

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.Index No. 14737  
(For London Office only.)

15 JUL 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Having

Single deck with forecastle.

Port of Survey

Southampton

Date of Survey

9 &amp; 11 July 1932

Name of Surveyor

J. Macmillan  
+ 100A1

Particulars of Classification

Hopper Barge

S.S. No. 2-31.

ANDROMEDA No. 1

(Type of Superstructures.)

Ship's Name

JAMES No 64

Nationality and Port of Registry

LONDON London

Official Number

14660

Gross Tonnage

1232

Date of Build

1922-11

Moulded Dimensions: Length

215.0

Breadth

35.5

Depth

19.25

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

825

tons

Coefficient of fineness for use with Tables

Depth for Freeboard (D)

Depth correction

Round of Beam correction

Moulded depth ... .. 19.25

Stringer plate ... .. .04

Sheathing on exposed deck

$$T \left( \frac{L-S}{L} \right) = \frac{42 \times 25}{215}$$

(a) Where D is greater than Table depth  
(D - Table depth) R =

$$(19.34 - 14.33) 1.654 = + 8.29$$

(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R =

If restricted by superstructures

Moulded Breadth (B)

35.5

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 8.52$$

$$\text{Ship's Round of Beam} = 10.00$$

$$\text{Difference} = 1.48$$

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{1.48}{4} (1 - 0.74) = - .34$$

## 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 ... ..					
" overhang ... ..					
Bridge enclosed ... ..	✓				
" overhang aft ... ..					
" overhang forward ... ..					
F'cle enclosed ... ..	16.00	16.00	5.75	5.75	15.33
" overhang ... ..					
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" " forward ... ..					
Total ... ..	16.00	16.00			15.33

Standard Height of Superstructure

6.0

" " R.Q.D.

Deduction for complete superstructure

27.5

$$\text{Percentage covered } \frac{S}{L} = .0744$$

$$\text{" " } \frac{S_1}{L} = .0744$$

$$\text{" " } \frac{E}{L} = .0713$$

Percentage from Table, Line A.

(corrected for absence of forecastle (if required)) .0356

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

$$\text{Deduction} = 27.5 \times .0356 = - .98$$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	31.50	1		31.50	35"	36.00	1		36.00
1/4 L from A.P. ... ..	14.02	4		56.08	12"	16.59	4		66.36
1/2 L " ... ..	3.46	2		6.92	3/4"	4.15	2		8.30
Amidships ... ..	-	4		-	0	-	4		-
3/4 L from F.P. ... ..	6.92	2		13.84	6"	7.11	2		14.22
1/4 L " ... ..	28.04	4		112.16	26"	28.43	4		113.72
F.P. ... ..	63.00	1		63.00	66"	66.00	1		66.00
Total ... ..				283.50					304.60

Mean actual sheer aft = Excess.

Mean standard sheer aft

Mean actual sheer forward = Excess.

Mean standard sheer forward

Length of enclosed superstructure forward of amidships =

" " aft of " =

No Bridge

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{21.10}{18} \left( .75 - .0372 \right) = -.84$$

If limited on account of midship superstructure.

Yes. No BRIDGE.

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.

$$\text{Depth to Freeboard Deck} = 19.29$$

$$\text{Summer freeboard} = 2.90$$

$$\text{Moulded draught (d)} = 16.39$$

Deduction for Tropical freeboard and addition for

$$\text{Winter freeboard} = \frac{d}{4} \text{ inches} = 4.10 = 4"$$

Addition for Winter North Atlantic Freeboard (if required = 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 =

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

4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

$$\text{Correction for coefficient} = \frac{8.25 + .68}{1.36} \frac{1.505}{1.36}$$

Depth Correction ... .. 8.29

Deduction for superstructures ... .. .98

Sheer correction ... .. .

Round of Beam correction ... .. .34

Correction for Thickness of Deck amidships ... .. .60

Other corrections, scantlings, etc. ... .. .

+

-

8.29

-

-

-

-

8.29

1.92

+ 6.37

Summer Freeboard = 34.81

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

Tropical Fresh Water Line above Centre of Disc ... ..	8"
Fresh Water Line " " ... ..	4" 102
Tropical Line " " ... ..	4" 102
Winter Line below " " ... ..	4" 102
Winter North Atlantic Line " " ... ..	6"

Tropical Fresh Water Freeboard ... ..	2' 10 3/4"
Fresh Water " " ... ..	2' 2 3/4"
Tropical " " ... ..	2' 6 3/4"
Winter " " ... ..	3' 2 3/4"
Winter North Atlantic " " ... ..	3' 4 3/4"



James No 69

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways :—

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

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

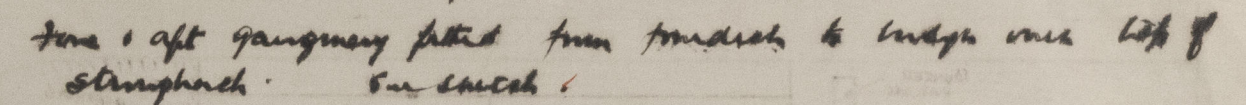
Particulars of Gangway Cargo and Coaling Ports :—

## Particulars of Scuppers and Sanitary Discharge Pipes —

Particulars of Side Scuttles :

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. :—



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 ... ..	81'	3'	3' x 1.6"	2	84'	
Forward Well ... ..	84.6'	3'	3' x 1.6"	1	84.6'	

State position of each freeing port ... .. { After Well: — 19' x 57' as shown in sketch. — 10" from deck edge.  
 (P. and A. position and height above deck edge) { Forward Well: — 84' as shown in sketch. — 10" from deck edge.  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Shuttles hinged. —

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 ... ..								
Bridge, Forward Bulkhead ... ..								
Forecastle Bulkhead ... ..								
Trunk, Aft ... ..								
Trunk, Forward ... ..								
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	5/16"	1/4"	3" x 3" x 3/16"	24"	Bolt	4'4" x 2'2"	18"	6'9"
Exposed Machinery Casings on Super- structure Decks ... ..								
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ... ..								
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead	...	...	...
Raised Quarter Deck Bulkhead	...		
Bridge, After Bulkhead	...	...	
Bridge, Forward Bulkhead	...	...	
Forecastle Bulkhead	...	...	
Exposed Machinery Casings on Free-board or Raised Quarter Decks	...	...	
Exposed Machinery Casings on Super-structure Decks	...	...	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	
Deckhouses on Flush Deck Ships	...		

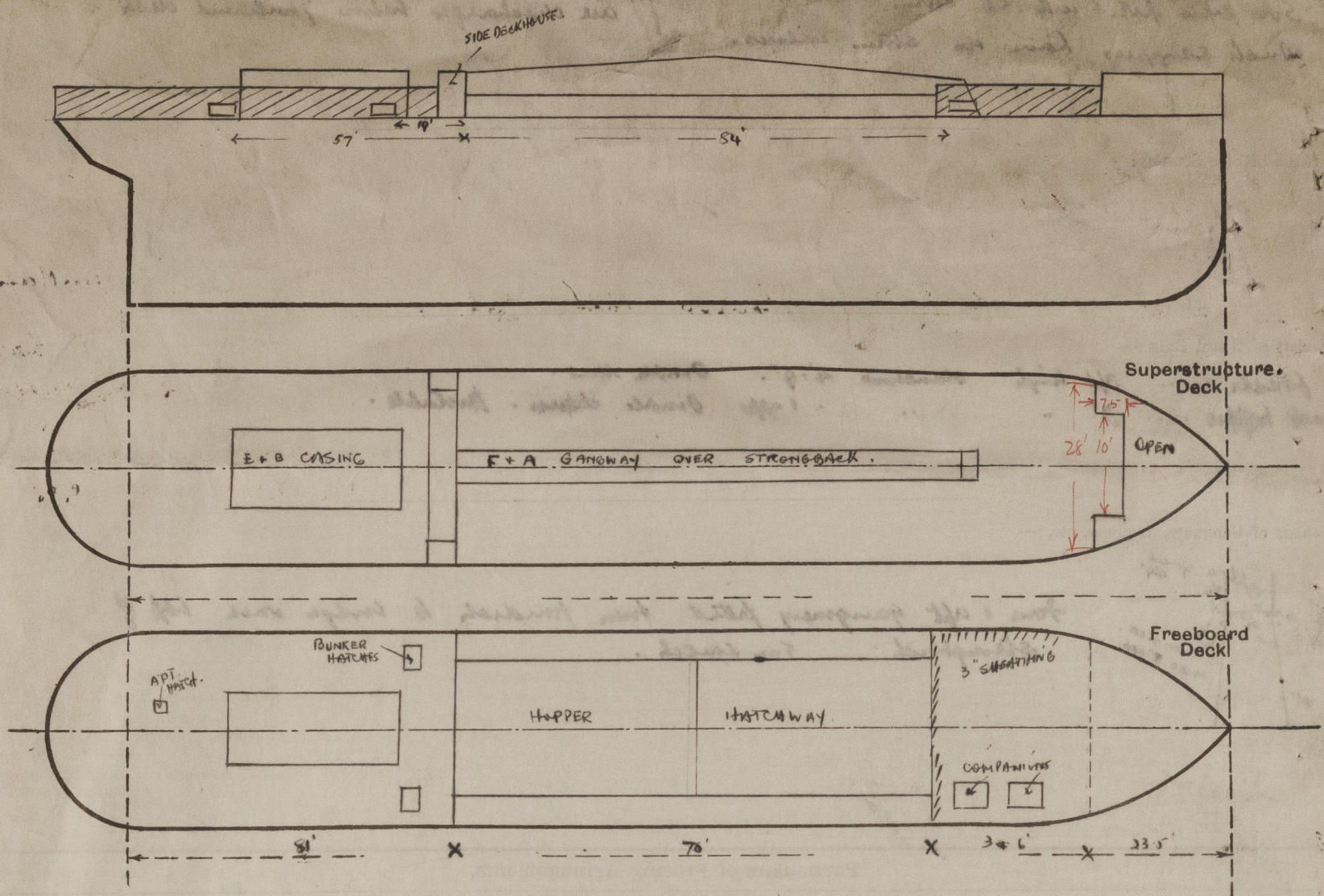
*Strong steel doors, permanently latched handles operated both sides*

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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:—

Builder's name and yard number

Names of sister ships

*James No 63 165.*

Owners

*James Dredging & Transport Co Ltd.*

Fee £

*8*

*10*

*0*

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Foundation