

5094 B.T. COPY Wreck 113 16 MAY 1932 Index No. 30501 (For London Office only.) Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamers, Sailing Ship, Tanker  
having Poop, bridge and fore-castle

Port of Survey Singapore

Date of Survey 12th April 32

Ship's Name Hassa

(Type of Superstructures.)

Nationality and Port of Registry British London

Official Number 146595

Gross Tonnage 5825

Date of Build 1922-7

Name of Surveyor John Tindley

Moulded Dimensions: Length 411.25 at waterline Breadth 53.08 Depth 31.0  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 13138 tons  
Coefficient of fineness for use with Tables 799

Particulars of Classification +100 A1.  
Carry 1st. Phosphorus in Bulk.  
Fitted for oil fuel F.P. above 150°

Depth for Freeboard (D)  
Moulded depth ... 31.0  
Stringer plate ... 0.05  
Sheathing on exposed deck ... 0.05  
T (L-S) =  
Depth for Freeboard (D) = 31.05

Depth correction  
(a) Where D is greater than Table depth  
(D - Table depth) R =  
(31.05 - 27.44) x 3.0 = +10.83  
(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R =  
If restricted by superstructures

Round of Beam correction  
Moulded Breadth (B) 53.08  
Standard Round of Beam =  $\frac{B \times 12}{50} = 12.74$   
Ship's Round of Beam = 12.75  
Difference .01  
Restricted to  
Correction =  $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.01}{4} (1 - \frac{.4764}{1.5236}) = \text{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	110.8	110.80	7'6"	✓	110.80
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...	26.17				
Bridge enclosed ...	34.77	26.17	7'6"	✓	26.17
" overhang aft ...	3.0	2.25	"	✓	2.25
" overhang forward ...	3.0	1.50	"	✓	1.50
F'cle enclosed ...	53.3	53.30	"	✓	53.30
" overhang ...	4.0	2.00	"	✓	2.00
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	200.27	196.02			196.02

Standard Height of Superstructure 7'6"  
" " R.Q.D. ✓  
Deduction for complete superstructure 42.00  
Percentage covered  $\frac{S}{L} = 48.67$   
" "  $\frac{S_1}{L} = 47.64$   
" "  $\frac{E}{L} = 47.64$

Percentage from Table, Line A.  
(corrected for absence of fore-castle (if required))  
Percentage from Table, Line B. TANKER 38.64  
(corrected for absence of fore-castle (if required))  
Interpolation for bridge less than 2L (if required) DOES NOT APPLY.  
Deduction =  $42 \times 38.64 = -16.23$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	51.15	1		51.15	47.2	50.0	1		50.00
1/4 L from A.P. ...	22.76	4		91.04	14	13.0	4		52.00
1/2 L " ...	5.62	2		11.26	2	1.0	2		2.00
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	11.25	2		22.50	7.2	11.00	2		22.00
3/4 L " ...	45.52	4		182.08	40	43.75	4		175.00
F.P. ...	102.30	1		102.30	101	102.0	1		102.00
Total ...				460.33					403.00

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( 75 - \frac{S}{2L} \right) = \frac{57.33}{18} \left( 75 - \frac{24.33}{50.67} \right) = +1.61$   
If limited on account of midship superstructure.  
If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 31.05  
Summer freeboard = 5.60  
Moulded draught (d) = 25.45

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 6.36 = 6 1/4

Addition for Winter North Atlantic Freeboard (if required) = 4.11 = 4 1/8

Deduction for Fresh Water.

Displacement in salt water at summer load water line  
 $\Delta = 12,040 \text{ tons}$   
Tons per inch immersion at summer load water line  
 $T = 44.8$   
Deduction =  $\frac{\Delta}{40T}$  inches = 7.05 = 7 1/8

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{799 + .58}{1.36} = \frac{1.471}{1.36}$

Depth Correction ... 10.83  
Deduction for superstructures ... 16.23  
Sheer correction ... 1.61  
Round of Beam correction ...  
Correction for Thickness of Deck amidships ...  
Other corrections, scantlings, etc. ...

	+	-
Depth Correction	10.83	
Deduction for superstructures		16.23
Sheer correction	1.61	
Round of Beam correction		
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	12.44	16.23

Summer Freeboard = 67.19

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

Tropical Fresh Water Line above Centre of Disc ... 13 1/4"  
Fresh Water Line " " ... 7"  
Tropical Line " " ... 6 1/4"  
Winter Line below " " ... 6 1/4"  
Winter North Atlantic Line " " ... 10 1/4"

Tropical Fresh Water Freeboard ... 5-7 1/4"  
Fresh Water " " ... 5-0 1/4"  
Tropical " " ... 5-1 1/2"  
Winter " " ... 6-1 1/2"  
Winter North Atlantic " " ... 6-5 1/2"

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Particulars of Gangway Cargo and Coaling Ports:—

all scupper pipes and discharge pipes fitted with 1/2" storm valves. except the scuppers from main deck which have outlets well above the foreboard deck.

In Lincastle, Bridge and Poop accommodation  
all C/P and fitted with hinged deadlights ✓  
(all in superstructure spaces. ✓ ✓)

On Newcastle Head. On forward and after ends of poop.  
Top Rail 3' 9" High ✓ Stanchions spaced about 3' 0" apart.  
Two tiers of rails making spacing 12" ✓

Shantham

Slut Top Plate

6x30

Hinged Plate

Support Girapins

4x3

2x2 L

6x10 to 8x6

gangways from Poop to Bridge and Bridge to Forecastle  
very strong construction having angle uprights 4x3 Tee  
section with crossed stiffeners, steel top plate and  
channel stiffeners along each side (See sketch)  
Stanchions securely fitted and wire rope a life rail  
for full length ✓  
Platform of gangway 7'6" high ✓

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	3/8 ✓	3/8 ✓	6x3 7/16 channels <i>also two vertical planked plates midway b/c runways</i>	30" ✓	Bolted ends.	3'6" x 2'6" ✓	24" ✓	7'6" ✓
Raised Quarter Deck Bulkhead ... ..	-	-	-	-	-	-	-	-
Bridge, After Bulkhead ... ..	3/8 ✓	3/8 ✓	6x3 7/16 channels	30" ✓	Bolted ends.	4'0" x 2'0" ✓	26" ✓	7'6" ✓
Bridge, Forward Bulkhead ... ..	3/8 ✓	3/8 ✓	No. Stiffeners - 6x3 7/16 No. 40	30" ✓	Bolted ends.	5'0" x 2'3" ✓	18" ✓	7'6" ✓
Forecastle Bulkhead ... ..	3/8" ✓	3/8" ✓	6x3 7/16 Channels	36" ✓	Bkts. Top.	5'0" x 2'2" ✓	20" ✓	7'6" ✓
Trunk, Aft ... ..	-	-	-	-	-	-	-	-
Trunk, Forward ... ..	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	<i>Pump Room 2 1/8" Coaming</i>	3/8"	?	?	?	4'0" x 2'0" ✓	12" ✓	6'6" ✓
Exposed Machinery Casings on Super-structure Decks ... ..	1/16" ✓	1/16" ✓	4x3 3/16 ✓	25" ✓	none ✓	5'0" x 2'6" ✓	18" ✓	7'9" ✓
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 ... ..	<del>Steel W.T. down</del> <i>bolts</i> / <i>Portable steel plates with hook bolts</i>
Raised Quarter Deck Bulkhead ...	<i>One opening with hinged alder door. Openings with portable plates &amp; hook bolts</i>
Bridge, After Bulkhead ... ..	<del>Steel W.T. hinged down</del> <i>operated from both sides</i> (Platings in way doubled)
Bridge, Forward Bulkhead ...	<i>Steel W.T. hinged down. Operated from both sides</i>
Breast Castle Bulkhead ... ..	<i>Steel W.T. hinged down to forehold space and to Pump Room. Operated both sides</i>
Exposed Machinery Casings on Foreward or Raised Quarter Decks ...	<i>Teakwood down to Forecastle spaces.</i>
Exposed Machinery Casings on Superstructure Decks ... ..	<i>Steel down to ER space.</i>
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	<i>Amended in red after annual survey in Nov.</i>
Deckhouses on Flush Deck Ships ...	<i>13/12/33</i>

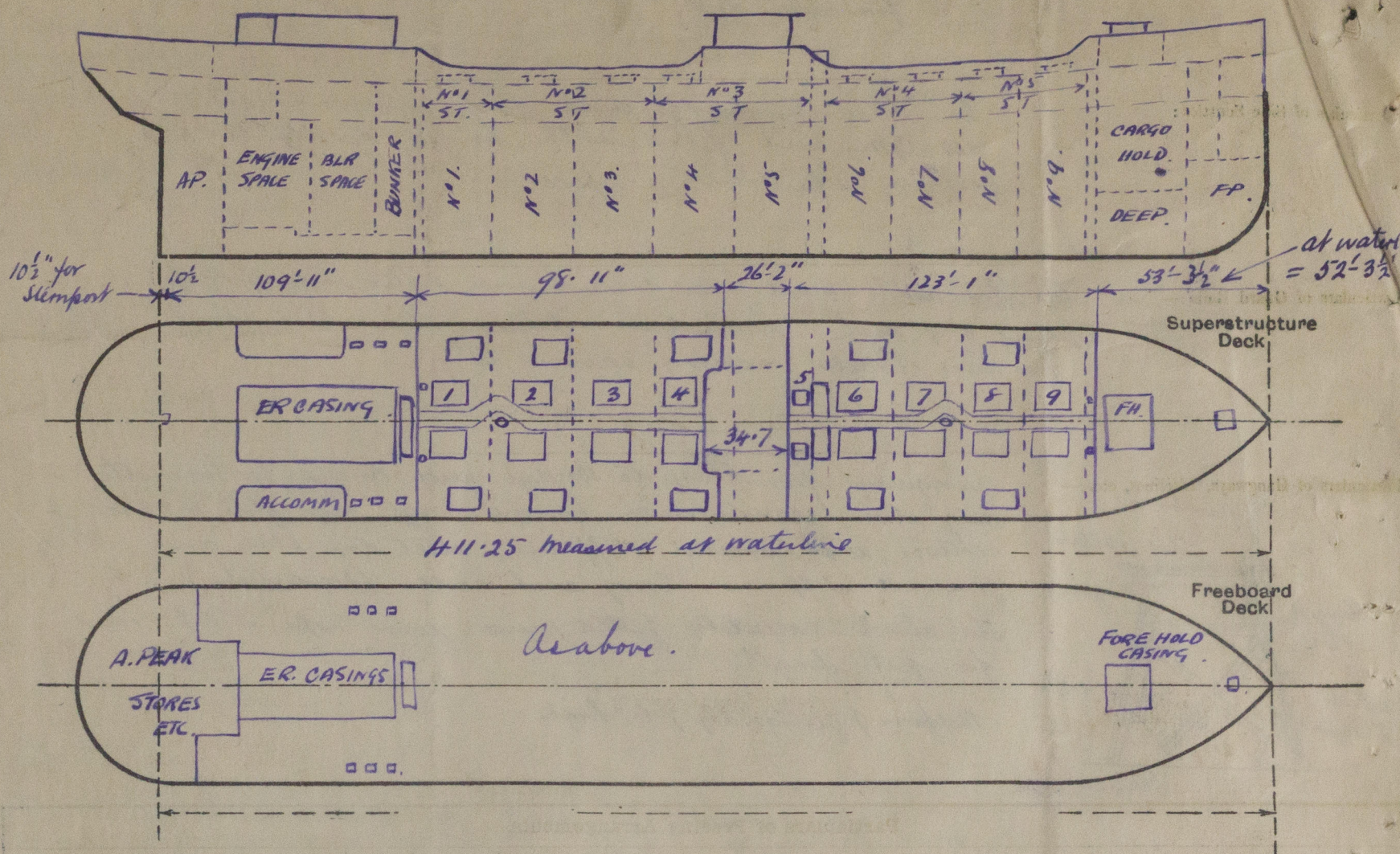
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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



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

Builder's name and yard number H.M. Dockyard Devonport.

Names of sister ships

Owners Anglo Saxon Petroleum Co Ltd.

Fee \$ 150  
Exp 10

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