

WRECK SECTION

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

19 JUN 1933

Index. No. 29291
(For London Office only.)
 Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
 having *complete Superstructure Deck and Tonnage Opening Aft.*
Port of Survey *Stockholm*Date of Survey *Feb. 7 & 28 Mar. 28 1933*Name of Surveyor *E.H. Knowles*
 Particulars of Classification *+100 A1. Shelter deck with freeboard.*
85 Mmo. No. 2. 28.

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<i>HEDRUN</i>	<i>Swedish Stockholm</i>	<i>6359</i>	<i>2325</i>	<i>1920-9</i>
Moulded Dimensions: Length <i>309.9</i> Breadth <i>44.5</i> Depth <i>22.0</i>				
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>5441</i> tons				
Coefficient of fineness for use with Tables <i>.739</i>				

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<i>22.0</i>	(a) Where D is greater than Table depth (D-Table depth) R = $(22.03 - 20.66) 2.383$		Moulded Breadth (B)	<i>44.5</i>
Stringer plate	<i>.035</i>	= <i>+3.26</i>		Standard Round of Beam = $\frac{B \times 12}{50}$	<i>10.68</i>
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R = \checkmark		Ship's Round of Beam	<i>11.00</i>
T $\left(\frac{L-S}{L}\right) = \checkmark$				Difference	<i>.32" excess</i>
Depth for Freeboard (D) =	<i>22.03</i>	If restricted by superstructures \checkmark		Restricted to	
				Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L}\right)$	<i>= \frac{.32}{4} \times .0076 = .0019</i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height Amidships	Height Correction	Effective Length (E)
Poop enclosed ...	<i>28.7'</i>	<i>26.70</i>	<i>8'-0"</i>		<i>26.70</i>
" overhang ...	<i>1'-0"</i>	<i>.50</i>			<i>.50</i>
R.Q.D. enclosed					
" overhang					
Bridge enclosed...	<i>278.2'</i>	<i>277.20</i>	<i>8'-0"</i>		<i>277.20</i>
" overhang aft	<i>1'-0"</i>	<i>.75</i>			<i>.75</i>
" overhang forward					
Fore enclosed ...					
" overhang					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	<i>4'-0"</i>	<i>2.37</i>	<i>8'-0"</i>		<i>2.37</i>
" " forward					
Total ...	<i>309.90</i>	<i>307.52</i>			<i>307.52</i>

Standard Height of Superstructure	<i>6.599</i>
" " R.Q.D.	\checkmark
Deduction for complete superstructure	<i>35.99"</i>
Percentage covered $\frac{S}{L} =$	<i>100%</i>
" " $\frac{S_1}{L} =$	<i>99.24%</i>
" " $\frac{E}{L} =$	<i>99.24%</i>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<i>99.06%</i>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = $35.99 \times .9906 =$	<i>35.65</i>

SHEER CORRECTION.

 Actual T.D. = *8'-00"*
 Standard " = *6.599*
 Difference = *1.401*
 = *16.80"*

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>40.99</i>	<i>1</i>		<i>40.99</i>	<i>33.2</i>	<i>33.00</i>	<i>1</i>		<i>49.80</i>
$\frac{1}{2}$ L from A.P. ...	<i>18.24</i>	<i>4</i>		<i>72.96</i>	<i>13.5</i>	<i>13.00</i>	<i>4</i>		<i>88.64</i>
$\frac{3}{4}$ L " ...	<i>4.51</i>	<i>2</i>		<i>9.02</i>	<i>1.5</i>	<i>3.75</i>	<i>2</i>		<i>10.96</i>
Amidships ...	\checkmark	<i>4</i>		\checkmark	<i>0</i>	\checkmark	<i>4</i>		\checkmark
$\frac{3}{4}$ L from F.P. ...	<i>9.02</i>	<i>2</i>		<i>18.04</i>	<i>12.5</i>	<i>9.68</i>	<i>2</i>		<i>23.50</i>
$\frac{1}{2}$ L " ...	<i>36.48</i>	<i>4</i>		<i>145.92</i>	<i>40</i>	<i>38.71</i>	<i>4</i>		<i>190.08</i>
F.P. ...	<i>81.98</i>	<i>1</i>		<i>81.98</i>	<i>90</i>	<i>90.00</i>	<i>1</i>		<i>106.80</i>
Total ...	<i>368.91</i>			<i>368.91</i>					<i>469.78</i>

 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 = *30'*
 " " aft of " = *30'*
 C.S.S.

 Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{100.87}{18} \left(\frac{75-.50}{2} \right) = -1.40"$
If limited on account of midship superstructure. \checkmark If limited to maximum allowance of $\frac{1}{4}$ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

 Ft.
 Depth to Freeboard Deck = *22.03*
 Summer freeboard = *1.17*
 Moulded draught (d) = *20.86*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *5.215* = *132*Addition for Winter North Atlantic Freeboard (if required) = *51*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$
 Tons per inch immersion at summer load water line

 $T = 27.8$
 Deduction = $\frac{\Delta}{40T}$ inches = *132*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{739+.68}{1.36} = \frac{1419}{1360}$

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ...

45.88

47.87

3.26

35.65

1.40

37.05

33.79

Summer Freeboard = *14.08*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:— *14.08* = *358*Tropical Fresh Water Line above Centre of Disc ... *26.4* Tropical Fresh Water Freeboard ... *94*Fresh Water Line " " ... *132* Fresh Water " " ... *226*Tropical Line " " ... *132* Tropical " " ... *226*Winter Line below " " ... *132* Winter " " ... *490*Winter North Atlantic Line " " ... *183* Winter North Atlantic " " ... *541*

W400-0118(1/2)

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

Description of Hatchway	HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
	Main Deck	N ^o 3	N ^o 4	N ^o 1, 2, 4, 5	N ^o 3	N ^o 4	Tonnage Opening	2 side Bunkers	Fore & Aft Cross Bunkers	Forepeak Hatch
Dimensions of Hatchway	22' x 20'	11' x 20'	26' x 20'	22' x 18'	11' x 18'	26' x 18'	18' x 4'	49' x 45'	16' x 4'	25' x 24'
COAMINGS	Height above Deck ... 9"			31"			10"	32"	10' over shelter dk	21"
	Thickness ... 9' x 3' x 1/2"	As N ^o 1.		44"	As N ^o 1.		10' x 3 1/2' B.A.	32"		28"
	Stiffeners ...			7' x 3' B.A.						
	Brackets, Stays ...			7' B. plate						
STEEL HATCH BEAMS	Number ... 5									
	Spacing ...									
	Scantling and Sketch ...	As per N ^o 1.								
	Bearing Surface ...	3"								
FORE AND AFTERS	Number ...									
	Spacing ...									
	Unsupported Lengths ...									
	Scantling* and Sketch ...									
	Bearing Surface ...									
HATCH COVERS	Material ...	Wood					Efficient temporary covers and closing appliances fitted.	Wood 3" F. & A.	Wood 3" F. & A.	Loose steel covers and tarpaulins with cleats.
	Thickness ...	3"	As	per	N ^o 1.			3"	3"	
	How fitted ...	F. & A.								
	Bearing Surface ...	2 1/2"								
Spacing of Cleats	...	24"	As	per	N ^o 1.			16"	16"	
Number of Tarpaulins	...	2						2	2	

*Are wood fore and afters steel shod at all bearing surfaces? Yes.

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:—

Particulars of Companionways:— None.

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

4 @ 18" φ. Samson posts.
2 @ 18" φ x 8' x 1/2". All vents have wood covers + tarpaulins.
2 @ 18" φ x 3' x 1/4".
2 @ 16" φ x 3' x 1/4".
2 @ 8 1/2" φ x 32' x 1/4".

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

1 @ 2 1/2" φ x 27' - goose-neck.
20 @ 2" φ x 28' - Wood plugs + tarpaulins provided for closing.

Particulars of Gangway Cargo and Coaling Ports:— None.

Particulars of Scuppers and Sanitary Discharge Pipes:—

Main deck scupper pipes led overboard below freeboard deck. Brass screw plugs fitted.
Sanitary discharge pipes above Storm valves fitted.

Particulars of Side Scuttles:—

All above freeboard deck, + efficient deadlights fitted.

Particulars of Guard Rails:—

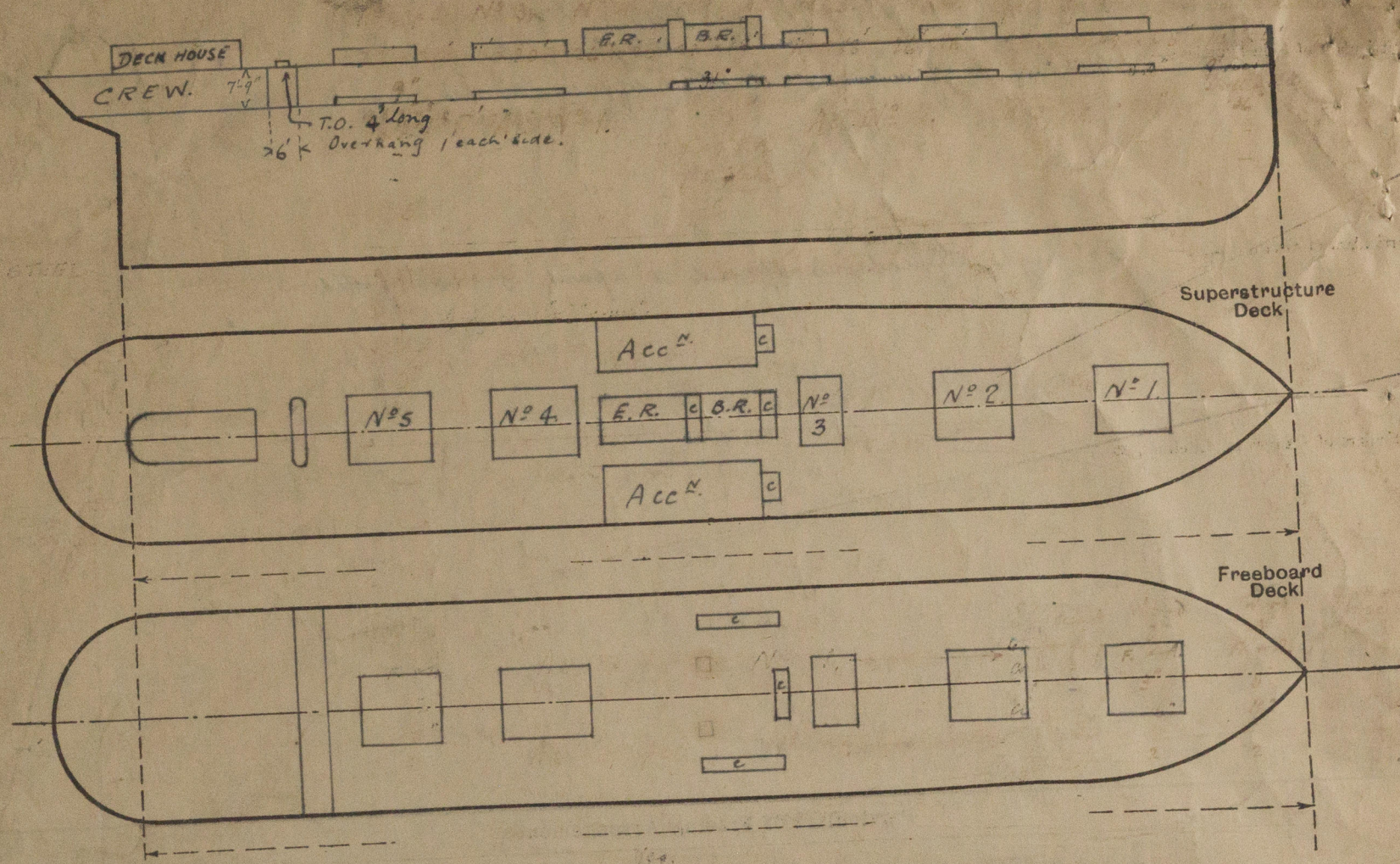
42" high. Stanchions spaced 4' apart. 3 rails fitted.

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 Tonnage Opening	6'	7'-9"	30" x 21"	1	4.375 sq ft.	
Forward Well						
State position of each freeing port (F. and A. position and height above deck edge) After Well:— Tonnage Opening. Mid-length. 6" over deck edge. Forward Well:— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Shutter + one wood bar with 2 bolts thro' same. 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	Vert. pl.	32"	Wood lining inside			none	—	7'-9"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	Vert. pl.	28"	4' x 3" angles	30"	—	2 @ 7'-6" x 3'-3"	—	7'-9"
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks .. B.R.	18"	28"	3 1/2" x 2 1/2" angles	31"	B.R. at TOP.	23' x 54"	19"	7'-8"
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	None.							
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	3' shifting boards in channels for full height.							
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks .. B.R.	Hinged steel door (P. & S.) in 2 halves horizontally. Workable from both sides.							
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:—

Timber Freeboard NOT required.

Builder's name and yard number *Nya Varusaktiebolaget Öresund. Landskrona. N° 5.*

Names of sister ships

OWNERS *Stockholms Rederiaktiebolaget Sica. Stockholm.*

Fee *230:-*

Received by me



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