

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

25 JAN 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Poop, Bridge & Forecastle

Port of Survey

Falmouth

(Type of Superstructures.)

Date of Survey

11th & 12th January 1932

Ship's Name

Linn Se. M.V. "Athelregent"

Nationality and Port of Registry

British
Liverpool

Official Number

161142

Gross Tonnage

8881

Date of Build

1930/2

Name of Surveyor

Arthur Sculthard

Moulded Dimensions: Length 473.8 Breadth 63.0 Depth 35.0

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

Coefficient of fineness for use with Tables

.806

Particulars of Classification

100 A.1.

Carrying Molasses & Petrol

Depth for Freeboard (D)

Moulded depth ... 35.00

Stringer plate07

Sheathing on exposed deck

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

Depth for Freeboard (D) =

35.07

(a) Where D is greater than Table depth

(D - Table depth) R =

(35.07 - 31.59) 3.00 = + 10.44

(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)

63.00

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

15.12

Ship's Round of Beam =

15.75

Difference

.63

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.63}{4} \times .5761 = -.10$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	118.92	118.92	8'-0"	✓	118.92
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	33.93	33.93	8'-0"	✓	33.93
" overhang aft ...					
" overhang forward ...	45.54				
F'cle enclosed ...	47.87	45.54	8'-0"	✓	45.54
" overhang ...	2.33	2.08			2.08
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	200.72	200.47			200.47

Standard Height of Superstructure

7.50

" " R.Q.D.

Deduction for complete superstructure

42.00

Percentage covered $\frac{S}{L} =$

42.37%

" " $\frac{S_1}{L} =$

42.31%

" " $\frac{E}{L} =$

42.31%

Percentage from Table, Line A. Tanker. 33.31%

(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 = $42.00 \times .3331 = -13.99$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	57.38	1	57.38	65.75	66.00	1	66.00
$\frac{1}{2}$ L from A.P. ...	25.54	4	102.16	26.25	27.55	4	110.20
$\frac{3}{4}$ L " ...	6.31	2	12.62	2.0	6.89	2	13.78
Amidships ...	✓	4	✓	✓	✓	4	✓
$\frac{3}{4}$ L from F.P. ...	12.62	2	25.24	14.25	13.43	2	26.86
$\frac{1}{2}$ L " ...	51.07	4	204.28	49.25	53.71	4	214.84
F.P. ...	114.76	1	114.76	122.37	123.00	1	123.00
Total ...			516.44				554.68

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{38.24}{18} (.75 - .2118) = -1.14$

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck =

35.07

Summer freeboard =

6.98

Moulded draught (d) =

28.09

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches =

7.02 = 7"

Addition for Winter North Atlantic Freeboard (if

required =

4.74 = 4 $\frac{3}{4}$ "

Deduction for Fresh Water.

Displacement in salt water at

summer load water line

 $\Delta =$

19385

Tons per inch immersion at

summer load water line

T =

60.8

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

=

7.96 = 8"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.68 + .806}{1.36} = \frac{1.486}{1.36}$

Depth Correction ...

10.44

Deduction for superstructures ...

- 13.99

Sheer correction ...

- 1.14

Round of Beam correction ...

- .10

Correction for Thickness of Deck amidships ...

-

Other corrections, scantlings, etc. ...

-

10.44 15.23 - 4.79

Summer Freeboard = 83.87

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

Tropical Fresh Water Line above Centre of Disc ...

15"

Fresh Water Line " " ...

8"

Tropical Line " " ...

7"

Winter Line below " " ...

7"

Winter North Atlantic Line " " ...

11 $\frac{1}{4}$ "

Tropical Fresh Water Freeboard ...

5' 8 $\frac{3}{4}$ "

Fresh Water " " ...

6' 3 $\frac{3}{4}$ "

Tropical " " ...

6' 4 $\frac{3}{4}$ "

Winter " " ...

7' 6 $\frac{3}{4}$ "

Winter North Atlantic " " ...

7' 11 $\frac{1}{2}$ "

20 APR 1932

MARKING FORM

MARKING FORM

25 APR 1932

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway			...	...	Nº 1 Upper deck	2 on U. deck	8 on U. deck	6 on U. deck	4 on U. deck	10 Summer tank hatches
Dimensions of Hatchway			...	...	9'-2" x 12'-0"	7'-0" x 7'-6"	7'-0" x 7'-4"	6'-5" x 7'-4"	5'-0" x 7'-4"	6'-0" x 3'-0"
COAMINGS	{	Height above Deck	...	...	37 ✓	15" x 4" x 4" x 4" E ✓				31" x 50" ✓
		Thickness	...	...	375 ✓	with 3'-0" x 3'-0" hatch				
		Stiffeners	...	...	7' x 3" B.A. ✓	6" x 3" x 40 ft coaming				
		Brackets, Stays	...	...	4.50 cover same ✓ same ✓ same ✓					
HATCH BEAMS	{	Number	...	...	4'-7" ✓	Large covers				Covers secured by
		Spacing	...	...	12" x 30" ✓	secured by bolts + nuts ✓				hinged bolts + butterfly
		Scantling and Sketch	...	...	Angles ✓	Small covers secured by				nuts ✓
		Bearing Surface	...	...	JIL 3" x 3" x 40 ✓	hinged bolts + butterfly nuts				
FORE AND AFTERS	{	Number	...	...	none ✓					
		Spacing	...	...				
		Unsupported Lengths	...	...				
		Scantling* and Sketch	...	...				
HATCH COVERS	{	Bearing Surface	...	...		secured by bolts + nuts				
		Material	...	...	Steel ✓					
		Thickness	...	...	.50 cover with ✓	3/4" ✓	3/4" ✓	3/4" ✓	3/4" ✓	.50 ✓
		How fitted	...	...	2-7' x 3" B.A. stiffeners ✓					
Spacing of Cleats	...	...	...	Access hatch 3'-0" x 3'-0" ✓						
	Number of Tarpaulins	...	...	...	Coaming 6" x 3 1/2" x 3 1/2" x 5 1/2" E ✓					
					3/8" cover secured by hinged bolts + butterfly nuts ✓					
*Are wood fore and afters steel shod at all bearing surfaces? ✓										
Are battens and wedges efficient and in good condition? ✓										
Are tarpaulins in good condition and in accordance with rule requirements? ✓										
Are lashings provided in accordance with rule requirements? ✓										

Particulars of fiddle, funnel and ventilator coamings:— Fiddle top 8'-3" above poop deck, No funnel coaming, stokehold gratings covered by strong steel hinged covers. Fiddle and funnel ventilators in efficient condition. Engine skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:— Strong hinged steel doors in Engine Casing starboard side 4'-9" x 2'-0" 15" sill to stokehold, Engine Room + Galley and strong wood doors 4'-9" x 2'-0" 15" sill to Engineer's Accommodation and Stewards Accommodation (see page 4.) Port side see sketch. Poop deck Pump Room Hinged W.I. door 4'-6" x 2'-6" 18" sill.

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

Forecastle deck. 4 vents 12" dia coamings 36" x 3/8" led to fore peak
 " " 6 " 9" " " 36" x 3/8" and intact f'ele
 Forward well 2 " 12" " " 37" x 3/8" led to fore hold.
 " 2 " 9" " " 37" x 3/8"
 Poop deck. 6 " 12" " " 37" x 3/8" led to intact Poop
 " 12 " 7" " " 37" x 3/8" + after peak

All ventilators constructed in accordance with Rules and coamings closed with wood plugs and canvas covers.

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

1 C.I. air pipe on forecastle deck 26" high from fore peak 3 1/2" dia
 3 C.I. " pipes " " 26" " " deep tank 1 @ 4" dia + 2 @ 6" dia. Closed by
 2 C.I. " " " forward well 27" " " Pump room 1 @ 3 1/2" + 1 @ 5" dia. Canvas covers.
 1 C.I. " pipe each side after peak T. 26" " 4" dia
 C.I. " pipes L.B.F.W. 2 @ 3" dia, 3" to dry tank, 6" Lub tanks, 3" O.F.D.B. 4" O.F. tanks 26" high

Particulars of Gangway Cargo and Coaling Ports:—

None.



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Particulars of Scuppers and Sanitary Discharge Pipes —

Single stormvalves on all.

All sanitary pipes discharge above freeboard deck

Particulars of Side Scuttles:

Forecastle: 8 side scuttles Port starboard 10" dia. 2'-0" below 7'le dke hinged glass lights & C1 in deadlights ✓
Bridge House: 3 side scuttles Port side 10" dia below bridge deck hinged glass lights & C1 ✓
2 " " starboard " 12" " " " " " " ✓

Poop:

9 " " Port starboard 12" " below poop deck " " " " " ✓
All scuttles of substantial construction ✓

Particulars of Guard Rails:—

Forecastle deck Rails & stanchions 4'-6" apart 3'-6" high 2 rails ✓
Poop " " " 5'-0" " 3'-6" " 3 rails ✓
Upper Bridge " " " 4'-6" " 3'-6" " 3 rails ✓

Particulars of Gangways, Lifelines, etc.:—

Fore & aft gangway from Bridge deck to Forecastle deck
" " " " " " Poop deck

Rails & stanchions 5'-0" apart 3'-0" high. 2 Rails ✓

Fore & aft sheering angle $3\frac{1}{2} \times 3\frac{1}{2} \times 35^\circ$
fitted about 14" below sheer platform

Transverse diagonal bracing
fitted at Dec 11/142

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 ...	133'-6" ✓	4'-0"	see page 4 Total 99'-1" x 18"	18	148.62	133' = 25% ✓
Forward Well ...	139'-7" ✓ 141'-10"	4'-0"	Total 100'-6" x 18"	19	150.75	139' = 25% ✓ 142' = 25%

State position of each freeing port ...

(F. and A. position and height above deck edge)

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.

After Well:— $11\frac{1}{2}$ " → 15'-0" from after Bhd. of Bridge + 17'-0" from Poop Bhd.
Forward Well:— $11\frac{1}{2}$ " 24'-6" " 7'le " + 12'-0" from for. Bridge Bhd.

Single bars.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

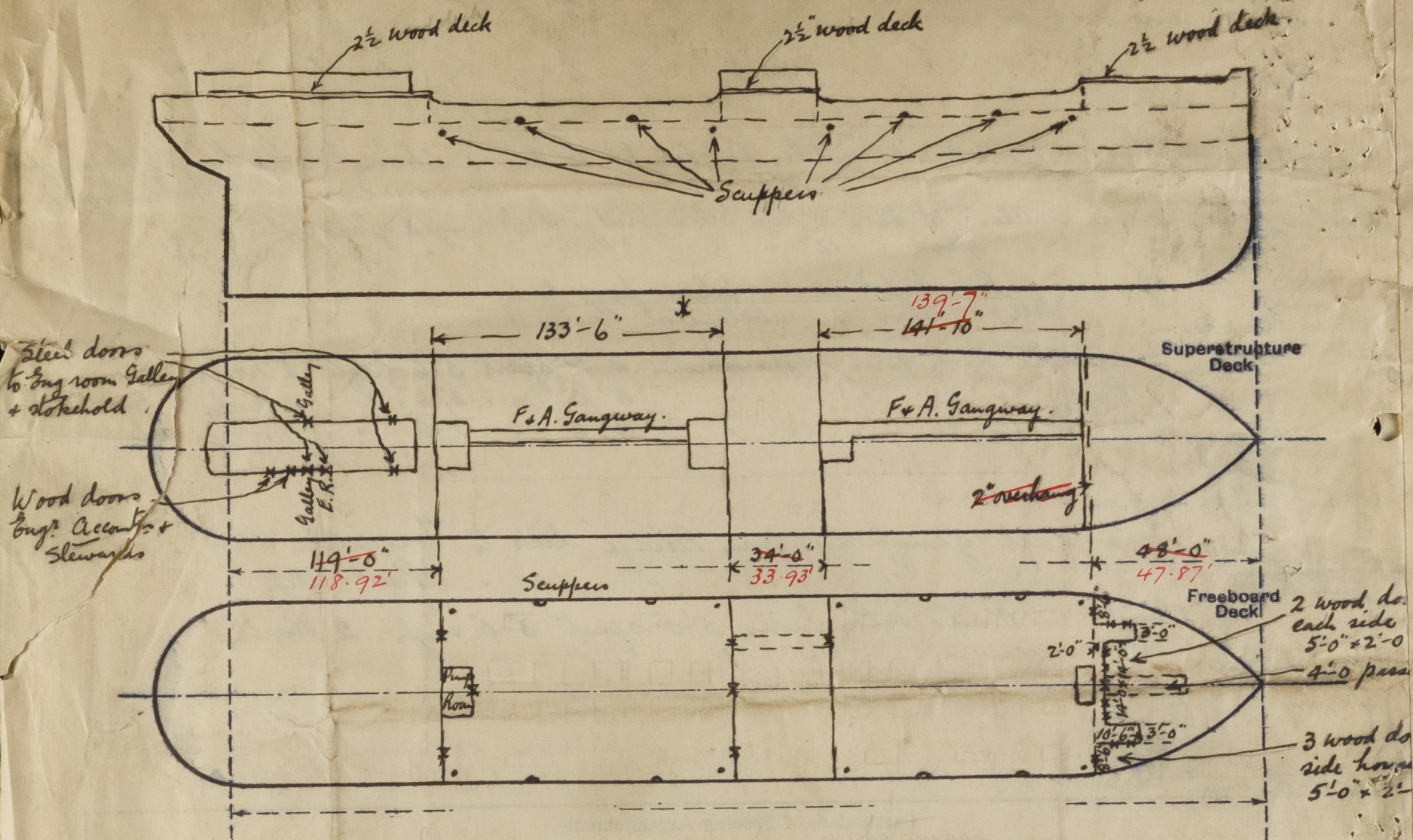
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	.50	.50	$11 \times 3\frac{1}{2}$ B.A.	39"	Bkts at top Lugs at bottom	4'-9" x 3'-0"	18"	8'-0"
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead ...	.375	.375	$3 \times 3 \times 5/20$	37"	Bkts at top	5'-0" x 4'-0"	18½"	8'-0"
Bridge, Forward Bulkhead ...	5/8"	.50	$11 \times 3\frac{1}{2}$ B.A.	36"	Bkts at top Lugs at bottom	5'-0" x 3'-0"	18½"	8'-0"
Forecastle Bulkhead ...	.375	5/16"	$4 \times 3 \times 5/20$	30"	✓	5'-3" x 3'-0"	16"	
Trunk, Aft ...	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward ...	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Superstructure Decks ...	✓	5/20	$3 \times 2\frac{1}{2} \times 3/8$	30"	Bkts at top	4'-11" x 2'-5"	20"	8'-3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	.30 ✓	.25 ✓	$3 \times 2\frac{1}{2} \times 3/8$ $6 \times 3 \times 1/2$	30" ✓ 10'-0"	✓	✓	✓	✓
Deckhouses on Flush Deck Ships ...	✓	✓	✓	✓	✓	✓	✓	✓

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

Poop Bulkhead ...	7/16" Plates with hook bolts & nuts not through bulkhead. also shifting boards in riveted channels full height
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	Opening at centre line with shifting boards full height in riveted channels, also 2 hinged iron doors
Bridge, Forward Bulkhead ...	Hinged W.T. door manipulated from both sides
Forecastle Bulkhead ...	Opening at centre line with shifting boards full height in riveted channels
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Superstructure Decks ...	Strong steel doors to Engine Room and strong wood doors, manipulated from both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓ No opening.
Deckhouses on Flush Deck Ships ...	✓

Athelregent

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 shown on the following sketches:—



Size of Freeing Ports each side

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

Note:— It is stated by the Owners Superintendent that the alterations to the hatch to fore hold and to Freeing ports have been approved. The alterations have been completed here—

Forward well.

1. 5'-1" x 18"
2. 5'-9" x 18"
3. 5'-7" x 18"
4. 5'-7" x 18"
5. 5'-7" x 18"
6. 4'-9" x 18"
7. 4'-9" x 18"
8. 5'-8" x 18"
9. 5'-10" x 18"
10. 5'-10" x 18"
11. 5'-10" x 18"
12. 4'-10" x 18"
13. 5'-2" x 18"
14. 5'-2" x 18"
15. 5'-4" x 18"
16. 5'-2" x 18"
17. 4'-9" x 18"
18. 5'-3" x 18"
19. 4'-7" x 18"

Aft well.

1. 4'-9" x 18"
2. 5'-1" x 18"
3. 5'-4" x 18"
4. 5'-3" x 18"
5. 5'-4" x 18"
6. 5'-4" x 18"
7. 5'-10" x 18"
8. 5'-4" x 18"
9. 6'-0" x 18"
10. 5'-10" x 18"
11. 5'-10" x 18"
12. 5'-10" x 18"
13. 5'-11" x 18"
14. 5'-4" x 18"
15. 5'-11" x 18"
16. 5'-10" x 18"
17. 5'-10" x 18"
18. 4'-6" x 18"

Builder's name and yard number

Names of sister ships

Owners

Messrs. United Molasses Co Ltd

Fee £

16 : 3 :
applied for from
Liv 23/4/32.

Received by me

This report refers to the Twin Sc. M.V. "Athelregent". The vessel has sailed

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