

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having RAISED QUARTER DECK & FO'CLE

Port of Survey NEWCASTLE

Date of Survey 2ND FEB. 1932

Name of Surveyor P. A. Broadbent

Particulars of Classification 100 A.1.

Ship's Name CERNE (Type of Superstructures.)
(ex WOODCOTE)

Nationality and Port of Registry BRITISH LONDON

Official Number 147672

Gross Tonnage 1257

Date of Build 1924-5

Moulded Dimensions: Length 220'0" Breadth 34'9" Depth 18'6"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 2671 tons

Coefficient of fineness for use with Tables .778

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	18.50	(a) Where D is greater than Table depth (D - Table depth) R = (18.54 - 14.67) 1.692 + 6.55		Moulded Breadth (B)	34.9
Stringer plate	.04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	8.34
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam	8.25
Depth for Freeboard (D) =	18.54			Difference	.09
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(\frac{L-S}{L} \right)$	$\frac{.09}{4} \times 261 = +.07$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	-	-	-	-	-	Standard Height of Superstructure <u>6.0'</u>
" overhang	-	-	-	-	-	" " R.Q.D. <u>3.8'</u>
R.Q.D. enclosed	140.00	140.0	4.0'	4.00	140.0	Deduction for complete superstructure <u>28.0</u>
" overhang	-	-	-	-	-	Percentage covered $\frac{S}{L} = 73.86$
Bridge enclosed	-	-	-	-	-	" " $\frac{S_1}{L} = 73.86$
" overhang aft	-	-	-	-	-	" " $\frac{E}{L} = 73.86$
" overhang forward	-	-	-	-	-	Percentage from Table, Line A. <u>67.75</u>
F'cle enclosed	22.50	22.50	6.0'	6.00	22.5	(corrected for absence of forecastle (if required))
" overhang	-	-	-	-	-	Percentage from Table, Line B.
Trunk aft	-	-	-	-	-	(corrected for absence of forecastle (if required))
" forward	-	-	-	-	-	Interpolation for bridge less than 2L (if required)
Tonnage opening aft	-	-	-	-	-	Deduction = $28 \times .6775 = 18.97$
" " forward	-	-	-	-	-	
Total	162.5	162.5			162.5	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	32.0	1		32.0	8.25	8.25	1		8.25	Mean actual shear aft = Deficient
$\frac{1}{4}$ L from A.P.	14.24	4		56.96	1.20	1.20	4		4.80	Mean actual shear forward = Deficient
$\frac{3}{4}$ L	3.52	2		7.04	.30	.30	2		.60	Mean standard shear forward
Amidships	-	4		-	-	-	4		-	Length of enclosed superstructure forward of amidships =
$\frac{3}{4}$ L from F.P.	7.04	2		14.08	2.65	2.65	2		5.30	" " aft of " =
$\frac{1}{4}$ L	28.48	4		113.92	10.70	10.70	4		42.80	
F.P.	64.0	1		64.0	30.00	30.00	1		30.00	
Total				288.00					91.75	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{196.25}{18} \left(.75 - \frac{36.93}{2 \times 220} \right) = +4.15$$

If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	26.60
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	28.52
Raised Quarter	$\Delta = 2626 \text{ tons}$		
Depth to Freeboard Deck = 22.54	Tons per inch immersion at summer load water line	Depth Correction	
Summer freeboard = 7.12	T = 15.89	Deduction for superstructure	
Moulded draught (d) = 15.37	Deduction = $\frac{\Delta}{40T}$ inches	Sheer correction	
	= 4.18 = 4.4	Round of Beam correction	
	@ 15' 8" draught = 2631 tons	Correction for this	
	@ 16' " = 2731 tons	Other corrections	
	T.P.I. = 16.03		

SUMMER FREEBOARD amidships for

12 APR 1932

Tropical Fresh Water Line above D

Fresh Water Line

Tropical Line

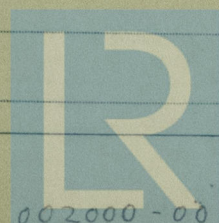
Winter Line

Winter North Atlantic Line

10m.231

RECEIVED JUN 1932

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway				Nº 1. UPPER DECK.	Nº 2. RQ DECK.	COAL HATCH ON RQ DK.			
Dimensions of Hatchway				51'0" X 22'6"	58'9" X 22'6"	5'0" X 22'6"			
COAMINGS	Height above Deck	...	...	3'0" ✓	3'0" ✓	5'9" ✓			
	Thickness	Sides	...	44" ✓	44" ✓	44" ✓			
	Stiffeners	Ends	...	44" ✓	44" ✓	44" ✓			
	Brackets, Stays	...	...	5x32x48. SIDES. ✓ 5 EACH SIDE ✓	SIDES. ✓ 5 EACH SIDE ✓	4x3x34 VERTICAL SPACED 30" ✓			
HATCH BEAMS	Number	...	...	9 ✓	11 ✓				
	Spacing	...	...	5'-1 1/4" ✓	4'-10 1/2" ✓				
	Scantling and Sketch	...	...	19 1/2" X 36" ✓ ANGLES 4 1/2" X 3" X 48" ✓	19" X 36" ✓ 4 1/2" X 3" X 46" ✓	NONE ✓			
	Bearing Surface	...	...	3 1/2" ✓	3 1/2" ✓				
FORE AND AFTERS	Number	...	...			ONE FIXED.			
	Spacing	...	...				
	Unsupported Lengths	...	...				
	Scantling* and Sketch	...	...	NONE.	NONE.	7 1/2" X 50 B.P. ✓			
HATCH COVERS	Bearing Surface	...	...			FIXED. ✓			
	Material	...	...	W.P. ✓	W.P. ✓	W.P. ✓			
	Thickness	...	...	2 1/2" ✓	2 1/2" ✓	2 1/2" ✓			
	How fitted	...	...	FORE & AFT. ✓	F & A. ✓	F & A. ✓			
Spacing of Cleats				24" ✓	24" ✓	22" ✓			
Number of Tarpaulins				2 ✓	2 ✓	2 ✓			
*Are wood fore and afters steel shod at all bearing surfaces? ✓ 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 ✓									

Particulars of fiddle, funnel and ventilator coamings:—

STOKE-HOLD GRATINGS COVERED BY HINGED STEEL SHUTTERS ✓
 FIDLEY & FUNNEL VENTS. IN GOOD CONDITION. ✓
 E. R. SKYLIGHT STEEL. ✓

Particulars of Flush Bunker Scuttles:—

NONE.

Particulars of Companionways:— ON RAISED Q. DECK.

COMPANION TO MIDSHIP AND TO AFT ACCOMMODATION ENCLOSED IN STRONG STEEL
 HOUSES FITTED WITH 2" SOLID TEAK DOORS. HEIGHT OF SILL 18" capable of being operated from both sides. ✓

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

FOREWELL - 2@15" DIA. LED TO HOLD. COAMINGS 36" X 40" ✓
 RAISED Q. DK. - 2@15" " " " 36" X 40" ✓
 " " " 2@21" " " " 36" X 40" ✓
 " " " 2@6" " " " 15" X 28" ✓
 " " " 8@6" " " " MUSHROOM VENTS 7" IN HEIGHT. ✓

VENTS ARE IN ACCORDANCE WITH RULES & ARE CLOSED WITH WOOD PLUGS & CANVAS COVERS. ✓

freeboard, raised quarter, or superstructure decks:—

TO FORE PEAK. 3 1/2" DIA. 18" TO MOUTH. ✓
 TANKS 4" " 22 1/2" " " ✓
 " 4" " 36" " " ✓
 ACCOMMODATION 3 1/2" " 6" " " ✓
 " 3 1/2" " 26" " " ✓
 " 2" " 33" " " ✓
 " 2 1/2" " 21" " " ✓

Air pipes provided with effective means of closing



Cerne ex

Woodcock

Particulars of Scuppers and Sanitary Discharge Pipes —

C. PIPES LEAD & MALLEABLE IRON. FITTED WITH STORM VALVES.
FOR POSITIONS SEE BACK. ✓

Particulars of Side Scuttles:

DEAD LIGHTS FITTED TO MIDSHIP & AFT ACCOMMODATION. ✓

Particulars of Guard Rails:—

FOCLE DECK: 2 TIER RAILS 3'0" IN HEIGHT. STANCHIONS SP. 4'3" ✓

FORE WELL & RAISED Q. DK:— BOLWORKS SUPPORTED BY 5" x 2½" x 40" B.A. STANCHIONS SPACED ABOUT 6'0" APART. NOT ON BEAMS. ✓

Particulars of Gangways, Lifelines, etc.:—

Gangway and rail fitted on port side upper deck
for protection of crew.

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 R. Q. D. ...	140'0" ✓	2'6"	12'0" x 7'5" } 3½" ABOVE DECK. 18'0" x 7'5" } OPEN SPACE 17'5" IN LENGTH. ✓	2 1	31.5 sq ft ✓	28'0" ✓
Forward Well ...	57'5"	3'7" TO 4'2"	11'75" x 7'5" } 10" ABOVE DECK. 6'5" x 7'5" } 6" " " ✓	2 1	22.5 sq ft ✓	12'25" ✓

State position of each freeing port ... } After Well:— 24'0" - 48'0" & 72'0" FROM BRIDGE FRONT. ✓
(F. and A. position and height above deck edge) } Forward Well:— 6'0" - 26'8" & 49'6" " FOCLE BKH? ✓
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 ...	—	—	—	—	—	—	—	—
Raised Quarter Deck Bulkhead ...	—	38" ✓	4" x 3" x 38L ✓	30" ✓	NONE ✓	NONE ✓	—	4'0"
Bridge, After Bulkhead ...	—	—	—	(ALSO 4 DIAPHRAGM PLATES.	—	30" x 40" ✓	—	—
Bridge, Forward Bulkhead ...	—	—	—	—	—	—	—	—
Forecastle Bulkhead ...	—	35" ✓	3" x 3" x 38" ✓	42" - 27" ✓	NONE. ✓	4'3" x 36" ✓	18" ✓	6'0"
Trunk, Aft ...	—	—	—	—	—	—	—	—
Trunk, Forward ...	—	—	—	—	—	—	—	—
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	—	34" ✓	4" x 3" x 35" ✓	24" - 30" ✓	NONE. ✓	4'3" x 21" ✓	18" ✓	3'6" & 6'6"
Exposed Machinery Casings on Superstructure Decks ...	—	—	—	—	—	—	—	—
Machinery Casings within Superstructures 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 Freeboard or Raised Quarter Decks ...	2" SOLID TEAK DOORS CLOSING BOTH SIDES. ✓
Exposed Machinery Casings on Superstructure Decks ...	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓
Deckhouses on Flush Deck Ships ...	✓

H & Sons fitted 1934
added a canopy

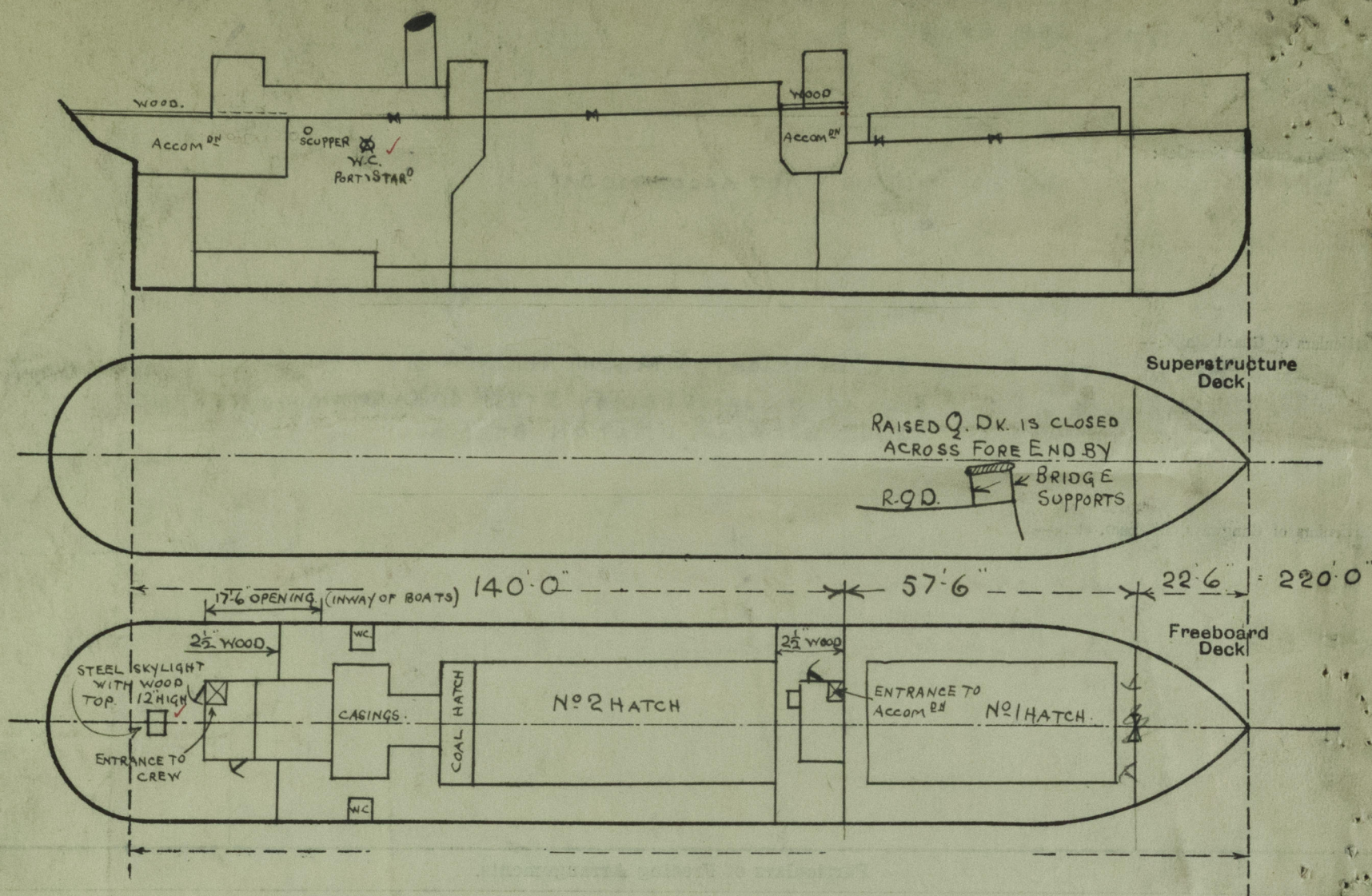
FULL HEIGHT RIVETED CHANNELS & WEATHER BOARDS. ✓

2" SOLID TEAK DOORS CLOSING BOTH SIDES. ✓

One on Starboard side
leading directly to ER
made of steel operated from
both sides

Corne

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:—

NO TIMBER ASSIGNMENT REQUIRED.

F.W. Allowance

S.M.D. = 15.48
Kut = -12
15.60

A @ 16' = 2721
- - 15' = 2531
190

Duff A = 60 x 190 = 114

A @ 15.6' = 2531
114
2645

Builder's name and yard number BURNTISLAND S.B. CO. LD.

Names of sister ships → HANDSWORTH & DISTRICT GAS CO.

Owners

Fee £ 8 : 10 : 0

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