

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. **31942**
(For London Office only.)

-5 JUL 1935

17 JAN 1935

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having *Quarter Deck & Forecastle.*

(Type of Superstructures.)

Ship's Name *M.V. CALDERGATE* Nationality and Port of Registry *BRITISH Hull* Official Number *149061* Gross Tonnage *138* Date of Build *1926-2*

Moulded Dimensions: Length *99.0* Breadth *17.125* Depth *8-6 1/2*
Moulded displacement at moulded draught = 85 per cent. of moulded depth *255* tons
Coefficient of fineness for use with Tables *.740*

Port of Survey *Hull*
Date of Survey *16th January 1935*
Name of Surveyor *W. Engledow*

Particulars of Classification *T100A1.*
CARRYING PETROLEUM IN BULK.
CONSTRUCTED IN ACCORDANCE WITH RULES OF LLOYD'S REGISTER.
(EXCEPT WEST COAST CORN TO PENTLAND FIRTH)

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<i>8-6 1/2</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(8-56 - 6-47) .740 = + 1.56</i>		Moulded Breadth (B)	<i>17.125</i>
Stringer plate	<i>.35</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>0</i>		Standard Round of Beam = $\frac{B \times 12}{50}$	<i>4.11</i>
Sheathing on exposed deck	<i>FBD Deck 5x2 1/2</i>			Ship's Round of Beam	<i>4 1/2</i>
T $\left(\frac{L-S}{L}\right) =$	<i>Arch Rise</i>			Difference	<i>.39</i>
Depth for Freeboard (D) =	<i>8.56</i>	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	<i>= .39 / 4 x .2002 = -.02</i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	-	-	-	-	-	Standard Height of Superstructure <i>6.00</i>
" overhang ...	-	-	-	-	-	" " R.Q.D. <i>3.00</i>
R.Q.D. enclosed ...	<i>29.75</i>	<i>29.75</i>	<i>2-6</i>	$\times 2.5 / 3.00$	<i>24.79</i>	Deduction for complete superstructure <i>15.7</i>
" overhang ...	-	-	-	-	-	Percentage covered $\frac{S}{L} =$ <i>43.57%</i>
Bridge enclosed ...	-	-	-	-	-	" " $\frac{S_1}{L} =$ <i>79.98%</i>
" overhang aft ...	-	-	-	-	-	" " $\frac{E}{L} =$ <i>46.55%</i>
" overhang forward	-	-	-	-	-	Percentage from Table, Line A. (corrected for absence of forecastle (if required))
Fore enclosed ...	<i>12.5</i>	<i>12.50</i>	<i>2-6</i>	$\times 2.7 / 6.00$	<i>5.65</i>	Percentage from Table, Line B. <i>Tanker 37.55%</i>
" overhang ...	-	-	-	-	-	(corrected for absence of forecastle (if required))
Trunk aft ...	-	-	-	-	-	Interpolation for bridge less than 2L (if required)
" forward	<i>54.45</i>	<i>35.31</i>	<i>2-6</i>	$\times 2.5 / 6.00$	<i>14.71</i>	Deduction = <i>15.7 x .3755 = - 5.89</i>
Tonnage opening aft ...	-	-	-	-	-	
" " forward	-	-	-	-	-	
Total ...	<i>42.25</i>	<i>77.56</i>			<i>43.15</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>19.70</i>	1		<i>19.70</i>	<i>15</i>	<i>15.00</i>	1		<i>15.00</i>
1/4 L from A.P. ...	<i>8.77</i>	4		<i>35.08</i>	<i>7 1/2</i>	<i>6.81</i>	4		<i>27.24</i>
1/2 L " ...	<i>2.17</i>	2		<i>4.34</i>	<i>2</i>	<i>1.70</i>	2		<i>3.40</i>
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	<i>4.33</i>	2		<i>8.66</i>	<i>5</i>	<i>4.05</i>	2		<i>8.10</i>
1/4 L " ...	<i>17.53</i>	4		<i>70.12</i>	<i>17</i>	<i>16.19</i>	4		<i>64.76</i>
F.P. ...	<i>39.40</i>	1		<i>39.40</i>	<i>36</i>	<i>36.00</i>	1		<i>36.00</i>
Total ...				<i>177.30</i>					<i>154.50</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{22.80}{18} \left(\frac{.75 - .2178}{1} \right) = + .67$

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 = *Ft.*

Summer freeboard =

Moulded draught (d) =

Deduction for Tropical freeboard and addition for

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

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$

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 ...	<i>1.56</i>	-
Deduction for superstructures ...	-	<i>5.89</i>
Sheer correction ...	<i>.67</i>	-
Round of Beam correction ...	-	<i>.02</i>
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc. ...	-	-
	<i>2.23</i>	<i>5.91</i>

Summer Freeboard = *6.45*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:— *0-6 1/2*

Tropical Fresh Water Line above Centre of Disc ...	
Fresh Water Line " " ...	
Tropical Line " " ...	
Winter Line below " " ...	
Winter North Atlantic Line " " ...	

Tropical Fresh Water Freeboard ...	
Fresh Water " " ...	
Tropical " " ...	
Winter " " ...	
Winter North Atlantic " " ...	

Existing freeboards rearranged.

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway									
Dimensions of Hatchway									
COAMINGS	Height above Deck								
	Thickness								
	Sides								
	Ends								
	Stiffeners								
HATCH BEAMS	Brackets, Stays								
	Number								
	Spacing								
	Scantling and Sketch								
	Bearing Surface								
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
	Bearing Surface								
HATCH COVERS	Material								
	Thickness								
	How fitted								
	Bearing Surface								
Spacing of Cleats									
Number of Tarpaulins									

8 Oil light hatches on trunk top. 2'3" x 2'0" x 6' Coaming.
with hinged steel covers 3/8" thick and secured by 5
butterfly fasteners.

*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:— 2- 6" dia mushroom units to after cabin coming 9" high.
1 Teak skylight to after cabin good order.
Engine room skylight 2 Square openings 2'7" x 1'11", 2 1/2" angle coming, with hinged steel flaps, secured
by butterfly fasteners. Each flap fitted with 2 bull eye lights.

Particulars of Flush Bunker Scuttles:— None.

Particulars of Companionways:— On forecabin deck to crew space built of steel, with lead doors 1 1/4" thick in helms
initially, secured by a cleat and clip fastener opening from one side only. This companion has a sliding lead top.
Door opening 2'8" x 2'0" with 6" sill along forecabin deck.
Companionway to Port side of crew space to accommodation of teak, with hinged lead door in helms initially, also sliding lead top.
Door of teak with clip cleat fastener on inside and padlock on outside. Door opening 3'0" x 1'11" x 13" sill.
Port and starboard side teak companion on coming top to engine room lead door 1 1/4" thick 2'4" x 2'0" or 3'6" along R.D. Deck
sliding lead top. Spring lock and handle both sides.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
On forecabin deck to crew space port and starboard Coamings 6" dia x 36" along nose deck, with mushroom tops.
Raised quarter - Engine room - Coal unit 9 1/2" x 36" - deck 30" thick. Wood plugs supplied.
Coming top to after cabin 2 mushroom unit 9" dia x 9" Coamings

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
Forecabin deck under low chub to chain locker 4" dia from neck 4 1/2" to mouth.
Culvert - W.B. Tank 3" - 14"
Culvert - 2 3/4" - 14"
R.Q. Deck - To Cofferdam P.S. 2 3/4" dia x 17"
- Engine Room S. 4" x 16" TO MOUTH
- AFTER PEAK P. 2 1/2" x 13" 2 OFF.
STORE S. 4" x 8"

Air pipes have no
plugs or stuffing
holes.

Particulars of Gangway Cargo and Coaling Ports:—

Efficient means of
closing provided

None.



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Particulars of Scuppers and Sanitary Discharge Pipes:

1 No. at aft end of forecath deck discharges 4" dia S.V. 2'-0" below upper deck.
Scuppers from upper deck 3 port and 3 starboard Collision patent scuppers
R.Q. 3 3

[Signature]

Particulars of Side Scuttles:

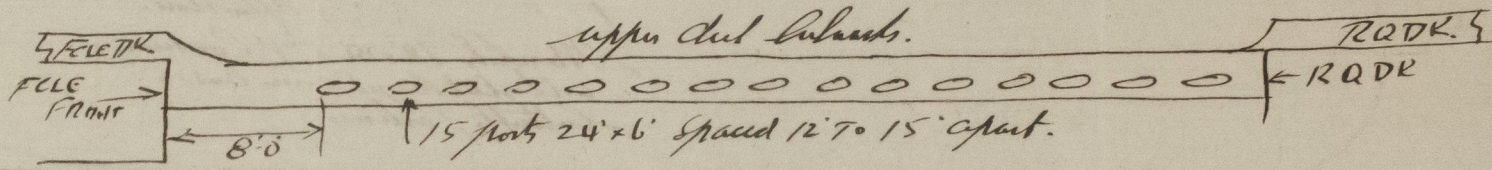
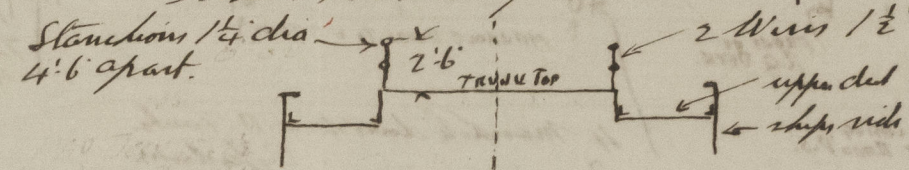
In forecath rich & crew space 2 Port and 2 Starboard
8' dia of strong construction and fitted with deadlights.

Particulars of Guard Rails:

Forecath deck steel bulwark 2'-6" high
upper 2'-6"
R.O. Deck 2'-3"

Particulars of Gangways, Lifelines, etc.:

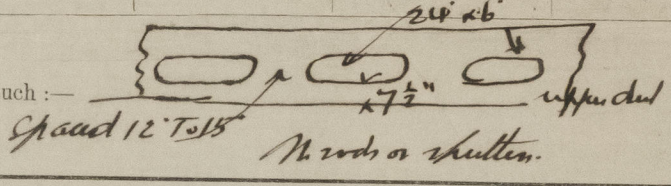
Stanchions on top of forward and S. sides with 2-1 1/2" wire upper.
Between R.O. Deck & forecath.
Stanchions 1 1/4" dia 4'-6" apart. 2 Wires 1 1/2" upper deck ship side



Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Well between R.O. Deck & forecath	54.95	2'-6"	24" x 6"	15	15 #	11.97 #
Forward Well						

State position of each freeing port ... After Well:—
P. 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
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead	30	30	3 x 2 1/2 x 5/16	24"	Keen to bottom stiffener	NONE	✓	2'-6"
Bridge, After Bulkhead	✓							
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	30	30	5 1/2 x 3 x 3/8	4'-6" Horizontal	BRACED	NONE	✓	2'-6"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Deck	25	25	2 1/2 x 2 1/2 x 25	2'-9"	Keen at top	None	✓	2'-6"
Exposed Machinery Casings on Superstructure Decks	✓							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships	✓							

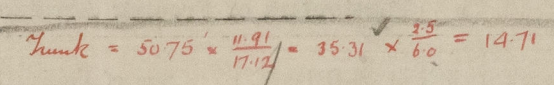
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	✓
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

no openings
no openings
See Companionways

0145 2/2

Caldingate



This road has been run over while lying in Messrs. Bygones & Co's
Dry Dock at Hull. This road is expected to trail about this week-end and
the Company would be pleased if the railroad could be arranged and worked
before road rails.

AMBLE S.B. 6th Lth. AMBLE. YARD N^o A.40.

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Anglo American Oil Co. Ltd.

Received by me.