

PLAN.
28698
Rpt. C.11.

Index. No. 30076
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Forecastle, Bridge, and Raised Quarter Decks. Port of Survey London

CANTICK HEAD (Type of Superstructures.)
Ship's Name ORIOLE Nationality and Port of Registry British London Official Number 146,067 Gross Tonnage 488 Date of Build 1921-8

Date of Survey 12th & 13th July 1932.
Name of Surveyor Thomas E. Snowden

Moulded Dimensions: Length 160.25 Breadth 25 Depth 11.9
Moulded displacement at moulded draught = 85 per cent. of moulded depth 825 ~~828~~ tons
Coefficient of fineness for use with Tables .727.724

Particulars of Classification +100 A.1.
S.S. Lon. No. 2-29.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>11.75</u>	(a) Where D is greater than Table depth (D-Table depth) R = <u>1.10</u>	Moulded Breadth (B) <u>25</u>
Stringer plate <u>36</u> R&D <u>.03</u>	<u>(11.78 - 10.68) / 1.232 = 1.36</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{6}{50} = 6.5$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Ship's Round of Beam = <u>6.5</u>
Depth for Freeboard (D) = <u>11.78</u>	If restricted by superstructures	Difference <u>.5</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.5}{4} \times \frac{2165}{4} = .03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
„ overhang					
R.Q.D. enclosed	<u>91-9 1/4</u>	<u>91.77</u>	<u>3'-6"</u>		<u>91.77</u>
„ overhang					
Bridge enclosed	<u>10-10 1/2</u>	<u>10.88</u>	<u>9'-0"</u>		<u>10.87</u>
„ overhang aft					
„ overhang forward					
„ enclosed	<u>23-6 3/4</u>	<u>23.73</u>			<u>23.73</u>
„ overhang	<u>6-3</u>	<u>7.0</u>	<u>7'-0"</u>		<u>1.67</u>
Trunk aft					
„ forward					
Tonnage opening aft					
„ forward					
Total	<u>126.70</u>	<u>125.54</u>			<u>125.54</u>

Standard Height of Superstructure	<u>6.0</u>
„ „ R.Q.D.	<u>3.402</u>
Deduction for complete superstructure	<u>22.02</u>
Percentage covered $\frac{S}{L} =$	<u>79.06</u>
„ „ $\frac{S_1}{L} =$	<u>78.35</u>
„ „ $\frac{E}{L} =$	<u>78.35</u>
Percentage from Table, Line A.	<u>73.27</u>
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	<u>22.02 x .7327 = 16.13</u>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>26.02</u>	1		<u>26.02</u>	<u>45</u>	<u>46.18</u>	1		<u>46.18</u>
1/4 L from A.P.	<u>11.58</u>	4		<u>46.32</u>	<u>19</u>	<u>20.14</u>	4		<u>80.56</u>
1/2 L „	<u>2.86</u>	2		<u>5.72</u>	<u>5</u>	<u>5.03</u>	2		<u>10.06</u>
Amidships		4					4		
3/4 L from F.P.	<u>5.72</u>	2		<u>11.44</u>	<u>8</u>	<u>8.10</u>	2		<u>16.20</u>
1/4 L „	<u>23.16</u>	4		<u>92.64</u>	<u>33</u>	<u>32.39</u>	4		<u>129.56</u>
F.P.	<u>52.04</u>	1		<u>52.04</u>	<u>69</u>	<u>69.00</u>	1		<u>69.00</u>
Total				<u>234.20</u>					<u>351.56</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{117.36}{18} (.75 - .3953) = -2.31$

If limited on account of midship superstructure.

Mean actual sheer aft = Excess
Mean standard sheer aft = Excess

Mean actual sheer forward = Excess
Mean standard sheer forward = Excess

Length of enclosed superstructure forward of amidships = 7.1 L
„ „ aft of „ = 5 L

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient <u>.724</u> <u>1401</u>
IN WAY OF MARKING	Δ = <u>991</u>	Depth Correction <u>1.36</u>
Depth to Freeboard Deck = <u>15.28</u>	Tons per inch immersion at summer load water line	Deduction for superstructures <u>16.13</u>
Summer freeboard = <u>3.67</u>	T = <u>7.88</u>	Sheer correction <u>2.31</u>
Moulded draught (d) = <u>11.61</u>	Deduction = $\frac{\Delta}{40 T}$ inches	Round of Beam correction <u>.03</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>2.9</u> <u>3"</u>	<u>d/4 = 3.14</u> <u>= 3 1/4</u>	Correction for Thickness of Deck amidships
Addition for Winter North Atlantic Freeboard (if required) = <u>2</u>		Other corrections, scantlings, etc. <u>RAQ</u> <u>42.00</u>
		43.36 18.47 + 24.89
		Summer Freeboard = <u>42.33</u>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, <u>RAISED QUARTER</u> Steel, Deck:—		
Tropical Fresh Water Line above Centre of Disc ...	<u>3 1/4</u>	Tropical Fresh Water Freeboard ...
Fresh Water Line „ „ ...	<u>3 1/4</u>	Fresh Water „ „ ...
Tropical Line „ „ ...	<u>0</u>	Tropical „ „ ...
Winter Line below „ „ ...	<u>3</u>	Winter „ „ ...
Winter North Atlantic Line „ „ ...	<u>5</u>	Winter North Atlantic „ „ ...

3-8 LIMITED
3-5 1/4
3-5 1/4
3-8 LIMITED
3-11
4-1

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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	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...
	Brackets, Stays	...	...	...	...	...	...	...	...
HATCH BEAMS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
FORE AND AFTERS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...

*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:—

Fiddle gratings fitted with plate covers, ~~permanently attached~~ hinged & portable.
 Ventilator & funnel coamings in efficient condition
 E.R. Skylight of steel strongly constructed

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways:—

1 On Bridge deck in steel house, leading to acc^m with wood door 4'-4" x 2' x 8" sill
 Operated from both sides

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

Forecastle: 2 @ 6" x 9" high to acc^m Bridge 3 M.V. @ 6" x 6" high to acc^m
 Well B: 1 @ 10" x 36" - hold Poop R.Q.D. 1 at 10" x 36" - hold.
 Wood plugs & canvas covers fitted

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

Forecastle: 1 @ 3" x 7" high to F.P. R.Q.D. 1 @ 2" x 15" high to D.B.
 Well: 1 @ 4" x 12" - D.B. 1 @ 2 1/2" x 9" - D.B.
 1 @ 3" x 9" - A.P.
 No means of closing provided.

Particulars of Gangway Cargo and Coaling Ports:—

None

Particulars of Scuppers and Sanitary Discharge Pipes:—

Discharges:— From Forecastle led below W.B. & fitted with 3. V.
 " Acc^m in Cas? " " R.Q.D. " " " "

Particulars of Side Scuttles:—

All fitted with fixed hinged deadlights

Particulars of Guard Rails:—

On Deck 3' high with 2 rods & stanchions 4'-0" apart

Particulars of Gangways, Lifelines, etc.:—

Fore well: Gangway fitted to hatch top with stanchions & rope rail fitted
 to hatch side stiffener.
 Crew in Forecastle
 R. Q. D. none fitted

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.	9'-9 1/4"	3'-0"	* 54" x 9" 28" x 15"	3 3	18.75 87.5 sq ft	18.35
1 Well ...	34'-0 1/2"	3'-7"	30" x 17"	3	10.6 sq ft	9.9 sq ft
State position of each freeing port ... After Well: 6', 27' & 45' from Bridge. 5" sill. * 3 1/2" sill (F. and A. position and height above deck edge) Forward Well: 3, 18, 27 " 9" 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	3'-6"
Raised Quarter Deck Bulkhead	7'-0"
Bridge, After Bulkhead	7'-0"
Bridge, Forward Bulkhead	7'-0"
Forecastle Bulkhead	7'-0"
Trunk, Aft
Trunk, Forward
Exposed Machinery Casings
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
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
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

Lloyd's Register
Foundation