

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship~~, Tanker
having Forecastle and Poop.

Port of Survey Haugesund

Date of Survey 16th September 1932

Name of Surveyor S. A. Gide jr.

Particulars of Classification 100 A.1.
S.S. for No. 3-1, 20
S.S. for No. 2-28

Ship's Name "HANESTROM IV" (Type of Superstructures.) Signal/letters S.K.T.G

Ship's Name "ASTRIANA" (ex "INGA") Nationality and Port of Official Number PANAMA 4627 Gross Tonnage 522 Date of Build 1906
PANAMA CITY Gota 8ms

Moulded Dimensions: Length 167'-0" Breadth 27'-11" Depth 13'-10"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1103 tons
Coefficient of fineness for use with Tables .402

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	13'-10"	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	28'-0"
Stringer plate	13'-8"	(13.86 - 11.13) 1.284 = + 3.51		Standard Round of Beam = $\frac{B \times 12}{50}$	6.42
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	10"
Depth for Freeboard (D) =	13.86	If restricted by superstructures		Difference	3.28
				Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{3.28}{4} \times 56.96 = - 4.64$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	49'-6"	49.50	7'-0"		49.5	Standard Height of Superstructure <u>6'-0"</u>
" overhang						" " R.Q.D.
R.Q.D. enclosed						Deduction for complete superstructure <u>22.40</u>
" overhang						Percentage covered $\frac{S}{L} =$ <u>43.39</u>
Bridge enclosed						" " $\frac{S_1}{L} =$ <u>43.04</u>
" overhang aft						" " $\frac{E}{L} =$ <u>43.04</u>
" overhang forward	21'-8"	21.81	7'-0"		21.81	Percentage from Table, Line A. <u>26.08</u>
Forecastle enclosed (Guit.)	22'-4"	22.33			22.33	(corrected for absence of forecastle (if required))
" overhang	1'-15"	1.25			1.25	Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = <u>22.40 x 26.08 = - 5.92</u>
" forward						
Total	42.46	41.88			41.88	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft =	Mean standard sheer aft =
A.P.	26.40	1	1	26.40	32 1/8"	33.00	1	1	33.00	Mean actual sheer forward =	Mean standard sheer forward =
1/2 L from A.P.	11.88	4	4	47.52	14 1/8"	15.01	4	4	60.04		
2/2 L	2.94	2	2	5.88	3 5/8"	3.44	2	2	7.48		
Amidships	-	4	4	-	0"	-	4	4	-	Length of enclosed superstructure forward of amidships =	
3/2 L from F.P.	5.84	2	2	11.68	8 1/8"	7.29	2	2	14.58	" " aft of "	
1/2 L	23.46	4	4	93.84	31"	29.23	4	4	116.92		
F.P.	53.40	1	1	53.40	64 5/8"	63.00	1	1	63.00		
Total				240.28					295.02		

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{54.74}{18} (.75 - .2169) = - 1.62$

If limited on account of midship superstructure. Yes NIL 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 = 13.86 Ft.
Summer freeboard = 1.27
Moulded draught (d) = 12.59

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.15 = 3 1/4

Addition for Winter North Atlantic Freeboard (if required =

5 1/4

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ not available
Tons per inch immersion at summer load water line

T = 10
Deduction = $\frac{\Delta}{40T}$ inches =

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	3.51	
Deduction for superstructures		5.92
Sheer correction		
Round of Beam correction		4.4
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		

Summer Freeboard 15.29

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

Tropical Fresh Water Line above Centre of Disc	...
Fresh Water Line	"
Tropical Line	"
Winter Line	below
Winter North Atlantic Line	"

Tropical Fresh Water Freeboard	...
Fresh Water	"
Tropical	"
Winter	"
Winter North Atlantic	"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS								
Description of Hatchway	No. 1.	No. 2.	No. 3.	PORT & ST.B COAL HATCH ON POOP DECK	COAL HATCH ON CASING TOP,	TO FOREPEAK INS. FORECASTLE		
Dimensions of Hatchway	11'-0 3/4" x 11'-8"	22'-0" x 11'-8"	21'-11" x 11'-8"	40 1/2" x 24"	63 1/2" x 72 1/2"	18 1/2" x 38"		
COAMINGS { Height above Deck ... Thickness { Sides ... Stiffeners .at Ends ... Brackets , Stays at sides ...	40"- .40" .36" 8"x3"x50' As No 1 none	40"- .40" .36" As No 1 2	40"- .40" .36" As No 1 also after end 2	18 3/4"- -26" -26" None -	7 1/2" 6" - - -	Flush with deck. 2 1/2" f None - -11-		
HATCH BEAMS { Number ... Spacing ... Scantling and Sketch ... Bearing Surface ...	None v None None	2 11'-0" 7'-4" 6'-1/4" 3'-4"x30" 2 1/2"x2 1/2"x26" BEAM.	2 10'-11 1/2" 7'-3 1/2" As No. 2.	None -	None -	None -		
FORE AND AFTERS { Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ...	3. 35" 10'-7 3/4" 2 1/2"x2 1/2"x26" Side 8 1/2"x3 1/2"x24' 3A 3x3x45'	3. 35" 10'-7" 6'-11" As No 1 6x26 BA C.Pine	3. 35" 10'-6 1/2" 6'-10 1/2" As No. 1. 2	None -	None -	None -		
HATCH COVERS { Material ... Thickness ... How fitted ... Bearing Surface ...	Pine - 2 1/2" TWT SHP. 1 1/4" at sides, 2 1/2" centre	Pine - 2 1/2" TWT SHP. 2" at sides, 2 1/2" centre	Pine - 2 1/2" TWT SHP. As No. 2.	Pine - 2 3/8" F. & A. 1 3/4"	Pine - 2" F. & A. 2 2"	Pine - 2 1/4". TWT SHP. 2"		
Spacing of Cleats	18 1/2"-27"	18 1/2"-27"	18 1/2"-27"	11"-25"	24"-27"	None -		
Number of Tarpaulins	2	2	2	2	2	-1-		

*Are wood fore and afters steel shod at all bearing surfaces? No wood fore and afters.
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? 2 ringbolts each side No. 1 and 3 each side No. 2 & 3 hatchways.

Particulars of fiddley, funnel and ventilator coamings:— Funnel and ventilator coamings on casing top 6'-10" above propeller good. — Steel covers for fiddley openings on casing top ~~not permanently~~ ^{hinged} attached. ✓

Particulars of Flush Bunker Scuttles:—

None fitted.

Particulars of Companionways :—

None fitted. -

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

Forecastle: - 1 stovepipe $4\frac{1}{2}'' \times 4\frac{3}{4}'' \times .40''$.
1 - $18'' \times 33'' \times .30''$ to hold.

Poop:-
 1 goose-neck ventilator to captain's bathroom 32" above deck at rail:
 1 " " " " W.C. 16" " " " "
 2 - 9" x 65" x .24" to poopstore:
 1 goose-neck ventilator to poopspace at counter 16 1/4" " " " "
 1 " " " " " 4 1/2" " " " "

POOPDECK :-

1 hold ventilator through saloon house
with opening in after bulkhead of house
60 1/2" above deck. Opening 14 1/2" x 15". *efficient* cover.

Ventilators fitted wood plugs and canvas covers.

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

Forecastle:- 1 goose-neck 2" above deck to forepeak.
 " 1 " 2 1/2" " " no tank.

Foredeck: - 2 -" - each side to tanks 42" above deck, -
Canvas covers fitted. -

Particulars of Gangway Cargo and Coaling Ports :—

None fitted. -

1 W.C. discharge from W.C. at forward end of poop	P.S.	28"	below main deck.	Storm valve fitted.
1 " " " " " after " "	P.S.	28"	" "	" "
1 " " " " " forward P.S.		34"	" "	" "

Deadlights fitted to sidescuttles in forecstle and poop.

Forecastle 42" high. 2 rods. 51"-53" apart.
Poop. 44 1/2" " 2 rods & 2 wires 47" " "

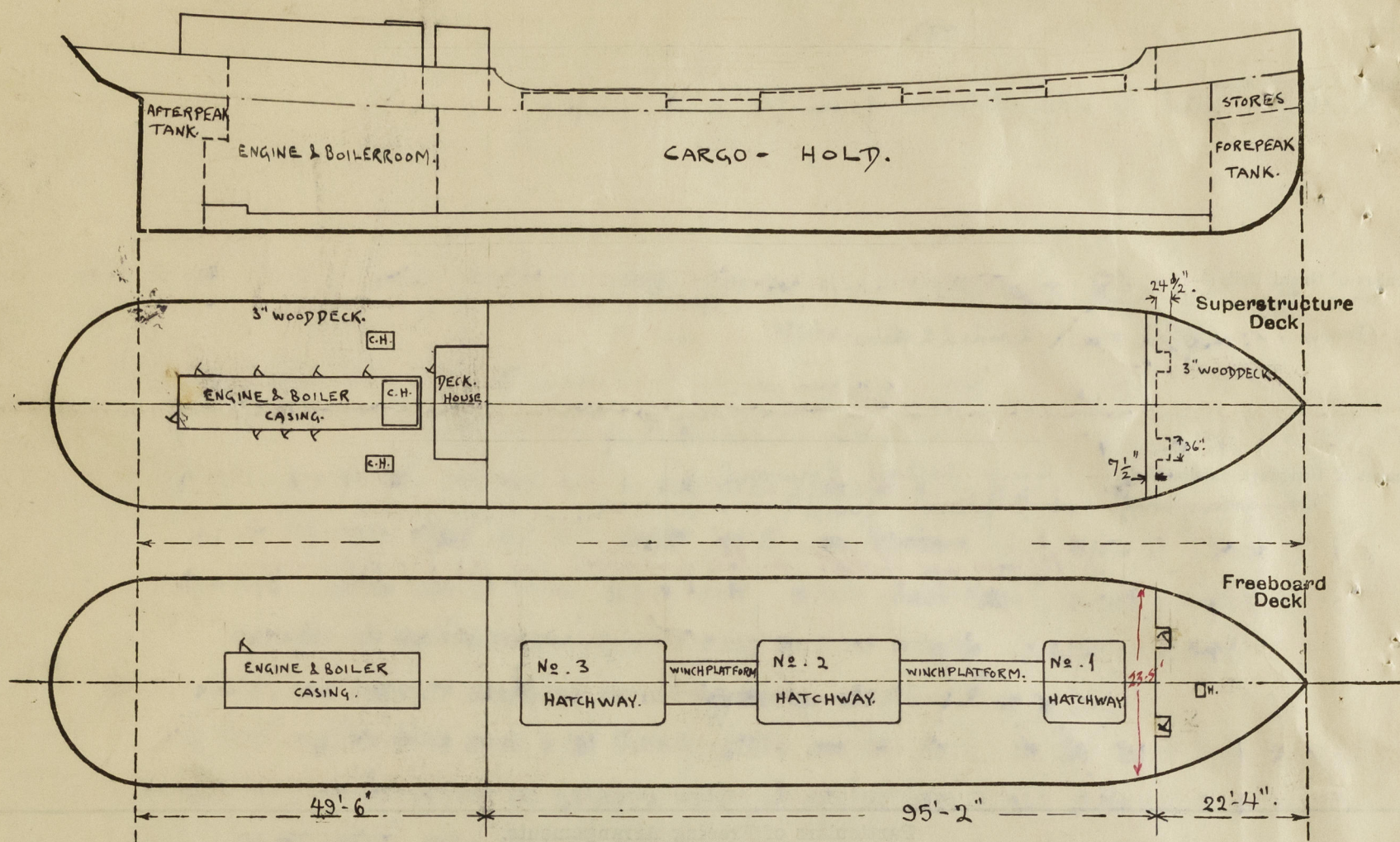
~~No gangways or lifelines fitted.~~

Lifelines are fitted on the forewell for the use of the crew

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	19" x .30"	.28"	5 1/2" x 3" x .36" f	30"	Brackets at top & bottom	None		7'-0"	
Raised Quarter Deck Bulkhead ...									
Bridge, After Bulkhead									
Bridge, Forward Bulkhead									
Forecastle Bulkhead	None	.26"	3" x 2 1/2" x .26" f	30"	None	24" x 56 1/2"	19 1/2"	7'-0"	
Trunk, Aft									
Trunk, Forward									
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	16" x .26"	.24"	3" x 3" x .26" f	22"-29"	None	23 1/2" x 56"	16"	7'-0"	
Exposed Machinery Casings on Super-structure Decks	" - "	" - "	" - "	" - "	"	24" x 56"	16"	6'-10"	
BOILER Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	" - "	" - "	" - "	32"	None at bottom Continuous above	None		7'-0"	
BOILER CASINGS ON POOP DECK Deckhouses on Flush Deck Ships ...	" - "	" - "	" - "	" - "	Not at top Continuous below	24" x 56" 18" x 24"	16" 16"	6'-10"	

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	No opening.
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	Hinged steel door each side to crew's quarters. Ordinary clips. ✓
Exposed Machinery Casings on Superstructure Decks	1 hinged steel door P.S. to engine room. Ordinary lock knob. -
BOILER Machinery Casings within Superstructures not fitted with Class I Closing Appliances	1 hinged steel door P.S. to engine room. Ordinary clips. - 1 " " " " each side to galley on Poop. 1 hinged steel door st. B. to store on poop deck. -
BOILER CASINGS ON POOP DECK Deckhouses on Flush Deck Ships ...	No openings. ✓ 1 hinged steel door P.S. to stokehold ash shoot. and 1 hinged steel door each side to

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:—



$$\begin{aligned}
 22.33 - (3 \times 2.04) &= 11.75 \\
 22.33 - .52 &= 21.81 \\
 22.96 &= 1.15 \text{ off.}
 \end{aligned}$$

State any special features in the construction of the ship:— The survey carried out afloat and confined to taking necessary measurements but a general examination also carried out for postponement of the S.S. 2nd. No. 3 until the expiration of the year of grace.

The owners state they desire to retain the present L.R. freeboard if the International freeboard is unfavourable. Certificate dated London 21st. April 1914 (for 5/5" FERMIA).

Summer 1'-3 1/2".
 F.W. 3" above centre of disc.
 W. 1 1/2" below " " "
 Stat. Deck line 1 1/2" above deck at side.

The owners state they may put the vessel through special survey at Haugesund before the end of January next.
 For details for timber freeboard see attached sheet.

Bergen 20th. September 1932
 L. A. Bide jr.

Builder's name and yard number Messrs. Eriksberg's Mek. Verkstads A/B. Gothenburg.

Names of sister ships

Owners a/s Omund Hauge, Haugesund. Port of Registry PANAMA CITY.

Fee £136.- Received by me