

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>Cheoy Lee Shipyard No. 669.</b> <b>"IAN CROUCH"</b>	Official Number	Nationality and Port of Registry <b>Australian</b> <b>Port Adelaide</b>	Gross Tonnage <b>876</b>	Date of Build <b>1958</b>	Port of Survey <b>HONG KONG.</b> Date of Survey <b>9th January, 1958.</b> Surveyor's Signature <i>James A. Anderson.</i> Particulars of Classification <b>+100A1</b> <b>restricted service.</b>
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Moulded Dimensions: Length **137'-0"** Breadth **29'-6"** Depth **12'-3"**  
to CL rudder stock on 10'-7" mld draught  
Moulded displacement at moulded draught = 85 per cent. of moulded depth  
Coefficient of fineness for use with Tables **728 use 72.**

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... .. <b>12.25</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>(12.25-11.42) 1.508 = +1.33"</b>	Moulded Breadth (B) <b>29.50'</b>
Stringer plate ... .. <b>.03</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>86</b>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{29.50 \times 12}{50} = 7.08"$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>10.00"</b>
Depth for Freeboard (D) = <b>12.28</b>		Difference = <b>+2.92"</b>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{2.92}{4} \times .5572 = -.41"$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	<b>30'-6"</b>	<b>30.50'</b>	<b>7'-6"</b>	✓	<b>30.50'</b>
" overhang ... ..	<b>7'-00"</b>	<b>3.50'</b>	<b>7'-6"</b>		<b>3.50'</b>
R.Q.D. enclosed ... ..	<b>30'-6"</b>		<b>3'-3"</b>		
" overhang ... ..					
Bridge enclosed ... ..					
" overhang aft ... ..	<b>1'-20"</b>	<b>.90'</b>	<b>10'-9"</b>	✓	<b>.90'</b>
" overhang forward ... ..					
Fore enclosed ... ..	<b>20'-9"</b>	<b>20.63'</b>	<b>7'-6"</b>	✓	<b>20.63'</b>
" overhang ... ..	<b>20.63'</b>				
Trunk aft ... ..					
" forward ... ..		<b>.058 x Diff</b>			
Tonnage opening aft ... ..	<b>7'-42"</b>	<b>5.14'</b>	<b>10'-9"</b>	✓	<b>5.14'</b>
" " forward ... ..					
Total ... ..	<b>66.75'</b>	<b>60.67'</b>			<b>60.67'</b>

Standard Height of Superstructure **6.00'**  
" " R.Q.D. ✓  
Deduction for complete superstructure **8.70'**  
Percentage covered  $\frac{S}{L} = \frac{60.67}{125.28} = 48.72$   
" "  $\frac{S_1}{L} = \frac{20.63}{125.28} = 16.43$   
" "  $\frac{E}{L} = \frac{5.14}{125.28} = 4.10$   
Percentage from Table, Line A. **26.28**  
(corrected for absence of forecastle (if required))  
Percentage from Table, Line B.  
(corrected for absence of forecastle (if required))  
Interpolation for bridge less than .2L (if required)  
Deduction = **26.28 x 8.70 = 2.29"**

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<b>23.70</b>	1		<b>23.70</b>	<b>23.00</b>	<b>82.50</b>	1		<b>82.50</b>
$\frac{1}{2}$ L from A.P. ... ..	<b>10.55</b>	4		<b>42.20</b>	<b>9.60</b>	<b>13.36</b>	4		<b>53.44</b>
$\frac{2}{3}$ L " ... ..	<b>2.61</b>	2		<b>5.22</b>	<b>2.50</b>	<b>2.50</b>	2		<b>5.00</b>
Amidships ... ..	<b>0</b>	4		<b>0</b>	<b>-</b>	<b>0</b>	4		<b>0</b>
$\frac{2}{3}$ L from F.P. ... ..	<b>5.21</b>	2		<b>10.42</b>	<b>5.00</b>	<b>5.00</b>	2		<b>10.00</b>
$\frac{1}{2}$ L " ... ..	<b>21.09</b>	4		<b>84.36</b>	<b>20.60</b>	<b>20.60</b>	4		<b>82.40</b>
F.P. ... ..	<b>47.40</b>	1		<b>47.40</b>	<b>49.75</b>	<b>49.75</b>	1		<b>49.75</b>
Total ... ..				<b>213.30</b>					<b>283.09</b>

Mean actual sheer aft =  
Mean standard sheer aft =  
Mean actual sheer forward = **EXCESS**  
Mean standard sheer forward = **EXCESS**  
Length of enclosed superstructure forward of amidships =  
" " aft of " = **NIL.**

Correction =  $\frac{\text{Difference between sums of products}}{18} = \frac{283.09 - 213.30}{18} = \frac{69.79}{18} = 3.88$   
If limited on account of midship superstructure. **YES - NIL**  
If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. **5064**

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line 10'-7" mld drft. $\Delta = 904$ tons. Tons per inch immersion at summer load water line $T = 8.58$	Correction for coefficient $\frac{62.72}{1.24} = 1.34$
Depth to Freeboard Deck = <b>12.28</b>		Depth Correction ... .. <b>1.33</b>
Summer freeboard = <b>1.75</b>		Deduction for superstructures ... .. <b>2.29</b>
Moulded draught (d) = <b>10.53</b>		Sheer correction ... .. <b>✓</b>
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40 T}$ inches <b>= 2.63</b>	Round of Beam correction ... .. <b>.41</b>
Winter freeboard = $\frac{d}{4}$ inches = <b>NIL</b>	<b>= 2 3/4"</b>	Correction for Thickness of Deck amidships ... .. <b>✓</b>
Addition for Winter North Atlantic Freeboard (if required) = <b>✓</b>		Other corrections, scantlings, etc. ... .. <b>✓</b>
		Summer Freeboard = <b>20.93</b>

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

Tropical Fresh Water Line above Centre of Disc ... .. <b>2 3/4"</b>	Tropical Fresh Water Freeboard ... .. <b>12'-6 1/4"</b>
Fresh Water Line " " ... .. <b>✓</b>	Fresh Water " " ... .. <b>✓</b>
Tropical Line " " ... .. <b>✓</b>	Tropical " " ... .. <b>✓</b>
Winter Line below " " ... .. <b>✓</b>	Winter " " ... .. <b>✓</b>
Winter North Atlantic Line " " ... .. <b>NOT ASSIGNED</b>	Winter North Atlantic " " ... .. <b>NOT ASSIGNED</b>



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.

$$\frac{b_1 - b_2}{b_1} = \frac{29.50 - 16.00}{29.50} = .458$$

SHEETS AFT

Prop. Treen deck height = 10'-9"

Standard height = 6'-0"

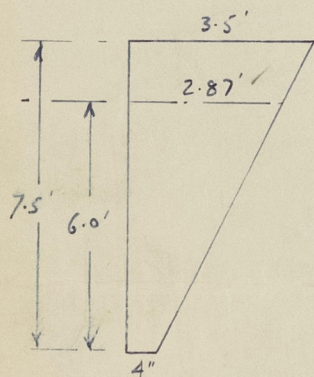
Excess 4'-9" = 57"

Allowable slew to AP = 23.00 + 57.00 + 2.50 = 82.50"

$$\begin{aligned} \text{allowable slew to } \frac{1}{6} &= 9.60 + 57.5 \left( \frac{7.67}{30.50} \right)^2 \\ &= 9.60 + 3.76 = 13.36" \end{aligned}$$

FORECASTLE BHD

Vol of stemming rears =

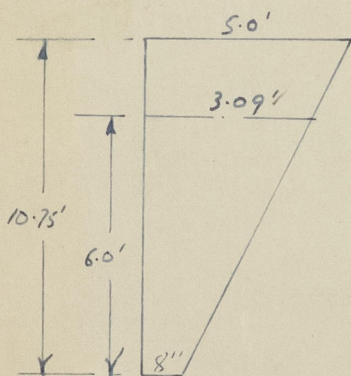


$$2 \left[ \frac{(6.0 \times 3.3)}{1.98} + \frac{(3.0 \times 2.54)}{7.62} \right] = 19.20 \text{ ft}^3$$

$$\text{Equiv. length} = 20.75 - \frac{19.20}{6.0 \times 25.50}$$

$$= 20.75 - .12 = 20.63'$$

Tonnage well bulkhead forward



Vol of rears

$$= 2 \left[ \frac{(6.0 \times 6.7)}{4.02} + \frac{(3.0 \times 2.42)}{7.26} \right] = 22.56 \text{ ft}^3$$

$$\text{Equiv. length } \frac{9}{14} \text{ off} = 1.33 - \frac{22.56}{6.0 \times 29.5}$$

$$= 1.33 - .13 = 1.20'$$

Trade of ship Australian Coastal Service between Newcastle and Adelaide including Tasmania.

Names of sister ships Nil.

Builder's name and yard number Cheoy Lee Shipyard - Yard No. 669.

Owners R.M. Crouch Esq.

Fee £ AC.



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Foundation