

Rpt. C.11

B.T. COPY

Index. No. 31514
(For London Office only.)Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

23 MAY 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Continuation of the Deck C.S.S. with T.O.

Port of Survey BARCELONA

Date of Survey 16-5-32

Name of Surveyor Wm. S. Thomas

Particulars of Classification 7 100A1 with Freeboard
Pumping Vegetable oil in deck tank

(Type of Superstructures.)

Ship's Name COMLIEBANK Nationality and Port of Registry BRITISH GLASGOW Official Number 147937 Gross Tonnage 5140 Date of Build 1924-12

Moulded Dimensions: Length 419.5 Breadth 53.75 Depth 29.16
Moulded displacement at moulded draught = 85 per cent. of moulded depth 2355 tons
Coefficient of fineness for use with Tables 173

Depth for Freeboard (D) Moulded depth 29.17
Stringer plate03
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = 29.20

Depth correction (a) Where D is greater than Table depth (D-Table depth) R = (29.20 - 27.97)3 = 3.69
(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) 53.75
Standard Round of Beam = $\frac{B \times 12}{50} =$ 12.90
Ship's Round of Beam = 13.00
Difference .10
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ $\frac{.10}{4} \times .0063 = .001575$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	23.54	23.54	8'0" +	✓	23.54
" overhang ...			3" wood		
R.Q.D. enclosed					
" overhang					
Bridge enclosed...					
" overhang aft	390.71	390.71	8'0" +	✓	390.71
" overhang forward			3" wood		
" overhang					
Trunk aft					
" forward					
Tonnage opening aft	5.25	2.63 1/2 diff			2.63
" forward					
Total	419.50	416.88			416.88

Standard Height of Superstructure	7.50
" " R.Q.D.	
Deduction for complete superstructure	42.00
Percentage covered $\frac{S}{L} =$	100.00%
" " $\frac{S_1}{L} =$	99.37%
" " $\frac{E}{L} =$	99.37%
Percentage from Table, Line A. (corrected for absence of fore-castle (if required))	99.22%
Percentage from Table, Line B. (corrected for absence of fore-castle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	42.00 x .9922 = - 41.68

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	51.95	1		51.95	48.00	57.00	1		57.00
1/4 L from A.P. ...	23.12	4		92.48	18.50	25.36	4		101.44
1/2 L " ...	5.71	2		11.42	1.00	6.27	2		12.54
Amidships ...		4					4		
3/4 L from F.P. ...	11.43	2		22.86	18.00	14.19	2		28.38
1/4 L " ...	46.24	4		184.96	57.00	57.40	4		229.60
F.P. ...	103.90	1		103.90	120.00	129.00	1		129.00
Total				467.57	+ 9"				557.96

Mean actual sheer aft = Excess
Mean standard sheer aftMean actual sheer forward = Excess
Mean standard sheer forwardLength of enclosed superstructure forward of amidships =
" " aft of " = C.S.S.Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{90.39}{18} (.75 - .50) = -1.26$

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 = 29.20
Summer freeboard = 3.64
Moulded draught (d) = 25.56Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.39 = 6 1/2
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 12830

Tons per inch immersion at summer load water line

T = 45.64Deduction = $\frac{\Delta}{40T}$ inches = 7.03

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{773 + .68}{1.36} = \frac{1.453}{1.36}$

	+	-
Depth Correction	3.69	
Deduction for superstructures		41.68
Sheer correction		1.26
Round of Beam correction		
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		

Summer Freeboard = 43.71SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	13 1/2
Fresh Water Line	7
Tropical Line	6 1/2
Winter Line below	6 1/2
Winter North Atlantic Line	

Tropical Fresh Water Freeboard	2 - 6 1/4
Fresh Water	3 - 0 3/4
Tropical	3 - 1 1/4
Winter	4 - 2 1/4
Winter North Atlantic	

8 JUN 1937

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SET

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** Details in red transferred from Cadiz report*

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS (SHELTER DK.)													FREEBOARD DECK		
Description of Hatchway			No 1	No 2	No 3	No 4	No 5	No 6	No 1	No 2	No 3	DEEP TANK	No 4	No 5	No 6
Dimensions of Hatchway			26'-11" x 22'-0"	31'-4 1/2" x 22'-0"	28'-8" x 22'-0"	26'-0" x 22'-0"	26'-1" x 22'-0"	26'-1" x 22'-0"	27' x 22'	31'-6" x 22'	13' x 22'	10'-5" x 9'	26'-3" x 22'	26'-3" x 22'	26'-3" x 22'
COAMINGS	Height above Deck	...	29 1/2"												
	Thickness	Sides	1/2"						9' x 3' BA	9' x 3' BA	9' x 3' BA	14 1/2" x 50"	9' x 3' BA		
	Stiffeners	Ends	as sketch												
	Brackets, Stays	...	2 1/2" dia												
			2 sides + 1 each end	hatched											
HATCH BEAMS	Number	...	5	5	5	4	4	4	5	5	2		4		
	Spacing	...	4'-6"	5'-3"	4'-9 1/2"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	4'-6"	5'-3 1/2"	4'-9"		5'-3"		
	Scantling and Sketch	...													
	Bearing Surface	...	3 1/2" x 1 1/2"												
FORE AND AFTERS	Number	...													
	Spacing	...													
	Unsupported Lengths	...													
	Scantling* and Sketch	...													
					None fitted										
Bearing Surface															
HATCH COVERS	Material	...	WOOD						WOOD						
	Thickness	...	2 1/2"						2 1/2"	SAME AS No 1	SAME AS No 1	STEEL 50	SAME AS No 1		
	How fitted	...	FORE & AFT												
	Bearing Surface	...	4 1/2" ON BEAMS, 3" HATCH END LEDGE												
Spacing of Cleats			24"						3 1/2" x 4 1/2"						
Number of Tarpaulins			3						24	24	24		24		
									+2	+2	+2		+2	2	2
*Are wood fore and afters steel shod at all bearing surfaces? No fore, afters															
Are battens and wedges efficient and in good condition? Yes															
Are tarpaulins in good condition and in accordance with rule requirements? Yes															
Are lashings provided in accordance with rule requirements? Yes															
NONE															
YES															
YES 3 ON SUPERSTR DK & ONE ON FBD DK															
YES ON SUPERSTR DK, NONE ON FBD DK															

Particulars of fiddle, funnel and ventilator coamings:—

Funnel above engine casing (motorship)
 All ventilators on the shells etc are of good solid construction in good condition.
 Scantlings of vents in exposed positions are given below

Particulars of Flush Bunker Scuttles:—

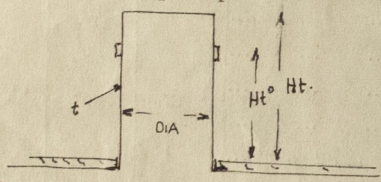
None.

Particulars of Companionways:— To Crew's space forward.

Casing: Ht. above deck 6'-8"
 Length 8'-6"
 3/8" Plate Beam 6'-0"
 Inside angle stiffeners 3 1/2" x 2 1/2" x 1/4" spaced 2'-3"
 2 - 1 3/4" thick ~~substantially~~ ~~wood~~ doors opening from inside port.
 Condition good.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— (Please see Superstructure Deck Plan)

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— (Please see Superstructure Deck Plan)



VENT	Ht.	Ht.	Dia.	t
A	6'-4"	5'-2"	15 1/4"	3/8" BRACKETED DK.
B	3 1/2"	24 1/2"	8 1/2"	1/4"
C	3 1/4"	22"	12"	5/16"
D	6'-0"	5'-0"	20"	3/8"
E	2'-9"	2'-0"	8 1/4"	1/4"
Y	3'-0"	2'-0"	12"	5/16"

VENT	Ht.	Ht.	Dia.	t
T	11'-8"	10'-5"	15"	3/8"
V	34"	11"	24"	3/8"
S	12'-0"	11'-0"	12"	5/16"
Q	10'-6"	8'-5"	24"	3/8"
P	7'-0"	5'-3"	24"	3/8"
R	9'-0"	7'-5"	20"	3/8"
M	7'-0"	5'-3"	15"	5/16"

All vent coamings in good condition. I have plugs & covers.

Vent. coamings marked thus -x- efficiently supported by brackets to deck 18" x 15"

Particulars of Gangway Cargo and Coaling Ports:—

None.



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Bombier

Particulars of Scuppers and Sanitary Discharge Pipes —

open Scuppers from Shelter deck in position shown on sketch
with outlet 31 1/2" below Shelter deck.
Scuppers with non-return valves from freeboard deck with outlet 27" below freeboard
deck, also shown on sketch.
Sanitary discharge pipes with valves are also shown

Particulars of Side Scuttles:

5 each side in Crew Quarters in Shelter tween deck forward and
2 each side in Steering gear space 10' diameter with hinged deadlight 32" from
deck to sill of light.

Particulars of Guard Rails:—

Length, position of rails & bulwarks as per deck sketch.
At above wood dk. 3'-8"
Pitch of stanchions 4'-2"
Stanchions 1 5/8" to 1 5/16 dia. — Spacing of Rails 9"
Top rail 1 3/8" dia. 1 5/8" dia back stays at alternate
other rails 3/4" dia. Stanchions.
Good construction. ✓

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 ...		3'-6" above wood dk.	BA 6' x 3 1/16" 3'-9"			
Forward Well ...			5 1/2" x 5 1/2" x 1/2"			

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
Side Houses Ford A.S.	3'-7" x 1/4"	1/4"	FRONT & SIDES BA 5 x 3 1/16"	30"	11" x 11" x 3/8"	5'-5" x 25" door	12"	7'-8"
Poop Bulkhead	3'-7" x 1/4"	1/4"	BA 4 x 2 1/2" & FLANGE 4 1/2" ALTERNATELY	29"	ON BOUNDARY ANGLE	6' x 3'-6"	18"	8'-0"
Raised Quarter Deck Bulkhead	3'-7" x 1/4"	1/4"	5 x 3 1/16 BA	30" to 35"	11" x 11" x 3/8"	5'-5" x 25" door	12"	7'-8 1/2"
Bridge, After Bulkhead	3'-7" x 1/4"	1/4"	5 x 3 1/16 BA	30" to 35"	11" x 11" x 3/8"	none	12"	7'-8 1/2"
Bridge, Forward Bulkhead	3'-7" x 1/4"	1/4"	5 x 3 1/16 BA	30" to 35"	11" x 11" x 3/8"	none	12"	7'-8 1/2"
Forecastle Bulkhead	3'-7" x 1/4"	1/4"	4 1/2" x 3 x 3/4	24"	ON BOUNDARY ANGLE	NONE	✓	8'-0"
Trunk, Aft	3'-7" x 1/4"	1/4"	BA 4 x 2 1/2" & FLANGE 4 1/2" ALTERNATELY	29"	ON BOUNDARY ANGLE	6' x 3'-6"	18"	8'-0"
Trunk, Forward	3'-7" x 1/4"	1/4"	5 x 3 1/16 BA	30" to 35"	11" x 11" x 3/8"	5' x 5" x 25" door	12"	7'-8"
Exposed Machinery Casings on Free- board or Raised Quarter Decks	3'-7" x 1/4"	1/4"	COAM 40	31 1/2"	✓	✓	✓	8'-0"
Exposed Machinery Casings on Super- structure Decks	3'-7" x 1/4"	1/4"	3 x 3 x 40	31 1/2"	✓	✓	✓	8'-0"
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	3'-7" x 1/4"	1/4"	COAM 40	31 1/2"	✓	✓	✓	8'-0"
Deckhouses on Flush Deck Ships	3'-7" x 1/4"	1/4"	COAM 40	31 1/2"	✓	✓	✓	8'-0"

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

Side Houses Ford A.S.	13 1/4" The wood doors of substantial construction, manipulated from both sides
Poop Bulkhead	13 1/4" The wood doors of substantial construction, manipulated from both sides
Raised Quarter Deck Bulkhead	STORM BOARDS 2 3/4" full height of opening in riveted channels
Bridge, After Bulkhead	STORM BOARDS 2 3/4" full height of opening in riveted channels
Bridge, Forward Bulkhead	none
Forecastle Bulkhead	None
Exposed Machinery Casings on Free- board or Raised Quarter Decks	7nd end steel doors at galley. After end 1 3/4" wood doors of sub. construction
Exposed Machinery Casings on Super- structure Decks	None
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	None
Deckhouses on Flush Deck Ships	None

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:—

Upper Deck

LENGTH 36'-8"
BEAM 42'-0"
HEIGHT 7'-8 1/2"

LENGTH 26'-8"
HT. 7'-5"
DEPTH (PLS) 10'-2"

STG GEAR, HINGED DOOR WITH SPRINGBACKS, N°5, N°4, ENGINES, DT, N°3, N°2, N°1, CREW, SH.

5'-3" x 22'-1" 9" S.A. COAMING
NO CLEATS OR BATTENS
EYEBOOTS ON UNDERSIDE OF COINERS

CALLEY, SALOON HOUSE, SIDE HOUSES

WE DISC. WITH VALVES N°2

DISC FROM CALLEY WITH VALVE

AP, TUNNEL FLAT

Freeboard Deck

14 AIR PIPES, 2 SOUNDING PIPE PROTECTED BY BULWARKS, WELL CONSTRUCTED

4" AIR PIPE 3'-0" HT.
4" AIR PIPE 8'-4" HT.

3" AIR PIPE 3'-0" HT.

VENT, SIDE HOUSE, BRIDGE HOUSE, N°3 HATCH, N°2 HATCH, N°1 HATCH, N°4 HATCH, N°5 HATCH, N°6 HATCH

RAILS, BULWARKS 76'-3", 31'-7"

no sheathing

23'-5 1/4", 390.71'

VENTILATOR MARKED & LETTER

Vessel examined afloat whilst discharging cargo.

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

~~Displacement to 85% ull depth (24' 10") 11982~~

Tons per inch at

23'-6"	=	45.15
24'-6"	=	45.38
25'-6"	=	45.58
26'-6"	=	45.83

Note. The skins in red ink have been taken from the reports of the
Cody Surveyor.

Om IT

This vessel is proceeding direct to Cadiz where it is hoped to complete the Survey. Owing to the vessel being full of cargo the examination of the freeboard dk. could not be done here. The same applies to the general examination of the vessel.

The Surveyor at Cadiz is being advised with a copy of this report.

Builder's name and yard number

Heland Wolff Ltd. Glasgow

Names of sister ships

" OAK BANK " " OLIVE BANK " etc etc.

Owners

Bank Line Ltd (A. Weir & Co managers).

Fee £

No fee charged at this
pt.

Received by me

Edm. C. Lane