimension: $3\frac{3}{4}'' R.$
- Bottom right corner dimension: $4\frac{1}{4}'' R.$

Handwritten notes on the right side of the drawing include:

- Long*
- 3 3/4" R.*
- 4 1/4" R.*

Gongway fitted all fore and aft

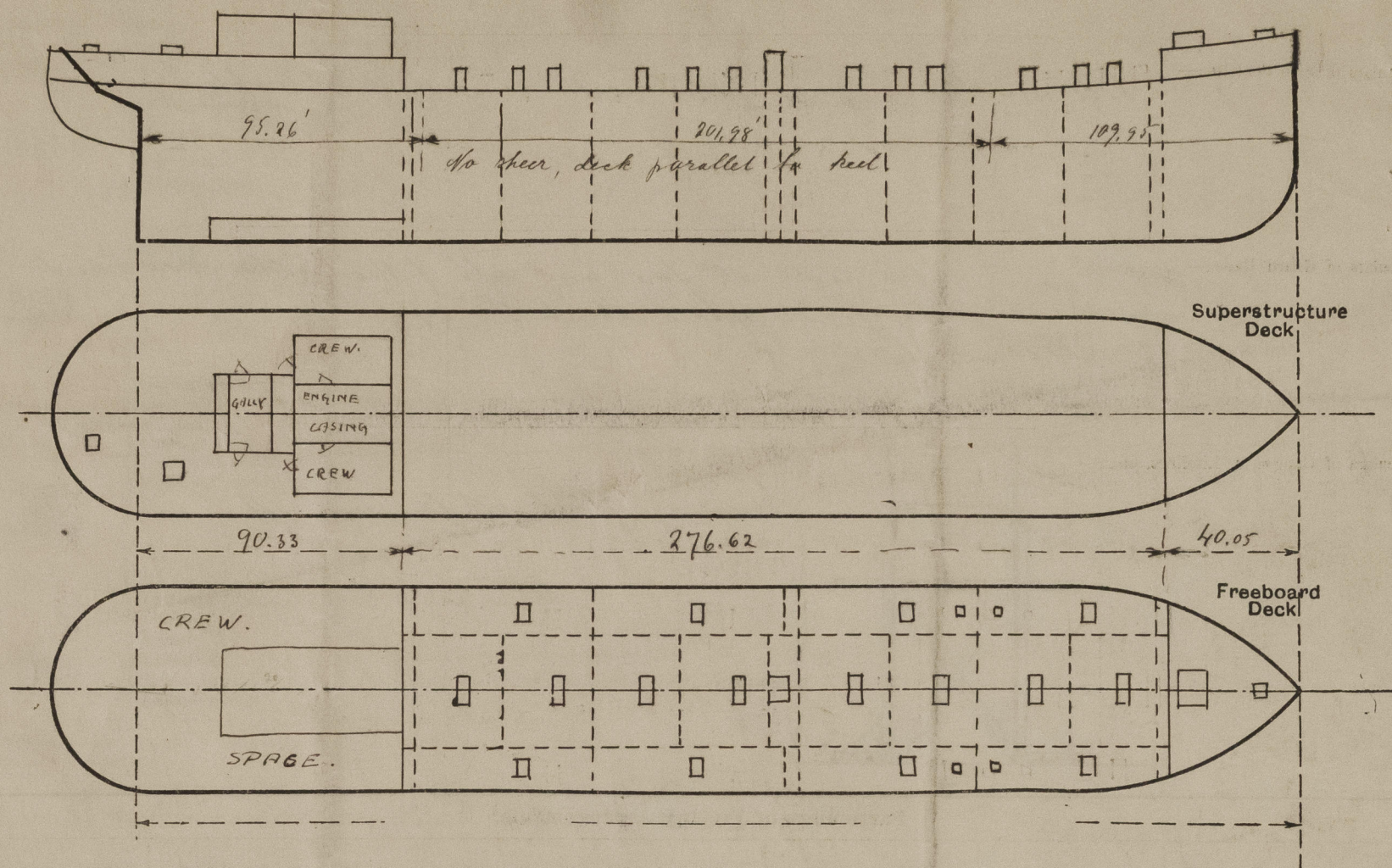
Spaced about 9'-0" apart

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	200x90x11 L.	10.5" ↓	250x90x13 L. ↓	780 I	Large top and bottom	1320x640 I	750 ↓	2480	
Raised Quarter Deck Bulkhead ...									
Bridge, After Bulkhead									
Bridge, Forward Bulkhead									
Forecastle Bulkhead	90x75x8 L. ↓	7.5" ↓	90x75x8 L. & 5 long. ttd. ↓	640 - 1000	None	1650x610 ↓	450 ↓	2480	
Trunk, Aft									
Trunk, Forward									
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...									
Exposed Machinery Casings on Super-structure Decks	150x75x9	8.5" ↓	140x65x8 L. & 90x75x9 L. ↓	750 I	Brackets top and bottom	1530x710 I	380 ↓	2480	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances									
Deckhouses on Flush Deck Ships ...	90x90x9 L	9.0" ↓	130x75x9 L	800 I	Top none bottom to beam	1650x610	460	2440.	

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

Particulars of Closing Appliances (State if Casings or Doors Manipulated from Both Sides).		
Poop Bulkhead		Hinged W.T. Steel doors operated from both sides.
Raised Quarter Deck Bulkhead ...		
Bridge, After Bulkhead		
Bridge, Forward Bulkhead		
Forecastle Bulkhead		Hinged W.T. Steel doors operated from both sides.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...		
Exposed Machinery Casings on Super-structure Decks		<u>2 wood doors</u> to crew space, no openings in exposed casing
Machinery Casings within Superstructures not fitted with Class I Closing Appliances		
Deckhouses on Flush Deck Ships ...		Hinged W.T. Steel door operated 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:—

Builder's name and yard number *A/B Gotaverken N° 461*

Names of sister ships *M/S Carina (A/B Gotaverken N° 436)*

Owners *Stavanger Tankrederi R/S.*

Fee *£ approx: 390* ~~xxx~~ *fr.*

Received by me



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