

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

NAM FENG

Ship's Name EX KAPONGA	Official Number 182692	Nationality and Port of Registry AUCKLAND HONG KONG	Gross Tonnage 2772	Date of Build 1949	Port of Survey _____
Moulded Dimensions: Length 300.625 Breadth 46.00 Depth 23.25					Date of Survey 12/3/55
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 5540 tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables .709					Particulars of Classification *100 AT

DEPTH FOR FREEBOARD (D).

Moulded depth ... **23.25**
 Stringer plate ... **.03**
 Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
 Depth for Freeboard (D) = **23.28**

DEPTH CORRECTION.

(a) Where D is greater than Table depth
 (D-Table depth) R = **(23.28 - 20.04) 2.312 = + 7.49**
 (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) **46.00**
 Standard Round of Beam = $\frac{B \times 12}{50} =$ **11.04**
 Ship's Round of Beam = **9.00**
 Difference **2.04**
 Restricted to
 Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2.04^2}{4} \times \frac{5596}{46} = +.29$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	16.30	16.30	7.19	✓	16.30
" overhang	1.82	.91			.91
R.Q.D. enclosed					
" overhang					
Bridge enclosed	86.80	86.80	8.00	✓	86.80
" overhang aft	.20	.15			.15
" overhang forward					
F'cle enclosed	24.02	24.02	7.50	✓	24.02
" overhang	4.20	4.20			4.20
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	133.34	132.38			132.38

Standard Height of Superstructure **6.51**
 " " R.Q.D. **✓**
 Deduction for complete superstructure **35.37**
 Percentage covered $\frac{S}{L} =$ **44.36**
 $\frac{S_1}{L} =$
 $\frac{E}{L} =$ **44.04**
 Percentage from Table, Line A.
 (corrected for absence of forecastle (if required))
 Percentage from Table, Line B. **30.93**
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than .2L (if required)
 Deduction = **35.37 x 30.93 = 10.94**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	40.06	1	40.06	40.5	40.50	1	40.50
$\frac{1}{2}$ L from A.P.	17.825	4	71.30	18.25	18.25	4	73.00
$\frac{3}{4}$ L " "	4.405	2	8.81	4.75	4.75	2	9.50
Amidships	✓	4	✓	✓	✓	4	✓
$\frac{3}{4}$ L from F.P.	8.815	2	17.63	9.25	9.25	2	18.50
$\frac{1}{2}$ L " "	35.655	4	142.62	35.75	35.75	4	143.00
F.P.	80.13	1	80.13	80.00	80.00	1	80.00
Total			360.55				364.50

Mean actual sheer aft =
 Mean standard sheer aft =

Mean actual sheer forward =
 Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **7.12**
 " " aft of " = **7.12**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{2.95}{18} \left(\frac{.75 - 22.18}{2} \right) = -.12$
 If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft. —

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.
 Depth to Freeboard Deck = **23.28**
 Summer freeboard = **3.44**
 Moulded draught (d) = **19.84**
 Keel allowance =
 Extreme draught =
 Addition for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **4.96** = **5"**

Addition for Winter North Atlantic Freeboard (if required) = **5" + 2" = 7"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta =$ **5596**
 Tons per inch immersion at summer load water line
 $T =$ **26.89**
 Deduction = $\frac{\Delta}{40 T}$ inches = **5.10**
 = **5 1/4"**

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.

43.56	✓
44.49	✓
7.49	✓
10.94	✓
.12	✓
.29	✓
-	✓
-	✓
7.78	✓
11.06	✓
- 3.28	✓
Summer Freeboard =	41.27

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

Tropical Fresh Water Line above Centre of Disc	10.4	✓
Fresh Water Line " "	5.4	✓
Tropical Line " "	5.4	✓
Winter Line below " "	5.4	✓
Winter North Atlantic Line " "	7.4	✓

Tropical Fresh Water Freeboard	3.54	✓
Fresh Water " "	2.7	✓
Tropical " "	3.0	✓
Winter " "	3.0	✓
Winter North Atlantic " "	4.0	✓

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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.

Prop & Tack :- for equiv lengths see computation dated 8.4.49.

Bridge

$$\text{Equiv. Length} = 87.00 - \frac{3.0 \times 3.0}{46}$$

$$= 87.00 - 20.$$

$$= 86.80$$

$$O/H \quad .20$$

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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