

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Newcastle-on-Tyne</u>	
having <u>Forecastle and Raised Quarter Deck</u>					Date of Survey <u>11th July 1933</u>	
(Type of Superstructures.)					Name of Surveyor <u>J. G. Lowden</u>	
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification <u>+100 A1</u>	
<u>CORALSTONE</u>	<u>British London</u>	<u>147676</u>	<u>1371</u>	<u>1924-6</u>	<u>ss. S.H.L. No. 1-29</u>	
Moulded Dimensions: Length <u>234.79</u> Breadth <u>35.83</u> Depth <u>17.5 to upper deck</u>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>2686</u> tons						
Coefficient of fineness for use with Tables <u>.751</u> ✓						
Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth <u>17.5</u>			(a) Where D is greater than Table depth (D-Table depth) R = <u>(17.54-15.66) 1.806 = +5.39' ✓</u>		Moulded Breadth (B) <u>35.83'</u>	
Stringer plate <u>.04</u>			(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>✓</u>		Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>8.60"</u>	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$			If restricted by superstructures <u>✓</u>		Ship's Round of Beam = <u>9"</u>	
Depth for Freeboard (D) = <u>17.54</u>					Difference <u>.40"</u>	
					Restricted to	
					Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>$\frac{.40}{4} \times .274 = -.035$</u>	

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>3.90'</u>
R.Q.D. enclosed	<u>145.25</u>	<u>145.25</u>	<u>4.0</u>	<u>✓</u>	<u>145.25</u>	Deduction for complete superstructure <u>29.48"</u>
" overhang						Percentage covered $\frac{S}{L} =$ <u>72.60%</u>
Bridge enclosed						" " $\frac{S_1}{L} =$ <u>72.60%</u>
" overhang aft						" " $\frac{E}{L} =$ <u>72.60%</u>
" overhang forward						Percentage from Table, Line A. <u>66.20%</u>
F'cle enclosed	<u>25.25</u>	<u>25.25</u>	<u>7.0</u>	<u>✓</u>	<u>25.25</u>	(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 = <u>29.48 x .662 = -19.52"</u>
" " forward						
Total	<u>170.50</u>	<u>170.50</u>			<u>170.50</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
A.P.	<u>33.48</u>	1	<u>33.48</u>	<u>26.0"</u>	<u>25.30</u>	1	<u>26.70</u>	Mean actual sheer aft = <u>Deficient.</u>
$\frac{1}{2}$ L from A.P.	<u>14.90</u>	4	<u>59.60</u>	<u>10.75</u>	<u>11.25</u>	4	<u>47.52</u>	Mean actual sheer forward = <u>Deficient.</u>
$\frac{3}{8}$ L "	<u>3.68</u>	2	<u>7.36</u>	<u>3.5"</u>	<u>2.81</u>	2	<u>5.88</u>	Mean standard sheer aft
Amidships		4				4		Mean standard sheer forward
$\frac{3}{8}$ L from F.P.	<u>7.36</u>	2	<u>14.72</u>	<u>7.5"</u>	<u>7.29</u>	2	<u>14.58</u>	Length of enclosed superstructure forward of amidships = <u>Deficient</u>
$\frac{1}{2}$ L "	<u>29.80</u>	4	<u>119.20</u>	<u>30.0"</u>	<u>29.23</u>	4	<u>116.92</u>	" " aft of " = <u>Sheer.</u>
F.P.	<u>66.96</u>	1	<u>66.96</u>	<u>66"</u>	<u>66.00</u>	1	<u>66.00</u>	
Total			<u>301.32</u>				<u>277.60</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{23.72}{18} \left(.75 - \frac{363.0}{2} \right) = +.51"$

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.

R.Q. Ft.
Depth to Freeboard Deck = 21.54
Summer freeboard = 5.25
Moulded draught (d) = 16.29

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 4.07' .4"

Addition for Winter North Atlantic Freeboard (if required)=

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 2983$

Tons per inch immersion at summer load water line

$T = 16.8$

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

$= \frac{2983}{40 \times 16.8} = 4.33 \text{ say } 4\frac{1}{2}$
 $TPI \text{ at } 85\% \text{ MLD DEPTH} = 16.7$

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

	+	-
Depth Correction	<u>3.39</u>	<u>-</u>
Deduction for superstructures	<u>-</u>	<u>19.52</u>
Sheer correction	<u>.51</u>	<u>-</u>
Round of Beam correction	<u>-</u>	<u>.03</u>
Correction for Thickness of Deck amidships	<u>-</u>	<u>-</u>
Other corrections, scantlings, etc. h.t. of R.Q.D.	<u>48.00</u>	<u>-</u>

Summer Freeboard = 63.25SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, 5'-3 3/4"Tropical Fresh Water Line above Centre of Disc 8 1/2"Fresh Water Line " " 4 1/2"Tropical Line " " 4"Winter Line below " " 4"Winter North Atlantic Line " " 6"Tropical Fresh Water Freeboard 4'-6 3/4"Fresh Water " " 4'-10 3/4"Tropical " " 4'-11 1/4"Winter " " 5'-7 1/4"Winter North Atlantic " " 5'-9 1/4"

12 JUL 1933

15 FEB 1937

1-2 JAN 1935

MARKING FORM

14 JUL 1933

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS												
<div style="display: flex; justify-content: space-between;"> ← UPPER DECK ← R.Q.D. → CASING TOP → TO PEAK </div>												
Description of Hatchway	...	...	Nº 1	Nº 2	ESCAPE	Nº 3	Nº 4	ESCAPE	COAL HATCH	COAL SHOOT	COAL SHOOT	FEEL UPPER DECK
Dimensions of Hatchway	...	...	20'-7 1/2" 24'-0" x 18'-0"	27'-10 1/2" 24'-0"	23' x 15'	26'-3" 24'-0"	28'-10 1/2" 24'-0"	23' x 15'	27' x 23 1/2" 24'-0"	18'-3" 5'-3"	11'-8" 4'-6"	2'-0" 2'-0" 2'-0" 2'-0"
COAMINGS	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> Height above Deck Thickness Stiffeners Brackets, Stays </div> <div style="font-size: 2em;">{</div> <div style="margin-left: 10px;"> Sides Ends </div> </div>	...	36"	36"	18"	36"	36"	18"	18"	9" BA	9" BA	13 1/2" 3" ANGLE
		...	44"	44"	36"	44"	44"	36"	36"	✓	✓	✓
		...	8" BA	8" BA	✓	8" BA	8" BA	36"	36"	✓	✓	✓
		...	1	2	✓	2	2	✓	✓	✓	✓	✓
HATCH BEAMS	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> Number Spacing Scantling and Sketch </div> <div style="font-size: 2em;">{</div> <div style="margin-left: 10px;"> 7" </div> </div>	...	5'-2"	4'-10"		4'-4 1/2"	4'-10"					
		...	19 1/2" 19" 18"	19 1/2" x 38"	✓	18 1/2" x 36"	19 1/2" x 38"	✓	✓	✓	✓	✓
		...	x 36	5 x 3 1/2 46	✓	5 x 3 1/2 x 46	5 x 3 1/2 x 46	✓	✓	✓	✓	✓
		...	4 x 3 x 46	Angle	✓	Angle	Angle	✓	✓	✓	✓	✓
FORE AND AFTERS	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> Number Spacing Unsupported Lengths Scantling and Sketch </div> <div style="font-size: 2em;">{</div> <div style="margin-left: 10px;"> 3 1/2" </div> </div>	...	3 1/2"	3 1/2"		3 1/2"	3 1/2"					
		...	3 1/2"	3 1/2"		3 1/2"	3 1/2"					
		...	3 1/2"	3 1/2"		3 1/2"	3 1/2"					
		...	3 1/2"	3 1/2"		3 1/2"	3 1/2"					
HATCH COVERS	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> Material Thickness How fitted Bearing Surface </div> <div style="font-size: 2em;">{</div> <div style="margin-left: 10px;"> WP 2 1/2" F + A 3" </div> </div>	...	WP	WP	Steel	WP	WP	Steel	Steel	WP	WP	WP
		...	2 1/2"	2 1/2"	4 Toggles	2 1/2"	2 1/2"	4 Toggles	4 Toggles	2 1/2"	2 1/2"	2 1/2"
		...	F + A	F + A	✓	F + A	F + A	✓	✓	F + A	F + A	2 1/2"
		...	3"	3"	✓	3"	3"	✓	✓	2 1/2"	2 1/2"	2 1/2"
Spacing of Cleats	...	...	24"	24"	✓	24"	24"	✓	24"	24"	12"	✓
Number of Tarpaulins	...	...	3	3	✓	3	3	✓	1	1	3	✓

*Are wood fore and afters steel shod at all bearing surfaces? None

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:— Funnel and ventilator coamings are efficient. Stoked gratings are covered by strong steel hinged covers. Engine skylight of steel strong construction.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways :—

None.

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

2 vents *flat deck* *1 1/2 diam* *coam* *36" x 36* *to hold* *Vents have wood covers*
 3 " *RQD* *1 1/2* " *36" x 36* " *and canvas covers*
 2 " *Forecastle* *7 1/2* " *36" x 25* " *crew's space*

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

Entrails of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks —									
Freeboard	Deck	2 MI	air pipes	3/4 diam	to life	to head	to db tank	Wood plugs	
R Q D		2 MI		4"	" "	" "	" "	for closing open	
		2 MI		2 1/2	" "	" "	" "		
		2 MI		2 1/2	" "	" "	" "		
		1 MI		from	for head led overboard thru	604	storm valve	above	freeboard deck

Particulars of Gangway Cargo and Coaling Ports :—

None ✓

Particulars of Scuppers and Sanitary Discharge Pipes :—

One soil pipe from F¹ space led overboard below F¹ deck with storm valve

Particulars of Side Scuttles:—

Side scuttles are fitted with hinged deadlights of strong construction.

Particulars of Guard Rails :—

Fche deck 2 tier rails 3'-6" high 4'-6" to 5'-0" apart -
 RQD forward end 2 tier rails 3'-0" " 4'-0" apart -

Particulars of Gangways, Lifelines, etc. :—

lifeline fitted port side on upper deck with gangway between hatches (in well forward).

lifetime provided for R. Q. D.

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	14'5.25	3'-6"	3'-4" x 1'-3"	6	25 sq ft	29.05 sq ft
Forward Well	64'29'	4'-0"	4'-3" x 1'-6"	4	19.15 sq ft	12.86 sq ft

State position of each freeing port { After Well:— from fore end of bulwark 11'-4", 35'-6", 61'-6", 86'-0", 110'-0", 134'-0". SILL 6"
(F. and A. position and height above deck edge) { Forward Well:— " RQD bulkhead 3'-0", 18'-6", 33'-6", 47'-0". SILL 11"

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
VERTICAL BARS (RQD - FBD DK)

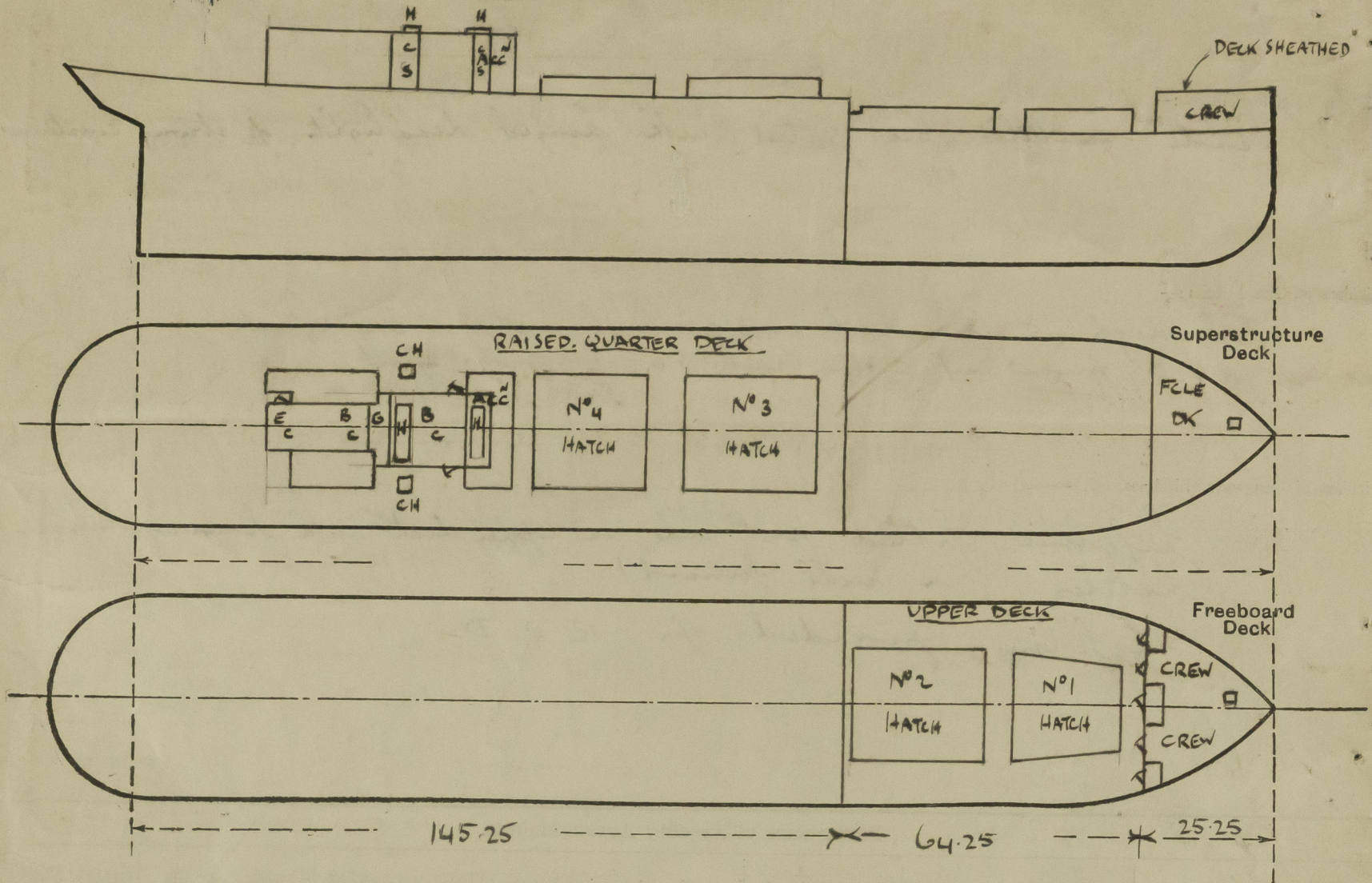
Additional area where sheer is less than standard.

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 ...	✓	.34	5 x 3 x .40 BA DIAPHRAM BKTS	36"	BKTS.	None	✓	4'-0"	
Bridge, After Bulkhead	✓								
Bridge, Forward Bulkhead	✓								
Forecastle Bulkhead	✓	.25	BULKHEAD ANGLES 2 1/2 x 4	24" 6 x 8	✓	4'-3" x 4'-11" by 2'-0"	18"	7'-0"	
Trunk, Aft	✓								
Trunk, Forward	✓								
Exposed Machinery Casings on Deck located on Raised Quarter Decks ...	✓	.40 BR 40 x ER	.36"	NOT ACCESSIBLE 3/2 x 3 x 30 L	30"	✓	4'6" x 2'1"	19" 16"	7'-0"
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 ...	<i>None no openings</i>
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	<i>Hinged wood doors 2" (1" PANEL) teak 30ft. Steel doors to side houses 30ft. To crews space work both sides operated both sides</i>
Exposed Machinery Casings on Deck Raised Quarter Decks ...	<i>Ord. steel hinged doors 2 doors to holdy have strong backs operated from inside only. Doors have also ord. locks operated both sides</i>
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships ...	✓

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:—

Vessel surveyed in dry dock
The Special Survey N°2 is being completed at this time except for examination of bunkers + testing of tanks in way See Secretary's letter 1/1/30

Timber assignment is required

The N°s 1 & 2 db tanks are ~~very~~ subdivided, wood plating filled + timbered all over.
Freeboard deck bulwarks 4'-0" high rail 5 1/2 x 3" BA stanchions 5 1/2 x 3" BA
Stanchions spaced 5'-6" to 6'-0" apart ~~efficiently riveted to stringer to take lashings~~
Raised quarter deck bulwarks 3'-6" high rail bar 5 1/2 x 3" BA stanchions 5 x 3 angle
spaced about 6'-0" apart
Steering gear after end of casing hand gear on top of casing
Angle sockets fitted on deck (fwd) ~~not exceeding 11'-6"~~ from head bulkhead (clear of stringer fit)
and spaced about 10' apart 4'-6" from fore bulkhead to 1st socket at funnel end
Angle sockets fitted on R & D 1st 6'-3" from head bulkhead + spaced 10'-0" to 1st socket
Bulwark stanchions have provision made for fitting shackles for lashings
~~spaced 6'-6"~~

Builder's name and yard number

Swan Hunter + Wigham Richardson

Names of sister ships

S/S Elfstone S/S Dewstone

Owners

Crete Shipp'g Co Ltd

Fee £

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