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Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 35071
(For London Office only.)

16 OCT 1936

Computation of Freeboard for ~~Steamship~~ **MOTOR** Tanker

having

Prop and Fairweather

Port of Survey *Hamburg*

Date of Survey *13th Oct. 1936*

Name of Surveyor *H. Goering*

Particulars of Classification *+100 A1*

"Carrying Petroleum in bulk"

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"REGULUS"	<i>Swedish</i>	<i>811</i>	<i>10290</i>	<i>1936</i>
Moulded Dimensions: Length <i>147.61m</i> Breadth <i>20.04m</i> Depth <i>10.95m</i>				
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>21630</i> den. tons				
Coefficient of fineness for use with Tables <i>0.7856</i>				

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<i>10.95m</i>	(a) Where D is greater than Table depth (D-Table depth) R = $(36.00 - 32.29)3$ = + 11.13"		Moulded Breadth (B)	<i>20.04m</i>
Stringer plate	<i>2.3mm</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	<i>15.78</i>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam	<i>0.40m</i>
Depth for Freeboard (D) =	<i>36.00'</i>			Difference	<i>Deficient .03</i>
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	<i>= $\frac{.03}{4} \times .6236 = .0116$</i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	<i>113.52'</i>	<i>113.52</i>	<i>2440mm</i>	<i>8'-0"</i>	<i>113.52</i>	
" overhang	<i>none</i>					
R.Q.D. enclosed	<i>none</i>					
" overhang	<i>none</i>					
Bridge enclosed	<i>none</i>					
" overhang aft	<i>none</i>					
" overhang forward	<i>68.77</i>	<i>68.77</i>	<i>7'-6"</i>		<i>68.77</i>	
F'cle enclosed	<i>20.96m</i>	<i>20.96</i>	<i>2290mm</i>		<i>20.96</i>	
" overhang	<i>none</i>					
Trunk aft	<i>none</i>					
" forward	<i>none</i>					
Tonnage opening aft	<i>none</i>					
" forward	<i>none</i>					
Total	<i>182.29</i>	<i>182.29</i>			<i>182.29</i>	

Standard Height of Superstructure	<i>7.50'</i>
" " R.Q.D.	<i>none</i>
Deduction for complete superstructure	<i>42.00</i>
Percentage covered $\frac{S}{L} =$	<i>37.64%</i>
" " $\frac{S_1}{L} =$	<i>37.64%</i>
" " $\frac{E}{L} =$	<i>37.64%</i>
Percentage from Table, Line A. TANKER (corrected for absence of forecastle (if required))	<i>28.64%</i>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = $42.00 \times .2864$	<i>= -12.03"</i>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<i>58.43</i>	<i>1</i>	<i>58.43</i>	<i>58.43</i>	<i>42.91</i>	<i>42.91</i>	<i>1</i>	<i>42.91</i>	<i>42.91</i>
$\frac{1}{2}L$ from A.P.	<i>26.00</i>	<i>4</i>	<i>104.00</i>	<i>416.00</i>	<i>18.90</i>	<i>18.90</i>	<i>4</i>	<i>75.60</i>	<i>75.60</i>
$\frac{2}{3}L$ "	<i>6.43</i>	<i>2</i>	<i>12.86</i>	<i>25.72</i>	<i>5.31</i>	<i>5.31</i>	<i>2</i>	<i>10.62</i>	<i>10.62</i>
Amidships	<i>none</i>	<i>4</i>	<i>none</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>none</i>	<i>0</i>
$\frac{3}{4}L$ from F.P.	<i>12.86</i>	<i>2</i>	<i>25.72</i>	<i>51.44</i>	<i>10.43</i>	<i>10.43</i>	<i>2</i>	<i>20.86</i>	<i>20.86</i>
$\frac{1}{4}L$ "	<i>52.00</i>	<i>4</i>	<i>208.00</i>	<i>832.00</i>	<i>35.43</i>	<i>35.43</i>	<i>4</i>	<i>141.72</i>	<i>141.72</i>
F.P.	<i>116.86</i>	<i>1</i>	<i>116.86</i>	<i>116.86</i>	<i>85.43</i>	<i>85.43</i>	<i>1</i>	<i>85.43</i>	<i>85.43</i>
Total			<i>525.87</i>		<i>2170</i>			<i>377.14</i>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{148.73}{18} \left(75 - \frac{1882}{2 \times 147.61} \right) = +4.64$

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 = *36.00*
Summer freeboard = *7.83*
Moulded draught (d) = *12.17*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *7.04 = 7"*

Addition for Winter North Atlantic Freeboard (if required) = *7" + 4 3/4" = 11 3/4"*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ *20035*

Tons per inch immersion at summer load water line

$T =$ *65.50*

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

= *7.65"*

= *7 3/4"*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{786 + .68}{1.36} = \frac{1.466}{1.36}$

	+	-
Depth Correction	<i>11.13</i>	
Deduction for superstructures		<i>12.03</i>
Sheer correction	<i>4.64</i>	
Round of Beam correction		
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<i>15.77</i>	<i>12.03</i>

Summer Freeboard = *93.99*

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

Tropical Fresh Water Line above Centre of Disc	<i>375"</i>	Tropical Fresh Water Freeboard	<i>2388mm</i>
Fresh Water Line	<i>197</i>	Fresh Water	<i>2013</i>
Tropical Line	<i>178</i>	Tropical	<i>2191</i>
Winter Line below	<i>178</i>	Winter	<i>2210</i>
Winter North Atlantic Line	<i>298</i>	Winter North Atlantic	<i>2566</i>

30 OCT 1936

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RECEIVED

28 OCT 1936

RECEIVED

26 OCT 1936

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
<div>← FREEBOARD - DECK → ← POOP DECK → ← FORE CASTLE →</div>											
Description of Hatchway			1 OF FORE STORE	4 OF OIL BUNKER COFFERDOOR	19 OF CARGO TANKS	PROVISION HATCHWAY	HATCHWAY	FORE CARGO HOLD	STORE HATCHWAYS		
Dimensions of Hatchway			810.600	600.400	1515.1074	1000.1000	810.810	2700 4000	810.600		
COAMINGS	{	Height above Deck	250	250	800	800	250	800	250		
		Thickness { Sides	10	10	10	10	10	11	10		
		Thickness { Ends									
		Stiffness									
		Brackets, Stays						5180.75.10 1 day on each morning			
HATCH BEAMS	{	Number	none								
		Spacing									
		Scantling and Sketch									
		Bearing Surface									
FORE AND AFTERS	{	Number	none								
		Spacing									
		Unsupported Lengths									
		Scantling* and Sketch									
		Bearing Surface									
HATCH COVERS	{	Material	Steel		Steel	Steel		Steel	stiffened by	Steel	
		Thickness	10 1/4"	do.	15 1/4"	10 1/4"	do.	12 1/4"	8 x 2 3/4 x 90 H	10	
		How fitted	hinged		hinged	hinged		humped	and	hinged	
		Bearing Surface	humped, padding		humped, padding	rubber padding		padding	flat tubs.	padding	
Spacing of Cleats			none	do.	none	none	do.	none	none		
Number of Tarpaulins			none	do.	none	none	do.	none	none		

*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 ?

Are lashings provided in accordance with rule requirements ?

Particulars of fiddley, funnel and ventilator coamings:— Fiddley top 2600 ^{mm} above the poop-deck.
Openings in fiddley top closed by steel hinged covers.
Funnel and ventilator coamings efficiently fastened to fiddley top.

Particulars of Flush Bunker Scuttles :—

none.

Particulars of Companionways:— Two companions on poop deck to accommodate stowage, closed by shut latched doors, capable of being manipulated from both sides. Till 18" above wood deck.

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

No. fore-and-aft deck has ventilators to fore cargo hold 18" diam., casing 36" high; .36" thick.
 " " " " " pump room 12" diam. " 36" high; .32" thick.
 " " " " " pump room 15" diam. " 36" high; .36" thick.
 The ventilators are capable of being closed by steel screwed covers.

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

Air pipes in exposed positions on deckboard, raised quarter, or superstructure decks:—
Air pipe to fore peak bulk 650^{mm} above forepeak deck.
Air pipe to after peak bulk 650^{mm} above poop deck
All air pipes are of substantial construction and fitted with wooden plugs
and canvas covers.

Particulars of Gangway Cargo and Coaling Ports :—

none.

Regulus

Particulars of Scuppers and Sanitary Discharge Pipes — All scuppers and sanitary discharge pipes shall have 6-in. diameter or larger pipes, fitted with brass valves, 5-in. openings, 4-in. galvanized pipe, and 1-in. galvanized pipe.

7 scuppers on each side above foreboard deck 100 x 90 mm.

All sanitary discharge pipes are fitted with storm valves.

Particulars of Side Scuttles :

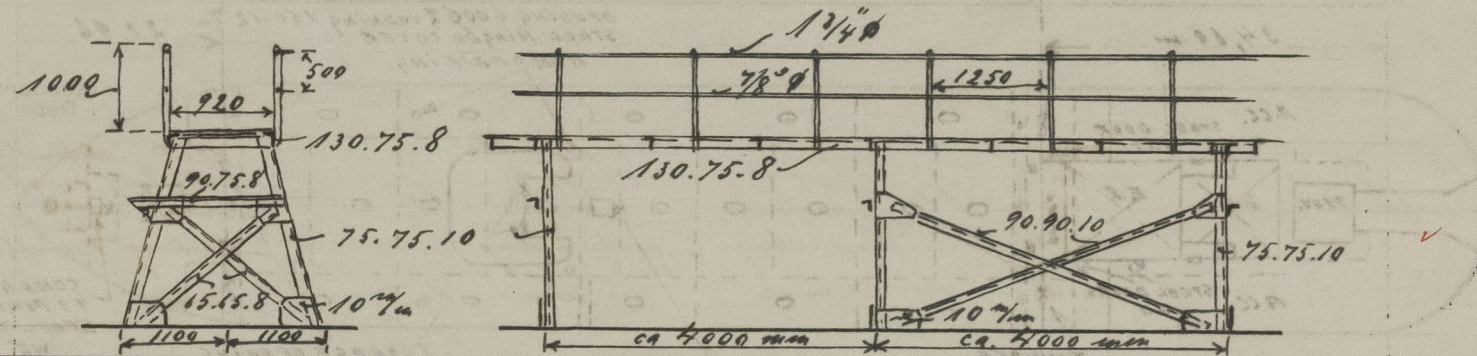
No side scuttles fitted below freeboard deck.
Side scuttles in forecabin and poop space are of substantial construction and fitted with dead lights.

Particulars of Guard Rails :—

On fore-castle deck and on fore-board deck
spun rail fitted:

on prop deck open rail fitted.

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		<i>Open rail fitted.</i> ✓				
Forward Well						

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 :—

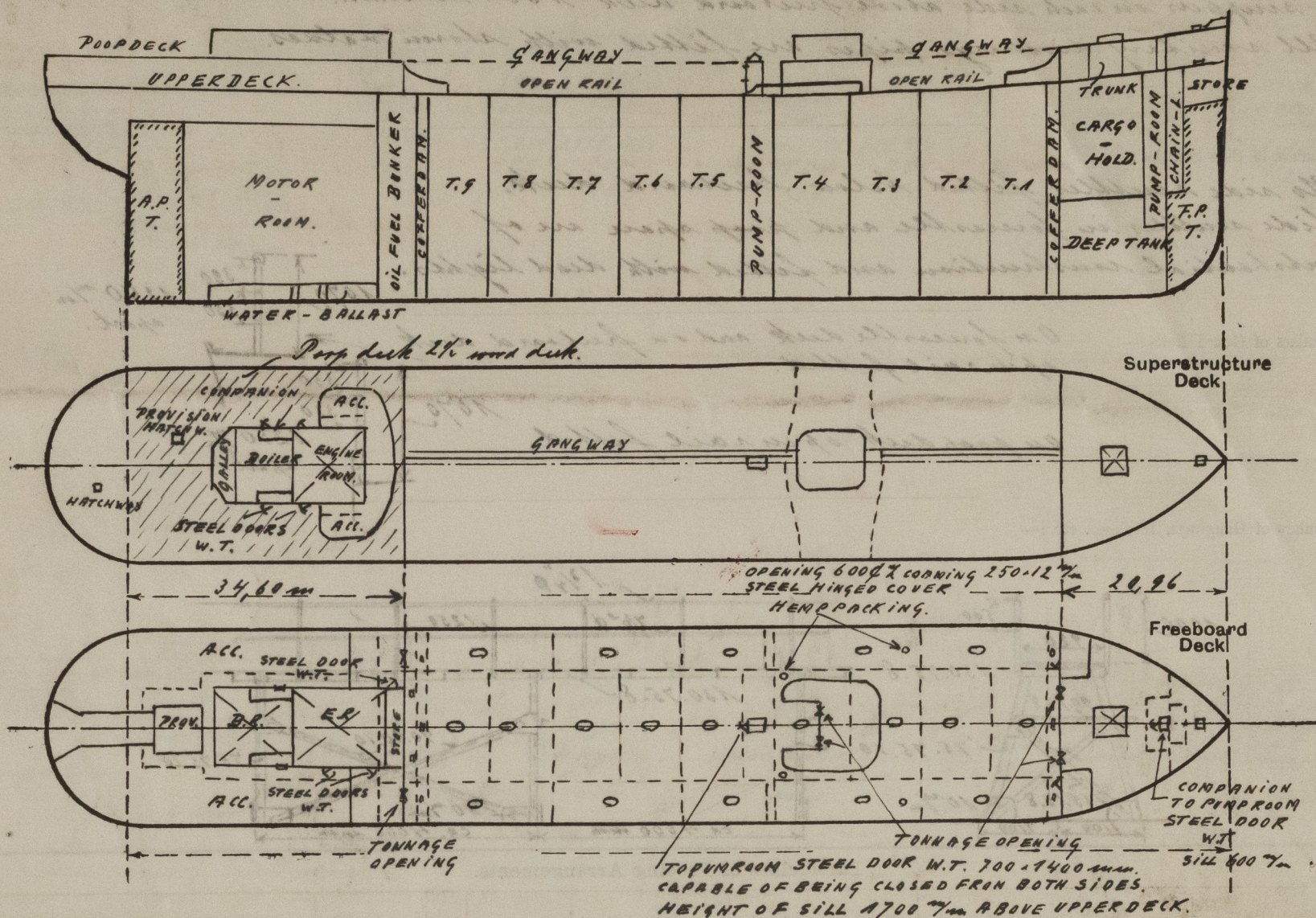
Additional area where sheer is less than standard.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	12 ^{1/4} in	11.2	5 250.90.11.5	645-730	brackets top = bottom	2a. 950.1150	460	2440 mm
Raised Quarter Deck Bulkhead ...	"	"	"	"	"	"	"	"
Bridge, After Bulkhead	"	"	"	"	"	"	"	"
Bridge, Forward Bulkhead	"	"	"	"	"	"	"	"
Forecastle Bulkhead	12 ^{1/4} in	7.5	4 100.75.7.5	700	none	2a. 600.1550 2a. 950.1150	400 600	2290 mm
Trunk, Aft	"	"	"	"	"	"	"	"
Trunk, Forward	"	"	"	"	"	"	"	"
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	"	"	"	"	"	"	"	"
Exposed Machinery Casings on Super-structure Decks	9 ^{1/4} in	7.5	5 115.65.7.5	760	none	700.1540	460	2440 mm
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	9 ^{1/4} in	6.5	5 150.75.9.5	760	none	700.1540	460	2440 mm
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead	Two bonnage openings, closed by port able plates with 78" huck bolts, 300Tm appt.
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	Two bonnage openings, closed by storm boards full height in channels.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	Two hinged steel doors, closed by lock and key only
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Two hinged steel doors, capable of being closed from both sides.
Deckhouses on Flush Deck Ships ...	Two hinged steel doors, capable of being closed 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:— *Tanker with two longit. bulkheads.*

This vessel has been surveyed during construction on stocks and afloat.

*Displacement in salt water at 27' draught = 18948 tons.
 " " " " 28' " = 19736 "
 " " " " 29' " = 20522 "*

Builder's name and yard number *Deutsche Werft A.G. Hamburg: Yard No. 182.*

Names of sister ships *"Marini" Yard No. 164; "Therminar" Yard No. 163; "Nelly" Yard No. 187.*

Owners *Tullbergs Rederi AB, Ny Årdevägen.*

Fee *RM. 400.—*

Received by me *will be charged with First Entry.*



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