

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

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Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Complete Shelter Deck with Forecastle

(Type of Superstructures.)

Ship's Name S.S. "DALIA" Nationality and Port of Registry British Durban Official Number 150215 Gross Tonnage 5188 Date of Build 1931

Moulded Dimensions: Length 404.75' Breadth 53'-10" Depth 28'-3"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 11870 tons

Coefficient of fineness for use with Tables .780

Port of Survey PORT

Date of Survey May 1

Name of Surveyor C.A.H.

Particulars of Classification +100 with Freeboard

Depth for Freeboard (D) 28'-3" Depth correction (a) Where D is greater than Table depth (D - Table depth) R = $(28.28 - 26.98) \times 3.0 = 3.90$

Stringer plate .39' (b) Where D is less than Table depth (if allowed) (Table depth - D) R = .03

Sheathing on exposed deck .28

T $\left(\frac{L-S}{L} \right) =$.28

Depth for Freeboard (D) = 28'-3.39" If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) 53'-10" Standard Round of Beam = $\frac{B \times 12}{50} = \frac{53.16 \times 12}{50} = 12.76$

Ship's Round of Beam = 13.75

Difference = .83 EXCESS.

Restricted to .61

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.61}{4} \times .0059 = \text{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	20.75	20.75	9'-2"	8'-11 1/2"	20.75
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	379.25	379.25	8'-11 1/2"		379.25
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	4.75	2.37			2.37
" forward ...					
Total ...	404.75	400.00			400.00

Standard Height of Superstructure 7'-6"

" " R.Q.D.

Deduction for complete superstructure 42"

Percentage covered $\frac{S}{L} = \frac{404.75}{404.75} = 100\%$

" $\frac{S_1}{L} = \frac{400.00}{404.75} = 98\%$ 99.41

" $\frac{E}{L} = \frac{400.00}{404.75} = 98\%$ 99.41

Percentage from Table, Line A. = 97.54% 99.27

(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 = $42.00 \times .9927 = 41.69$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	50.47	1	50.47	36	52.50	1	50.47
1/4 L from A.P. ...	22.46	4	89.84	17	23.81	4	89.84
1/2 L " ...	5.55	2	11.10	4	5.88	2	11.10
Amidships ...	—	4	—	—	—	4	—
3/4 L from F.P. ...	11.10	2	22.20	9	9.84	2	19.68
1/4 L " ...	44.92	4	179.68	32	39.83	4	159.32
F.P. ...	100.95	1	100.95	72	89.50	1	89.50
Total ...			454.24				419.91

Mean actual sheer aft = $\frac{19.00}{26.16} = 27.3\%$ DEFICIENT.

Mean standard sheer aft

Mean actual sheer forward = $\frac{37.66}{52.32} = 28\%$ DEFICIENT.

Mean standard sheer forward

Length of enclosed superstructure forward of amidships 202.375

" " aft of " 197.625

Actual Tw. Sh. Height = 8'-11 1/2"

Standard " " 7'-6"

1-5 1/2 = 17.5"

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{124.24}{18} \left(.75 - \frac{404.75}{2 \times 404.75} \right) = 1.73$ DEFICIENT.

If limited on account of midship superstructure.

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 = 28.28

Summer freeboard = 3.42

Moulded draught (d) = 24.86

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Tons per inch immersion at summer load water line

T = 45.73Deduction = $\frac{\Delta}{40T}$ inches= 6.77= 6 3/4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.780 + .680}{1.36} = \frac{1.460}{1.36}$ Depth Correction ... 3.90Deduction for superstructures ... 41.69Sheer correction48

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

Summer Freeboard = 41.0

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

Tropical Fresh Water Line above Centre of Disc ... 13"Fresh Water Line " " ... 6 3/4"Tropical Line " " ... 6 1/4"Winter Line below " " ... 6 1/4"

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " ...

Winter North Atlantic " " ...

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
— SUPERSTRUCTURE DECK —						— FREEBOARD DECK —					
Hatchway	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	
Hatchway	22'-6" X 16'	27'-6" X 20'	17'-6" X 20'	40' X 20'	25' X 18'	22'-6" X 16'	27'-6" X 20'	17'-6" X 20'	40' X 20'	25' X 18'	
S	Height above Deck	30"	30"	30"	30"	9"	9"	9"	9"	9"	
	Thickness	.44"	.44"	.44"	.44"	.40"	.40"	.40"	.40"	.40"	
	Stiffeners	7 X 3 X 3/8	7 X 3 X 3/8	7 X 3 X 3/8	7 X 3 X 3/8	7 X 3 X 3/8	7 X 3 X 3/8	7 X 3 X 3/8	7 X 3 X 3/8	7 X 3 X 3/8	
	Brackets, Stays	2 2 2 1/2 D.	2 2 2 1/2 D.	2 2 2 1/2 D.	3 2 2 1/2 D.	2 2 2 1/2 D.	2 2 2 1/2 D.	2 2 2 1/2 D.	2 2 2 1/2 D.	2 2 2 1/2 D.	
HATCH COAMINGS	Number	4	5	3	7	4	5	3	7	4	
	Spacing	4'-5"	4'-6"	4'-5"	4'-11"	4'-5"	4'-6"	4'-5"	4'-11"	4'-11"	
	Scantling and Sketch										
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	
FORE AND AFTERS	Number										
	Spacing										
	Unsupported Lengths										
	Scantling* and Sketch										
	Bearing Surface										
HATCH COVERS	Material	Wood									
	Thickness	2 1/2"									
	How fitted	For a 1/2"	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	
	Bearing Surface	3"									
Spacing of Cleats		24"	24"	24"	24"	24"	24"	24"	24"	24"	
Number of Tarpaulins		3	3	3	3	3	+ 2	+ 2	+ 2	+ 2	
*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/>											

Particulars of fiddle, funnel and ventilator coamings:—

Fitted on top of machinery casing, on Superstructure deck.
Fiddle, gratings fitted with strong steel covers, permanently attached in their proper positions

Particulars of Flush Bunker Scuttles:—

One 18 1/2" iron scuttle of substantial construction fitted each side of Freeboard deck, for trimming bunkers, secured by 2 - 3/4" set bolts.
provided with chain attachment

Particulars of Companionways:—

Within steel house of 1/4" plating, stiffened by edge of each plate being flanged 3" and 36" apart. Sills 18" in height. Width of opening 24", fitted with 1 3/4" hardwood door with lock.

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

Ventilators within a quarter of the ship's length from the stem fitted with substantial steel coamings 36" in height. Other ventilators of similar construction with coamings 30" in height. Supplied with wooden plugs and canvas covers.

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

Air pipes of steel with goose-necks, 12" from deck to opening. All supplied with wooden plugs and canvas covers.

Particulars of Gangway Cargo and Coaling Ports:—

Three Cattle openings fitted each side of Shelter Tween-decks, and fitted with substantial steel doors, permanently hinged to ship's sides and secured by 7/8" bolts and dogs. Size of openings 6'-6" X 4'-6",

Particulars of Scuppers and Sanitary Discharge Pipes —

Eight 6" Scuppers fitted each side of Freeboard deck, discharging through the ship's sides, and fitted with N.R. Valves, for draining Shelter Tween-decks

Particulars of Side Scuttles:

9" Scuttles fitted each side of Shelter Tween-decks, fitted with deadlights.

Particulars of Guard Rails:—

Efficient guard rails 3'-6" high fitted to Shelter deck.

Particulars of Gangways, Lifelines, etc.:—

NONE

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	4.75	8-11½	3'-6" x 15"	1	4.25 4.68	✓
Forward Well						

State position of each freeing port { After Well:—
(F. and A. position and height above deck edge) { Forward Well:—

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

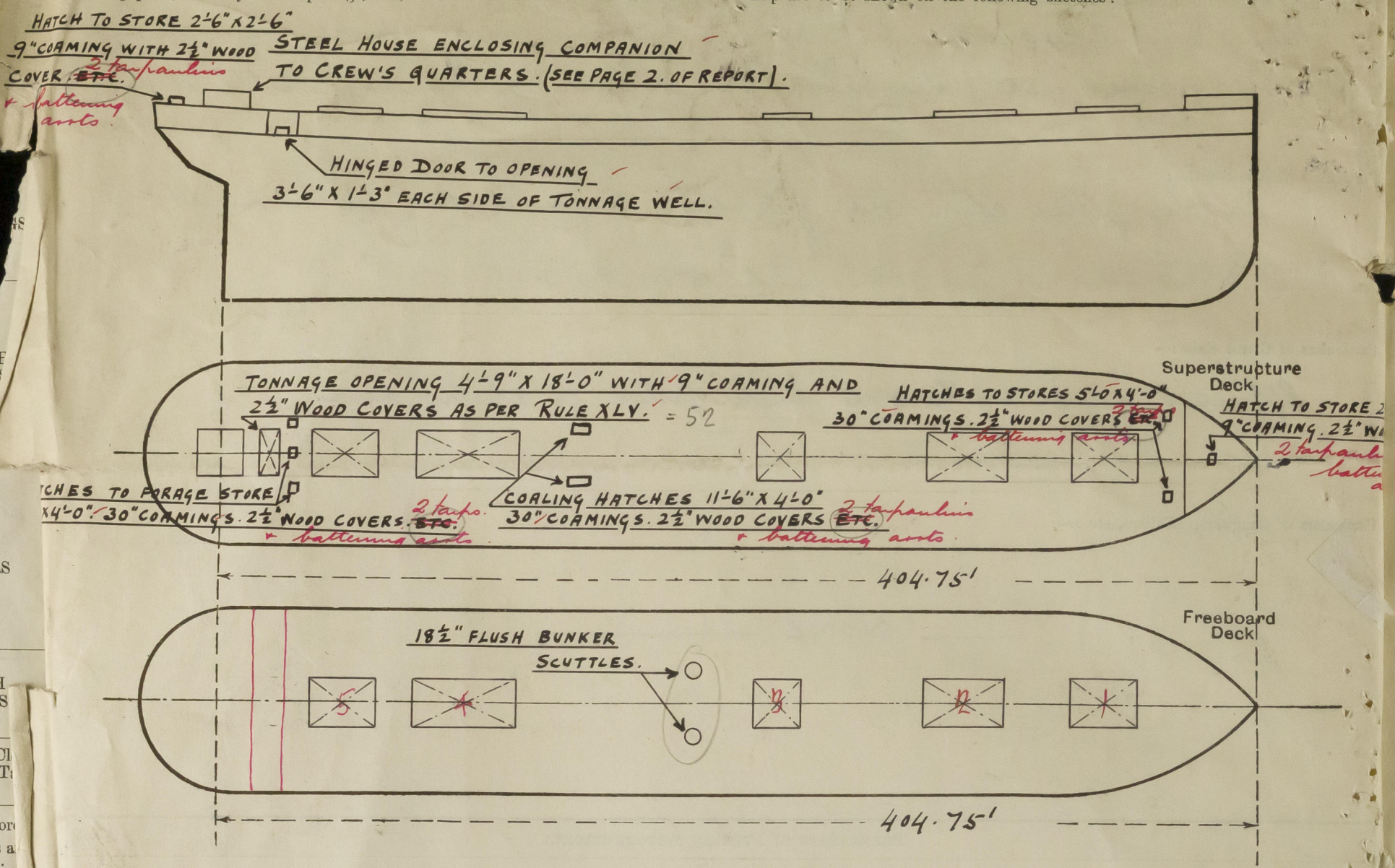
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	20"	20"	PLATE FLANGED 3"	36"	✓	✓	✓	9'-2"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead	25"	25"	PLATE FLANGED 2½"	36"	✓	5'-8" x 3'-3"	10"	8'-11½"
Bridge, Forward Bulkhead								
Forecastle Bulkhead	35"	35"	5½" x 3" x 5/16"	23"	3½" x 3" x 3/8"	✓	✓	8'-11½"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks	30"	25"	3" x 2½" x 1/4"	28"	15" x 9" x 5/16"	5'-0" x 2'-0"	19"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances		5/16"	3" flanges	38"		None		
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead	No openings ✓
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead	2½" Weatherboards fitted in fixed steel channels. Also steel plates with 3/4" Hook bolts
Bridge, Forward Bulkhead	
Forecastle Bulkhead	No openings ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks	1¾" Hardwood hinged doors, fitted with locks, manipulated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships ...	

Salina

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:—



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

full Δ @ 24.73 mtd = 12310.
24.86
15x12x4573 = +82
12392
Over

Builder's name and yard number *R. Duncan & Co. Ltd. Port Glasgow. Yard No. 400.*
Names of sister ships *✓*
Owners *The Union Government of South Africa. (Repd Hbr. Administration)*
Tee £ : : Received by me

Over



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