

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "HOI HUNG" (Ex "FIONIA")	Official Number 196787	Nationality and Port of Registry BRITISH HONG KONG	Gross Tonnage 5347	Date of Build 1914	Port of Survey Hong Kong
Moulded Dimensions: Length 395.0' Breadth 53.0' Depth 30.00'					Date of Survey 2nd February, 1955
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 11260. tons					Surveyor's Signature James A. Anderson
Coefficient of fineness for use with Tables .738					Particulars of Classification +100 A1 Running deck with freeboard.

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	30.00	(a) Where D is greater than Table depth (D - Table depth) R = (30.14 - 26.33) 3 = + 11.43"		Moulded Breadth (B)	53.00
Stringer plate	.04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	12.72
3" Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .25 \times 3956$.10	If restricted by superstructures		Ship's Round of Beam	13.25
Depth for Freeboard (D) =	30.14			Difference	.53
				Restricted to	
				Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{.53}{4} \times 3997 = -.05"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed (Equiv.)	28.32	28.32	7.5		28.32	Standard Height of Superstructure 7.45'
" overhang	.68	.34			.34	" " R.Q.D. X
R.Q.D. enclosed						Deduction for complete superstructure 41.67'
" overhang						Percentage covered $\frac{S}{L} = \frac{60.44}{100}$
Bridge enclosed (Equiv.)	167.73	167.73	7.5		167.73	" " $\frac{S_1}{L} = \frac{60.03}{100}$
" overhang aft	1.02	.77			.77	" " $\frac{E}{L} = \frac{46.05}{100}$
" overhang forward	2.00	1.00			1.00	Percentage from Table, Line A. 88
Fore enclosed (Equiv.)	38.80	38.80	7.5		38.80	(corrected for absence of forecastle (if required))
" overhang	.20	.15			.15	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 = 41.67' x .4605 = -19.19'
" " forward						
Total	238.75	237.11			237.11	

FROM CURVE

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	49.50	1		49.50	39.00	39.00	1		39.00
$\frac{1}{8}L$ from A.P.	22.03	4		88.12	18.50	18.50	4		74.00
$\frac{2}{8}L$ "	5.45	2		10.90	5.00	5.00	2		10.00
Amidships	0	4		0	0	0	4		0
$\frac{3}{8}L$ from F.P.	10.89	2		21.78	8.75	8.75	2		17.50
$\frac{4}{8}L$ "	44.05	4		176.20	33.00	33.00	4		132.00
F.P.	99.00	1		99.00	74.00	74.00	1		74.00
Total				445.50					346.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{99.00}{18} \times \frac{(.75 - 30.22)}{2L} = +2.46'$

If limited on account of midship superstructure. **X**

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **30.25'**

Summer freeboard = **5.92'**

Moulded draught (d) = **24.33'**

Keel allowance =

Extreme draught =

Deduction for Tropical Freeboard and addition for Winter freeboard $\frac{d}{4}$ inches = **5"**

Addition for Winter North Atlantic Freeboard (required) = **5 1/2"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

T =

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

= **6"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

69.95

72.94

+	-
11.43	
-	19.19
2.46	
-	.05
1.30	
-	
15.19	19.24

Summer Freeboard = **68.89**

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

Tropical Fresh Water Line above Centre of Disc ... **11"**

Fresh Water Line " " ... **6"**

Tropical Line " " ... **5"**

Winter Line below " " ... **5 1/2"**

Winter North Atlantic Line " " ... **X**

Tropical Fresh Water Freeboard **5' 11"**

Fresh Water " **5' 5"**

Tropical " **5' 6"**

Winter " **6' 4 1/2"**

Winter North Atlantic " **X**

Freeboards as assigned by Danish Authorities now re assigned 1955

3.5"

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Roop Length to 14 frame. = 26.92 ✓

Add $(8.33 \times 6.58) + (2.92 \times 2.5) + (6.17 \times 6.50)$ = $\frac{102.22}{41.50}$ = + 2.46 ✓

Less $(4.0 \times 5.42) + (7.5 \times 3.0)$ = $\frac{44.18}{41.50}$ = - 1.06 ✓

Equivalent Length = 28.32' ✓

Overhang = 2.08 - (2.46 - 1.06) = .68' ✓

Bridge Length b/w frs 51-131 = 166.67

Add $(8.5 \times 10.0 \times 2)$ = + 3.21

Less $(18.25 \times 4.0) + (10.25 \times 4.0)$ = $\frac{114.0}{53.0}$ = - 2.15

Equivalent Length = 167.73' ✓

Overhang aft = 2.08' - (3.21 - 2.15) = 1.02' ✓

Overhang fwd = 2.00' ✓

Forecastle Length to 173 frame. = 36.92'

Add $(6.25 \times 6.25 \times 2)$ = + 2.23' ✓

Less $(2.0 \times 2.92 \times 2)$ = - .35' ✓

Equivalent Length = 38.80' ✓

Overhang = 2.08 - (2.23 - .35) = .20' ✓

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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