

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Forecastle, bridge and raised quarter deck*Port of Survey *Port Adelaide*Date of Survey *Last 14th April, 1936*Name of Surveyor *W. J. Beck and J. H. Thomas*Particulars of Classification *100 A1*

Ship's Name

*LUTANA*

(Type of Superstructures.)

Nationality and Port of Registry  
*British Melbourne*Official Number  
*145642*Gross Tonnage  
*918*Date of Build  
*1922 3 month*

Moulded Dimensions: Length *206.71* Breadth *31.96* Depth *15.42* tons  
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *1806*  
 Coefficient of fineness for use with Tables *.730*

## Depth for Freeboard (D)

Moulded depth ... *15' 5" 42*  
 Stringer plate ... *.38*  
 Sheathing on exposed deck *Nil*  
 $T \left( \frac{L-S}{L} \right) =$   
 Depth for Freeboard (D) = *15' 4 1/2"*

## Depth correction

(a) Where D is greater than Table depth *1.68*  
 (D - Table depth) R =  $(15.42 - 13.78) 1.59$   
 $= + 2.67$   
 (b) Where D is less than Table depth (if allowed)  
 (Table depth - D) R =  $\checkmark$

If restricted by superstructures  $\checkmark$ 

## Round of Beam correction

Moulded Breadth (B) *31' - 11 1/2"*  
 Standard Round of Beam =  $\frac{B \times 12}{50} = 7.67$   
 Ship's Round of Beam = *8"*  
 Difference *Excess .33"*  
 Restricted to  
 Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.33}{4} \times .2955 = -.02$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	<i>71.25</i>	<i>71.25</i>	<i>3' 7"</i>	$\times \frac{3.58}{3.711}$	<i>68.73</i>
" overhang ...					
Bridge enclosed ...	<i>48.75</i>	<i>48.75</i>	<i>7' 0"</i>	$\checkmark$	<i>48.75</i>
" overhang aft ...					
" overhang forward ...	<i>25.64</i>	<i>25.64</i>	<i>7' 0"</i>	$\checkmark$	<i>25.64</i>
Deck enclosed ...					
" overhang ...					
Trunk aft ...					
forward ...					
Tonnage opening aft ...					
forward ...					
Total ...	<i>145.64</i>	<i>145.64</i>			<i>143.12</i>

Standard Height of Superstructure *6.00'*  
 " " R.Q.D. *3.711'*  
 Deduction for complete superstructure *26.67'*  
 Percentage covered  $\frac{S}{L} = 70.45\%$   
 "  $\frac{S_1}{L} = 70.45\%$   
 "  $\frac{E}{L} = 69.24\%$   
 Percentage from Table, Line A. *61.71%*  
 (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 =  $26.67 \times .6171 = -16.46$

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<i>30.67</i>	<i>1</i>	<i>30.67</i>	<i>27 1/2"</i>	<i>28.00</i>	<i>1</i>	<i>28.00</i>
1/4 L from A.P. ...	<i>13.65</i>	<i>4</i>	<i>54.60</i>	<i>9"</i>	<i>11.06</i>	<i>4</i>	<i>44.24</i>
1/2 L " ...	<i>3.37</i>	<i>2</i>	<i>6.74</i>	<i>2 1/4"</i>	<i>2.76</i>	<i>2</i>	<i>5.52</i>
Amidships ...	$\checkmark$	<i>4</i>	$\checkmark$	$\checkmark$	$\checkmark$	<i>4</i>	$\checkmark$
3/4 L from F.P. ...	<i>6.75</i>	<i>2</i>	<i>13.50</i>	<i>4 3/4"</i>	<i>6.32</i>	<i>2</i>	<i>12.64</i>
3/4 L " ...	<i>27.30</i>	<i>4</i>	<i>109.20</i>	<i>23"</i>	<i>25.28</i>	<i>4</i>	<i>101.12</i>
F.P. ...	<i>61.34</i>	<i>1</i>	<i>61.34</i>	<i>58 3/4"</i>	<i>59.00</i>	<i>1</i>	<i>59.00</i>
Total ...			<i>276.05</i>				<i>250.52</i>

Correction =  $\frac{\text{Difference between sums of products}}{18} = \frac{25.53}{18} = 1.42$   
 $(.75 - \frac{S}{2L}) = \frac{25.53}{18} (.75 - .3522) = +.56$

If limited on account of midship superstructure.

Mean actual sheer aft = *Deficient*  
Mean standard sheer aftMean actual sheer forward = *Deficient*  
Mean standard sheer forward

Length of enclosed superstructure forward of amidships =  $\frac{16.65}{206.71} = .0805L$   
 " aft of " =  $>.1L$

Deduction for Tropical Freeboard.  
 Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *15.46*  
 Summer freeboard = *1.00*  
 Moulded draught (d) = *14.46*

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches =  $3.61 = 3.61$

Addition for Winter North Atlantic Freeboard (if required) =

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

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... *2.67*  
 Deduction for superstructures ... *16.46*  
 Sheer correction ... *.56*  
 Round of Beam correction ... *.02*  
 Correction for Thickness of Deck amidships ...  
 Other corrections, scantlings, etc. ...

+	-
<i>2.67</i>	<i>-</i>
<i>-</i>	<i>16.46</i>
<i>.56</i>	<i>-</i>
<i>-</i>	<i>.02</i>
<i>-</i>	<i>-</i>
<i>-</i>	<i>-</i>
<i>3.23</i>	<i>16.48</i>

Summer Freeboard = *11.83*

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

Existing freeboards as measured 5. being more favourable than the computed value in the computation regulations

Tropical Fresh Water Line above Centre of Disc ...	<i>5 1/2"</i>
Fresh Water Line " " ...	<i>3 1/2"</i>
Tropical Line " " ...	<i>2"</i>
Winter Line below " " ...	<i>2"</i>
Winter North Atlantic Line " " ...	<i>5"</i>

Tropical Fresh Water Freeboard ...	<i>11.03 1/4</i>
Fresh Water " " ...	<i>0-7 1/4</i>
Tropical " " ...	<i>0-9 1/4</i>
Winter " " ...	<i>0-10 3/4</i>
Winter North Atlantic " " ...	<i>1-2 3/4</i>
	<i>1-5 3/4</i>



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway			No.1	No.2	No.3	No.4			
Dimensions of Hatchway			15'x12'	18'9"x13'-9"	15'-0"x13'-9"	13'-11 1/2"x12'-0"			
COAMINGS	{	Height above Deck	32"	32"	32"	32"			
		Thickness	4 1/2"	4 1/2"	4 1/2"	4 1/2"			
		Sides	4 1/2"	4 1/2"	4 1/2"	4 1/2"			
		Ends	4 1/2"	4 1/2"	4 1/2"	4 1/2"			
Stiffeners		7"x3"x4"	7"x3"x4"	7"x3"x4"	7"x3"x4"				
Brackets, Stays		7"x4"	7"x4"	7"x4"	7"x4"				
HATCH BEAMS	{	Number	2	3	2	2			
		Spacing	5'-0"	4'-8 1/2"	5'-0"	4'-4 1/2"			
		Scantling and Sketch							
		Bearing Surface	3"	3"	3"	3"			
FORE AND AFTERS	{	Number	N/A	N/A	N/A	N/A			
		Spacing							
		Unsupported Lengths							
		Scantling* and Sketch							
Bearing Surface									
HATCH COVERS	{	Material	Wood	Wood	Wood	Wood			
		Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"			
		How fitted	F & A	F & A	F & A	F & A			
		Bearing Surface	3"	3"	3"	3"			
Spacing of Cleats			24"	24"	24"	24"			
Number of Tarpaulins			2	2	2	2			
*Are wood fore and afters steel shod at all bearing surfaces? <u>N/A.</u>									
Are battens and wedges efficient and in good condition? <u>Yes.</u>									
Are tarpaulins in good condition and in accordance with rule requirements? <u>Yes.</u>									
Are lashings provided in accordance with rule requirements? <u>Yes.</u>									

Particulars of fiddle, funnel and ventilator coamings: Fiddle fitted with hinged closing plates. Funnel strongly constructed and watertight at fiddle top. Boiler room ventilators 2-18" 6-0" coamings specially stiffened. Engine room ventilators 1-14" 1-14" coamings 4-6" specially stiffened. Engine room skylight strongly constructed and flaps can be removed from inside.

Particulars of Flush Bunker Scuttles: 1-P x 1-S on bridge superstructure deck. 16" diameter. strongly constructed in cast iron with hinged joints and provided with chain attachments.

Particulars of Companionways: One on bridge superstructure deck (leading to crew's quarters in fore end of bridge superstructure) strongly constructed in steel. Door 4'-0" x 1'-4" steel 5/16" fastening can be manipulated from both sides. Well 15'.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: Forecastle: 1-7" 24" coaming to forecabin. 2-7" 36" coamings to No. 1 hold. Bridge Deck: 1-12" 8'-0" coaming specially stiffened, to No. 1 hold. 1-12" 36" coaming to No. 2 hold. 1-7" goose neck 14" high to crew's accommodation. 1-9" coaming 20" to crew's accommodation. Raised Quarter Deck: 1-12" 36" coaming to No. 2 hold. 4-5" 36" coamings to tunnel access. 1-7" 36" coaming to aft peak. Fore Well: 1-12" 7'-0" coaming specially stiffened to No. 1 hold forward. Specially supported.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks: Forecastle: 1-2 1/2" 2'-0" high goose neck. 1-2 1/4" 2'-0" high goose neck. Fore Well deck: 2-2" 12" high fitted with screwed plugs. Bridge superstructure: 1-2 1/2" 18" high fitted with screwed plug. 1-12" high 2 1/2" with goose neck. Raised Quarter Deck: 1-1 1/2" high fitted with screwed plug. 1-1 1/2" 2'-0" high fitted with screwed plug.

Particulars of Gangway Cargo and Coaling Ports: N/A

Particulars of Scuppers and Sanitary Discharge Pipes: Forecastle: 1-1/2" from crew's lavatory discharging 18" below freeboard deck, fitted with 1/2" brass non-return valve strongly constructed and securely fastened to ship's side. Bridge superstructure: 4-1" from washing conveniences discharging 12" above freeboard deck, fitted with non-return valves. 1-2" scupper above freeboard deck not fitted with closing arrangement, with automatic non-return valves.

Particulars of Side Scuttles: Forecastle: 4-P x 4-8" strongly constructed and fitted with lead lights. Accommodation in bridge superstructure 2-10" in forward bulkhead and 2-8" in ship's side stateroom all four not fitted with lead lights.

Particulars of Guard Rails: Forecastle: portable rails at ship's side, 3'-3" high consisting of collapsible rails with 2 sets of chain. At aft and fore ends 3'-3" high with 3 rails. Bridge superstructure deck: sides and fore end 4'-3" bulwarks, efficiently staged. Well deck: Bulwarks 4'-3" high, efficiently staged. Raised quarter deck 4'-3" bulwarks 4'-3" high, efficiently staged.

Particulars of Gangways, Lifelines, etc.: No gangway at well deck and no permanent fixtures for life lines fitted. Suitable provision made for rigging lifelines in accordance with the regulations.

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	71'-3"	4'-3"	2'-6" x 1'-8"	3	12.5	14.25
Forward Well	59'-6"	4'-3"	2'-6" x 1'-8"	3	12.5	12.35
State position of each freeing port: After Well: From aft bridge bulkhead 5'-0" 2'-6" 25'-6" (F. and A. position and height above deck edge). Forward Well: From fore bulkhead 5'-0" 2'-6" 25'-0". State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: Fitted with shutters hinged on top and two 7/8" dia. bars.						
Additional area where sheer is less than standard.						

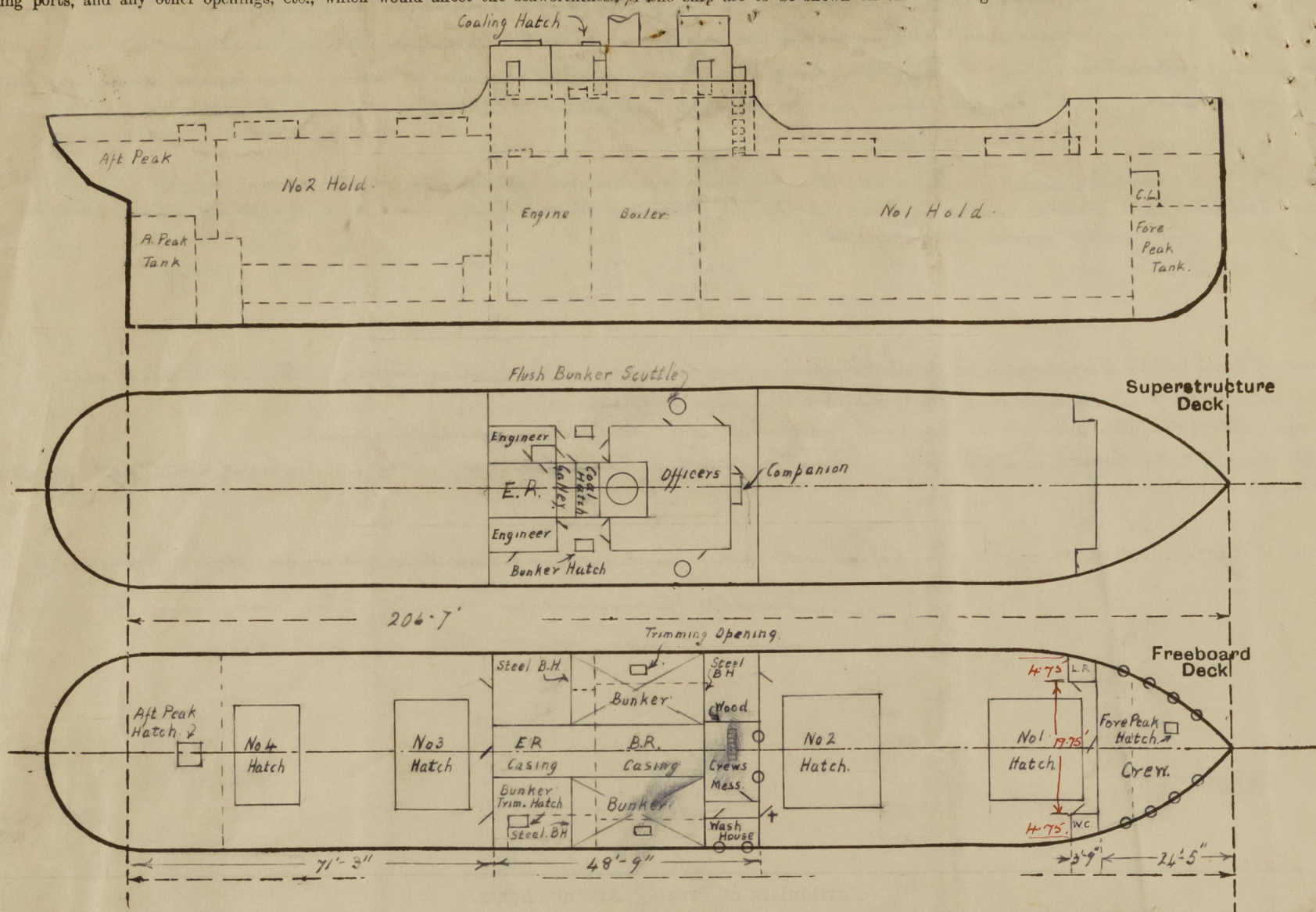
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead								
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	5/16"	5/16"	7' x 3" x 3/8" B.	2'-6"	Yes	2'-3" x 2'-3"	15"	3'-5"
Bridge, Forward Bulkhead	5/16"	1/32"	7' x 3" x 3/8" B.	2'-6"	Yes	5'-2" x 2'-0" 3'-0" x 4'-0"	15"	7'-0"
Forecastle Bulkhead	5/16"	5/16"	3' x 3" x 1/4"	2'-6"	Yes	5'-0" x 2'-6"	17"	7'-0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	5/16"	5/16"	4' x 3" x 5/16"	2'-7"		5'-0" x 2'-3"	12"	7'-0"
Exposed Machinery Casings on Superstructure Decks	5/16"	5/16"	4' x 3" x 5/16"	2'-7"		5'-0" x 1'-9"	12"	7'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	5/16"	5/16"	4' x 3" x 5/16"	2'-7"		5'-0" x 2'-3"	12"	7'-0"
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides). X

Poop Bulkhead	
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	2- Steel hinged doors specially stiffened, secured with 1 clip X from outside only.
Bridge, Forward Bulkhead	1- Steel hinged door not stiffened 3/8" thick, secured with 2 clips X from outside only.
Forecastle Bulkhead	1- Steel hinged door 1/4" thick X Yes.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	1- Steel hinged door 5/16" opened from S.P. only.
Exposed Machinery Casings on Superstructure Decks	2- " " " 1/4" X Yes.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	2- Steel hinged door 1/4" X Yes.
Deckhouses on Flush Deck Ships	



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:—



$$\begin{array}{rcl}
 \text{Fore castle} & 24 \cdot 42 & \\
 \text{S.H. } \frac{2 \times 4 \cdot 75 \times 3 \cdot 75}{29 \cdot 25} & + \frac{1 \cdot 22}{25 \cdot 64} & \text{equiv.}
 \end{array}$$

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

*Fiddly coaling hatch:— 3'-7" x 10'-6" coaming 10" high, 3/8" thick, stiffened with 3" x 3" x 3/8" L on inside and 3" x 3/8" flat on outside. 2 1/2" wood hatch covers, cleats 24" spacing. 2 tarpaulings in good condition.*  
*Aft Peak Hatch:— 3'-2" x 3'-2" coaming 24" high, 3/8" thick, stiffened with 3" x 3" x 3/8" L on inside and 3" x 3/8" flat on outside. 2 1/2" wood hatch covers, cleats 18" spacing. 2 tarpaulings in good order.*  
*Bunker hatches on bridge superstructure deck. 3'-6" x 2'-3" coaming 32", 5/16" thick stiffened with 3" x 3" x 5/16" L. 2 1/2" wood hatch covers, cleats 18" spacing. 2 tarpaulings in good order.*

Builder's name and yard number *E. J. Smit & Zoon, Westerbreek.*

Names of sister ships

Owners *Wm. Holman & Sons Pty. Ltd.*

Fee £ *8* : — : — Received by me



© 2020

Lloyd's Register  
Foundation