

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

20851.
N. Report!

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Rotterdam</u>	
having <u>Two Screw Motor Tanker</u> <u>having poop, bridge and forecastle</u> (Type of Superstructures.)					Date of Survey <u>22-23 / 12-31</u> <u>4-5 / 1-31</u>	
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Name of Surveyor <u>Mr L. Vuyk and J. van der Wal</u> Particulars of Classification <u>100.A.1 Carrying Molasses or Petroleum in bulk</u>	
<u>ATHELVISCOUNT.</u>	<u>British Liverpool</u>	<u>161118</u>	<u>8882</u>	<u>1929-9</u>		
Moulded Dimensions: Length <u>473.8</u> Breadth <u>63.0</u> Depth <u>35.0</u> Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>20240</u> tons Coefficient of fineness for use with Tables <u>.799</u> could not be determined						
Depth for Freeboard (D)		Depth correction		Round of Beam correction		
Moulded depth <u>35.00</u> Stringer plate <u>measured on well</u> <u>.88</u> Sheathing on exposed deck <u>none</u> $T \left(\frac{L-S}{L} \right) =$ <u>-</u>		(a) Where D is greater than Table depth (D - Table depth) R = <u>(35.04 - 31.59) x 3 = + 10.44</u> (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>-</u>		Moulded Breadth (B) <u>63.0</u> Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>15.12</u> Ship's Round of Beam = <u>15.75</u> Difference <u>.63</u> Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>.63 x .546 = -.09</u>		
Depth for Freeboard (D) = <u>35.04</u>		If restricted by superstructures				

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	118.90	118.90	8.0	✓	118.90
„ overhang ...	✓				
R.Q.D. enclosed ...	✓				
„ overhang ...	✓				
Bridge enclosed...	34.38	34.38	8.0	✓	34.38
„ overhang aft ...	✓				
„ overhang forward	✓				
Fore enclosed ...	47.83	47.60	8.0	✓	47.60
„ overhang ...	See sketch				
Trunk aft ...	✓				
„ forward ...	✓				
Tonnage opening aft ...	✓				
„ „ forward	✓				
Total ...	201.11	200.88			200.88

Standard Height of Superstructure 4.50

„ „ R.Q.D. ✓

Deduction for complete superstructure 42.00 ✓

Percentage covered $\frac{S}{L} = 42.45$ ✓

„ „ $\frac{S_1}{L} = 42.40$

„ „ $\frac{E}{L} = 42.40$ ✓

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, ~~Line B.~~ Line C 33.40 ✓

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $42.00 \times .3340 = 14.04$ ✓

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	Mean actual sheer aft =
A.P. ...	54.38	1	54.38	68.00	68.00	1	68.00	Mean standard sheer aft =
$\frac{1}{2}$ L from A.P. ...	25.54	4	102.16	29.43	29.43	4	117.72	Mean actual sheer forward =
$\frac{2}{8}$ L " ...	6.31	2	12.62	7.36	7.36	2	14.72	Mean standard sheer forward =
Amidships ...	✓	4	✓	✓	✓	4	✓	Length of enclosed superstructure forward of amidships =
$\frac{2}{8}$ L from F.P. ...	12.62	2	25.24	13.97	13.97	2	27.94	" " aft of " =
$\frac{1}{2}$ L " ...	51.04	4	204.28	55.90	55.90	4	223.60	
F.P. ...	114.46	1	114.46	125.00	125.00	1	125.00	
Total ...			516.44	299.66			546.98	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{60.54}{18} \times (.75 - .2122) = -1.81$

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.

Deduction for Fresh Water.

Displacement in salt water at summer load water line

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	10.44	-
Deduction for superstructures	-	14.04
Sheer correction	-	1.81
Round of Beam correction	✓	.09
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	10.44	15.94

Summer Freeboard =

81.15

88.25 ✓

Ft.

Depth to Freeboard Deck = 35.04 ✓

Summer freeboard = 6.90 ✓

Moulded draught (d) = 28.14

$\Delta = 19221$

Tons per inch immersion at summer load water line

T = 61.1

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

= 4.86

Correction for coefficient

136

81.15

88.25 ✓

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.04 ✓

Addition for Winter North Atlantic Freeboard (if required) = 4.44

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

= 4.86

Correction for coefficient

136

81.15

88.25 ✓

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

Tropical Fresh Water Line above Centre of Disc	14 ³ / ₄ "	Tropical Fresh Water Freeboard	5' 2 ⁸ / ₁₆ "
Fresh Water Line	"	"	...	Fresh Water	"	...	6' 1 ³ / ₁₆ "
Tropical Line	"	"	...	Tropical	"	...	6' 1 ³ / ₁₆ "
Winter Line	below	"	...	Winter	"	...	7' 5 ³ / ₁₆ "
Winter North Atlantic Line	"	"	...	Winter North Atlantic	"	...	7' 10 ³ / ₁₆ "

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Particulars of Scuppers and Sanitary Discharge Pipes

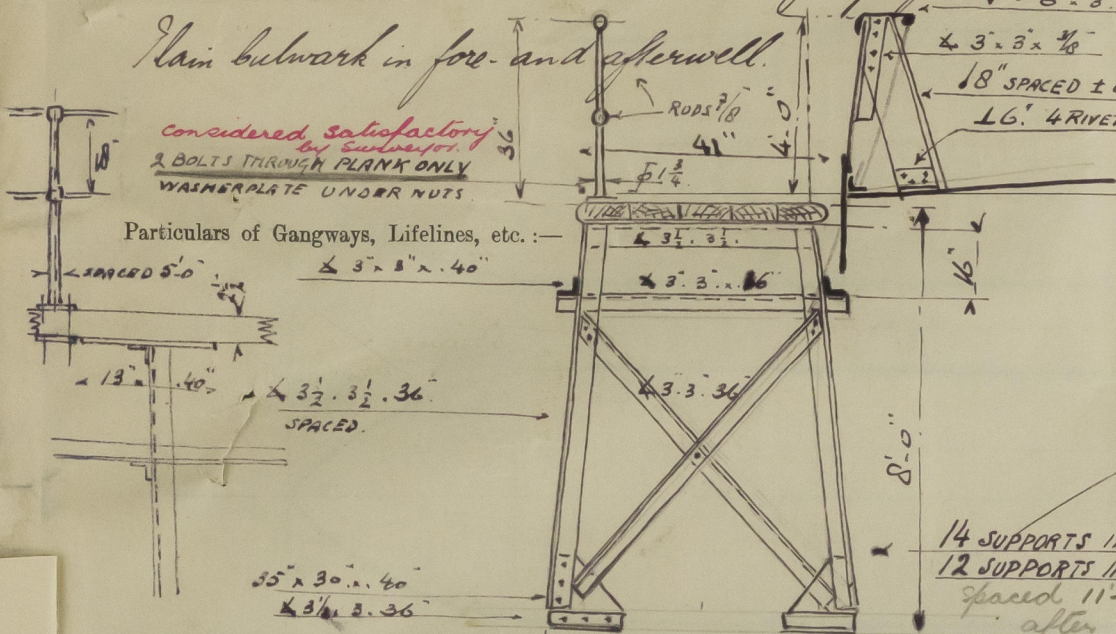
Lavatory in fore space drain to well through 1" hole at level of floor.
Alleyway and central space in bridge drain to well through 1" hole at level of floor.
Storespace in fore drains to ship's side through elbows fitted with stormvalves.
Scuppers of livingquarters in poop space drain to ship's side through steel pipes, fitted with stormvalves.
Lowest stormvalve 3'-7" below upperdeck.
Waterclosets and baths have soilpipes fitted with stormvalves which are all situated on the shell above the upperdeck. The nature of the valves' casings could not be ascertained. Soilpipes are situated in fore, bridge space and poop space.

Particulars of Side Scuttles:

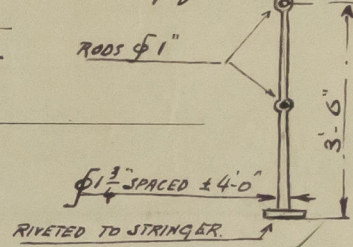
Sidelights in fore space, bridge space and after part of poop space all of an efficient construction and fitted with hinged deadlights.

Particulars of Guard Rails:

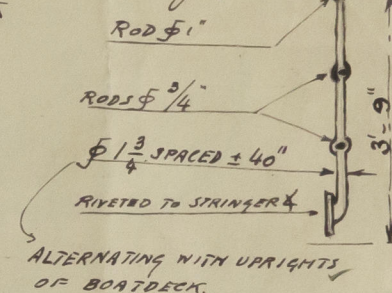
Rain bulwark in fore and afterwell.



Railing fore

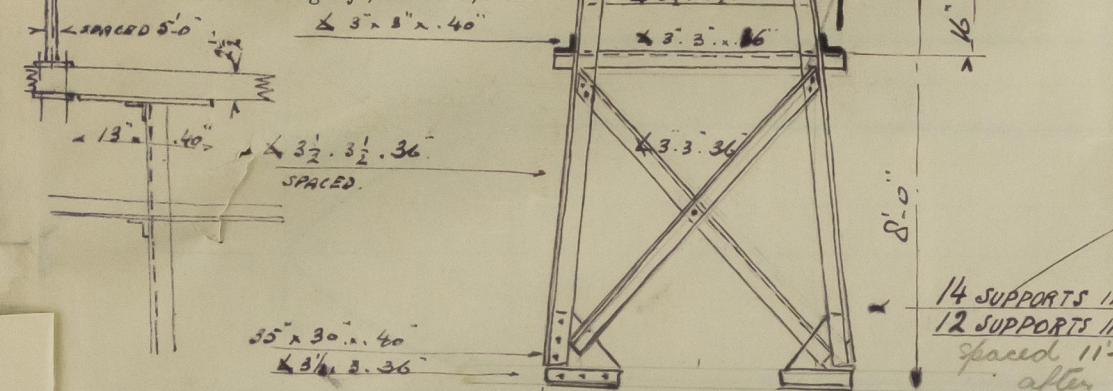


Railing poop



Railing afterend bridge deck is of the same construction as the railing of the gangway.

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	139'-5"	4'-0"	ALL OF DIFFERENT LENGTH FROM 1.46 - 1.81 M 18" high	17	144.3'	133.5
Forward Well	139'-4"	4'-0"	FROM 1.50 - 1.89 M 18" high	18	149.5'	139.3

State position of each freeing port (F. and A. position and height above deck edge) After Well: 12" height of lower edge freeing ports above deck maximum. Forward Well: 12" height of lower edge freeing ports above deck maximum. State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: No shutters; the openings are fitted with a horizontal bar. 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	.48"	.44"	4 11" x 3 1/2" x .46"	39"	BRACKETED.	2 OPENINGS 47 1/2" x 69" HIGH	18"	-
Raised Quarter Deck Bulkhead	-	-	-	-	-	-	-	-
Bridge, After Bulkhead	.34"	.34"	4 3" x 2 1/2" x .36" AND DIVLS. B.H.D'S.	36"	BRACKETS AT TOP.	SEE SKETCH	18"	-
Bridge, Forward Bulkhead	.47"	.43"	4 10 1/2" x 3 1/2" x .46"	36"	LUGS AT BOTTOM BRACK. AT TOP.	5'-0" x 2'-11 1/2" NEIGH.	22 1/2"	-
Forecastle Bulkhead	.34"	.34"	DIVISION BULKHEADS.	-	-	SEE SKETCH	18"	-
Trunk, Aft	-	-	-	-	-	-	-	-
Trunk, Forward	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Free-board or Raised Quarter Decks	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Superstructure Decks	.40"	.30"	4 3" x 3" x .30" x 30" EVERY 3' x 5' x 3" x 40" x 90"	90"	NONE BRACKETED.	ORDINARY steel HINGED DOOR	16"	8'
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	.36"	.30"	4 3" x 3" x .30" x 30" 4 6" x 3" x .44" x 120"	120"	NONE BRACKETED.	NO OPENINGS	-	-
Deckhouses on Flush Deck Ships	-	-	-	-	-	-	-	-

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

Poop Bulkhead	3" weatherboards in riveted channels over full height, also portable plates with 10 hookbolts going through plates only.
Raised Quarter Deck Bulkhead	2 1/2" weatherboards in riveted channels over full height. In wings, ordinary hinged steel watertight door. 7 eyebolts with butterfly nuts operated from outside.
Bridge, After Bulkhead	2 1/2" weatherboards in riveted channels over full height. In wings, ordinary hinged steel watertight door. 7 eyebolts with butterfly nuts operated from outside.
Bridge, Forward Bulkhead	2 1/2" weatherboards in riveted channels over full height. In wings, ordinary hinged steel watertight door. 7 eyebolts with butterfly nuts operated from outside.
Forecastle Bulkhead	2 1/2" weatherboards in riveted channels over full height. In wings, ordinary hinged steel watertight door. 7 eyebolts with butterfly nuts operated from outside.
Exposed Machinery Casings on Free-board or Raised Quarter Decks	full height. Other doors of oak 1 1/2" hinged.
Exposed Machinery Casings on Superstructure Decks	Ordinary hinged steel door, operated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	no passage from poop space storeroom to engine room. From poop livingquarters a door in afterend casing.
Deckhouses on Flush Deck Ships	oak steel door, hinged, sill 16".

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

[illegible]

*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?

In all ways of forecastle one small accumbent to
chain the forepeak 24" x 24" B.A. coaming 3" above local
requirements? wood deck. Complete battening down arrangement.

On poop deck each side one or light hatch to bunks. 58" x 30". Coaming 25" x 40". Cover . 50" fastened with 12 eyebolts and butterfly nuts. ✓

Particulars of fiddley, funnel and ventilator coamings:—

eyebolts and butterfly nuts. ✓
Each side 3 hatches 49"x49" and 60"x36" framing 28." ✓ Complete
battening down arrangements and eyebolts for lashing 2 1/2
wood hatches. Tarpanlines, wedges etc complete and good. ✓

On foile deck one small hatchway to peak "4'-2" x 2'-2"
Coaming 30" above wood deck. $\frac{1}{2}$ " Complete battening down arrangement. ✓

~~Particulars of Flash Bunker Scuttles:—~~

~~The hatch is protected by the pump, without any doors in proper place (front part),~~
~~causing above 1000 deck 8'-0" of an efficient construction, see below.~~

Height of exposed canopy above foredeck 8-0. of an efficient construction, see detail.

Top fidley of steel. \rightarrow Tunnel of substantial construction, riveted to the deck and stager.
 \rightarrow ~~2~~ ⁴ doors, ^{open} ~~closed~~ by hinged steel covers (see sketch Page 4)

~~In particular of ventilator openings on freeboard and superstructure deck.~~
~~See below. For vents on top. fidley see sketch. Page 4.~~

Particulars of Companionways :—

There is no companion on the fo'c'sle deck.
The entrance to the pump room in the afterwell is of steel, of a substantial construction and is fitted with a hinged, steel watertight door, fastened with 6 eyebolts and butterfly nuts. *Capable of being closed & secured from both sides*
Height of sill 18" ✓

Height of roll up hatch doors 13' 6" - capable of being closed

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

POSITION	DIAMETER	COAMING	DECK CONNECTIONS	POSITION	DIAMETER	COAMING	DECK CONNECTIONS
FOREWELL DECK	9"	39" x .36"	ANGLE COLLARS 4 x 3 1/2 x 40	FOCLE DECK	9"	36" x .36"	ANGLE COLLARS.
	12"	39" x .36"	RIVETING 4 x DIAM.	"	12"	36" x .40"	3 1/2" x 3 1/2" x .40"
POOP DECK	8"	30" x .34"	ANGLE COLLARS	"	12"	40" x .40"	
	12"	30" x .36"	UNDER WOOD DECK R 4 DIAM.			1/2" fore space.	
TOP PUMPROOM - ENTRANCE	12"	24" x .36"	- 2° -				

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

Wooden plugs and canvas covers for clowng are on board. ✓
freeboard raised quarter, or superstructure decks:—

POSITION	DIAMETER.	FLOODING HEIGHT.	MEANS OF CLOSING
FOCLE DECK	4" 6"	12" 18" ✓	18"
FORE WELDECK.	6"	12" 16" ✓ 18" 36" ✓	WIRE GAUZE DIAPHR.
POOPDECK.	2 1/2" 3 1/2"	14" 19" ✓	NO CLOSING APPL.
"	3"	21" 20" ✓	WIRE GAUZE
"	4 3 1/2"	20" 16" ✓	DIAPHR.
"	6"		
TOP FIDLEY.	3"	20"	WIRE GAUZE DIAPHR. ✓

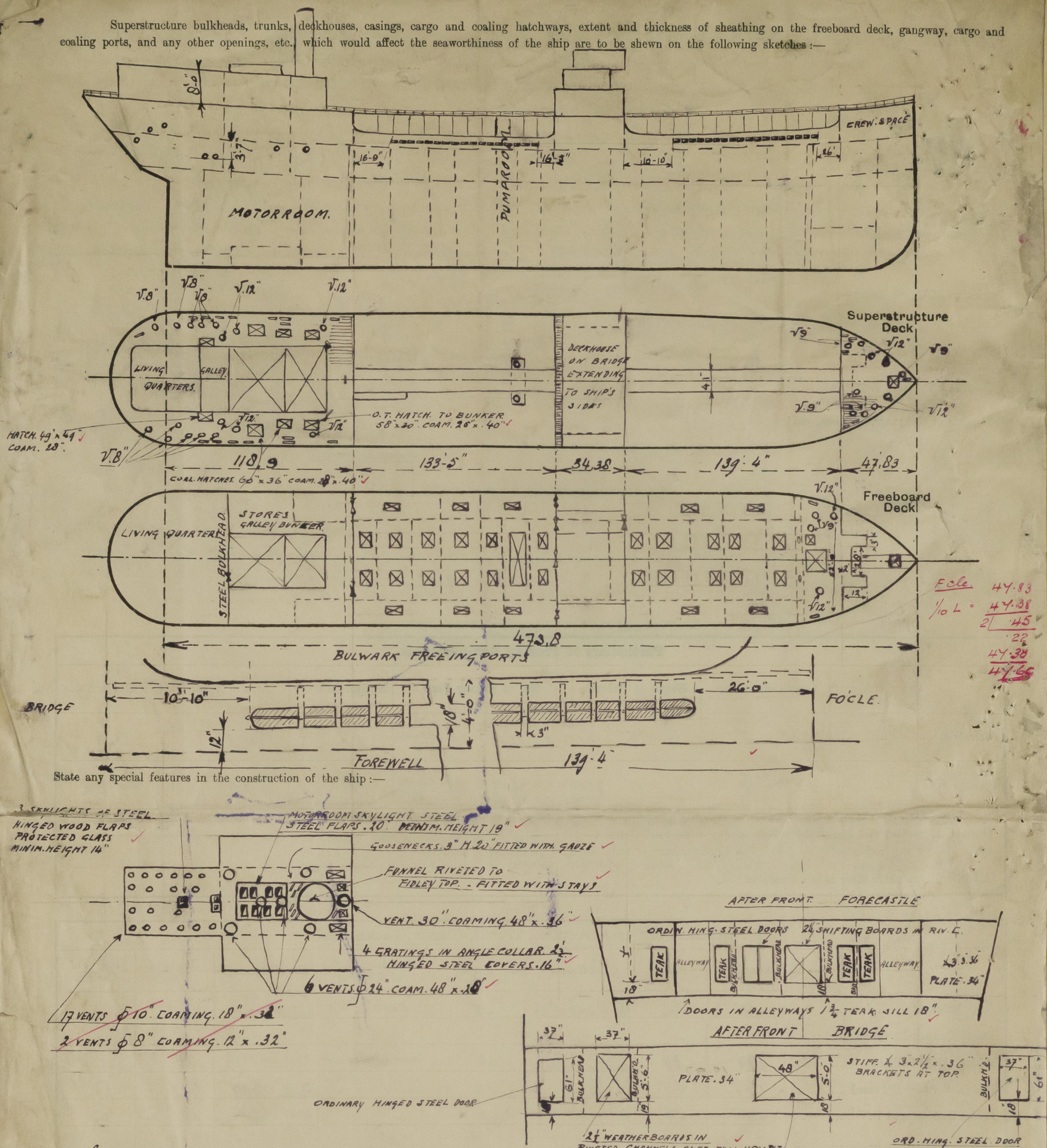
Particulars of Cargo, Crew and Cooling Ports:

of Gangwa

fore peak tank & fore deep
fell space
aft peak tank.
D.B. fresh water tank
Bul. D.B. tank & D.B. fuel tank
D.B. fuel tank
D.F. bunker & D.B. fuel tank
tub. oil tank & aft offerdaman

Canvas Cover provided where wine gauge is not fitted
The air pipes of the cargo tanks are carried up alongside the

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:—



There is a steel bulkhead at after end of motor room, dividing the poop space into two spaces, without communication.

Builder's name and yard number R. Duncan & Co. Ltd. Port Glasgow.

Names of sister ships _____

Owners United Molasses Co. Ltd.

Fee £ _____ (Received by me) D. V. van der Weel

Rotterdam 12th Jan. 1931.



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