

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

10,917

Computation of Freeboard for Steamer, Sailing Ship, Tanker having <u>R.O.D. Bridge & Forecastle.</u>					Port of Survey <u>Belfast.</u>
(Type of Superstructures.)					Date of Survey <u>Aug 10th 1932.</u>
Ship's Name <u>"FINVOY"</u>	Nationality and Port of Registry <u>Belfast.</u>	Official Number <u>142499.</u>	Gross Tonnage <u>374.</u>	Date of Build <u>1920-6.</u>	Name of Surveyor <u>John K. Williams.</u>
Moulded Dimensions: Length <u>145ft</u> ✓ Breadth <u>23ft</u> ✓ Depth <u>10.75</u> ✓					Particulars of Classification <u>+100 A1.</u>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>728.</u> tons					<u>S.S. Bd. No. 2-28</u> ✓
Coefficient of fineness for use with Tables <u>.788.</u>					

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth ...	10.75	(a) Where D is greater than Table depth (D - Table depth) R = <u>10.79 - 9.67 = 1.12</u>		Moulded Breadth (B)	23.0
Stringer plate ...	<u>10.79</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>1.12 x 1.15 = 1.25</u>		Standard Round of Beam = $\frac{B \times 12}{50} = 5.52$	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓		If restricted by superstructures		Ship's Round of Beam = <u>7.00</u>	
Depth for Freeboard (D) = <u>10.79.</u>				Difference = <u>1.48</u>	
				Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.48}{4} \times (1 - \frac{4299}{145}) = .16$	

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>b.o.</u>
" overhang ...	✓					" " R.Q.D. <u>3.30.</u>
R.Q.D. enclosed ...	<u>49'-0"</u>	<u>49.00</u>	<u>3'-6"</u>		<u>49.00</u>	Deduction for complete superstructure <u>20.5</u>
" overhang ...	<u>9.58</u>	<u>9.58</u>	<u>7'-1"</u>		<u>9.58</u>	Percentage covered $\frac{S}{L} = 58.33$
Bridge enclosed ...	<u>9.58</u>	<u>9.58</u>	<u>7'-1"</u>		<u>9.58</u>	" " $\frac{S_1}{L} = 57.01$
" overhang aft ...	<u>9.58</u>	<u>9.58</u>	<u>7'-1"</u>		<u>9.58</u>	" " $\frac{E}{L} = 57.01$
" overhang forward ...	<u>9.58</u>	<u>9.58</u>	<u>7'-1"</u>		<u>9.58</u>	Percentage from Table, Line A. <u>41.81.72</u>
W'cle enclosed ...	<u>22.18</u>	<u>22.18</u>	<u>6'-3"</u>		<u>22.18</u>	(corrected for absence of forecastle (if required))
" overhang ...	<u>1.91</u>	<u>1.91</u>	<u>6'-3"</u>		<u>1.91</u>	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>8.57.55</u>
" " forward ...	✓					
Total ...	<u>84.58</u>	<u>82.67</u>			<u>82.67</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<u>24.50</u>	1		<u>24.50</u>	<u>27.25</u>	<u>27.25</u>	1		<u>27.25</u>	Mean actual sheer aft = <u>Deficient. 99%</u>
$\frac{1}{2}$ L from A.P. ...	<u>10.90</u>	4		<u>43.60</u>	<u>9.97</u>	<u>9.97</u>	4		<u>39.88</u>	Mean actual sheer forward = <u>Excess</u>
$\frac{3}{4}$ L " ...	<u>2.70</u>	2		<u>5.40</u>	<u>2.49</u>	<u>2.49</u>	2		<u>4.98</u>	Length of enclosed superstructure forward of amidships = 0
Amidships ...	—	4		✓	✓	✓	4		✓	" " aft of " = 0
$\frac{3}{4}$ L from F.P. ...	<u>5.39</u>	2		<u>10.78</u>	<u>5.63</u>	<u>5.63</u>	2		<u>11.26</u>	
$\frac{1}{2}$ L " ...	<u>23.81</u>	4		<u>87.24</u>	<u>22.52</u>	<u>22.52</u>	4		<u>90.08</u>	
F.P. ...	<u>54.00</u>	1		<u>49.00</u>	<u>54.00</u>	<u>54.00</u>	1		<u>54.00</u>	
Total ...				<u>220.52</u>					<u>227.45</u>	
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{220.52 - 227.45}{18} \left(.75 - \frac{2917}{4299} \right) = .13$										
If limited on account of midship superstructure. <u>.13 x 0 = 0</u>										
If limited to maximum allowance of $\frac{1}{2}$ ins. per 100 ft.										

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	14.85.
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	16.03
Depth to Freeboard Deck = <u>10.79</u>	$\Delta =$	Depth Correction ...	1.25
Summer freeboard = <u>.71</u>	Tons per inch immersion at summer load water line	Deduction for superstructures ...	<u>8.57</u>
Moulded draught (d) = <u>10.08</u>	T =	Sheer correction ...	<u>.16</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>2.52.21</u>	Deduction = $\frac{\Delta}{40 T}$ inches =	Round of Beam correction ...	
Addition for Winter North Atlantic Freeboard (if required) =		Correction for Thickness of Deck amidships ...	
		Other corrections, scantlings, etc. ...	<u>.71</u>
		Summer Freeboard = <u>8.55.57</u>	

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

0-8½.

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

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
TOP OF MACHINERY CASING.									
Description of Hatchway			...	CARGO.				CROSS BUNKER.	
Dimensions of Hatchway			...	45'-6" x 15'-0"				4'-9" x 13'-0"	
COAMINGS	{	Height above Deck	...	34"				12"	
		Thickness	...	1/2" 3/8"				Part of casing 1/4" thick	
		Stiffeners	...	7 x 3 x 1/2" BA	11" FROM TOP OF COAMING.			3" molding	
		Brackets, Stays	...	4 BA STAYS	EACH SIDE.			round topped edge.	
HATCH BEAMS	{	Number	...	4.				None.	
		Spacing	...	6'-11" TO 10'-7 1/2"					
		Scantling and Sketch	...	3 x 3 x 5/16 ANGLES. ↑ 2 3/4" x 1/16" PLATE. ↓					
		Bearing Surface	...	3"					
FORE AND AFTERS	{	Number	...	3.				None.	
		Spacing	...	3'-9" 1/2"					
		Unsupported Lengths	...	10'-7 1/2"					
		Scantling* and Sketch	...	8" x 8 1/2"					
Bearing Surface	...	3"							
HATCH COVERS	{	Material	...	Wood.				Wood.	
		Thickness	...	2 3/8"				2 3/8"	
		How fitted	...	adhesant				FR A.	
		Bearing Surface	...	2"				2"	
Spacing of Cleats			...	24"				24"	
Number of Tarpaulins			...	2.				1.	

*Are wood fore and afters steel shod at all bearing surfaces? *yes.*

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 fiddley, funnel and ventilator coamings:—

Tunnel thro' machinery casing. Opening protected by cap 17½" high.

2 ventilators to stoke hold 23" steel coamings.

2 Saddles openings fitted with strong steel covers permanently attached in their proper position.

Particulars of Flush Bunker Scuttles:—

R. Q. D. 2-16 $\frac{1}{2}$ " dia, closed with C1 lids bayonet joints. ✓

Particulars of Companionways :—

companionway from bridge deck house (steering engine house) to cabin in bridge space.

Opening $4'-6" \times 18\frac{1}{2}"$ closed by panelled teakwood doors $1\frac{1}{4}"$ thick $\frac{3}{4}"$ panels. Manipulate both sides.

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

Forecastle deck. 3 goose neck ventilators to accommodation. 2- $5\frac{1}{2}$ " dia x 21-8" high. } Closing appliances
1- $4\frac{1}{2}$ " dia x 8" high. } No closing fitted.
appliances.

Fore well. 1- 8" dia, 38" steel coaming to fore hold. Fitted with wood ply & canvas cover.

Bridge.
2- 5½" dia, 15" coaming. goose neck to cabin. ~~no closing appliances.~~ Closing appliances fitted

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

Newcastle dk. 1 air pipe 25" high goose neck to fore peak. —

R.G.O. 2 air pipes, goose neck. 1 to aft peak 22" high.
1 to space above aft peak 29" high.

Closing appliances fitted.

Particulars of Gangway Cargo and Coaling Ports :—

Particulars of Scuppers and Sanitary Discharge Pipes :—

1 close discharge from fore-castle space discharging below freeboard deck. 1 storm valve fitted.
1 " " " enclosed space within machinery casing on R.Q.D. No storm valve fitted.
No scuppers from enclosed spaces or below freeboard or R.Q. decks.

Particulars of Side Scuttles :—

Fore-castle 3 each side. Dead lights fitted.
Bridge none.

Particulars of Guard Rails :—

Fore-castle Rails 3'-0" high, stanchions 5'-3" apart, 2 rails.
Bridge 3'-0" high steel bulwarks.

Particulars of Gangways, Lifelines, etc. :—

Port side fore well stanchions fitted into holes thro' hatch coaming stiffeners. Wire lifeline reeved through and attached to eye bolts in fore-castle & bridge front bulkheads. Hatch forming efficient gangway & fixed gangway from ladders to hatch.
Starboard side fore well none.
R.Q.D. 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
R.Q.D. After Well	49'-0" 50'-7"	2'-11"	27" x 15½"	4	11.6 sq ft	11.5 sq ft
Forward Well	61'-3"	3'-9"	3/ 28" x 16½" 1/ 29" x 16½"	4	13 sq ft	12.25 13 sq ft
State position of each freeing port } After Well :— 5'-0", 13'-0", 24'-3", & 39'-4" from AP. 8' above deck. (F. and A. position and height above deck edge) } Forward Well :— 6'-3", 21'-8", 32'-0" & 43'-0" from Bridge front bulkhead. 8' above deck. State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :— Winged shutters. Additional area where sheer is less than standard.						

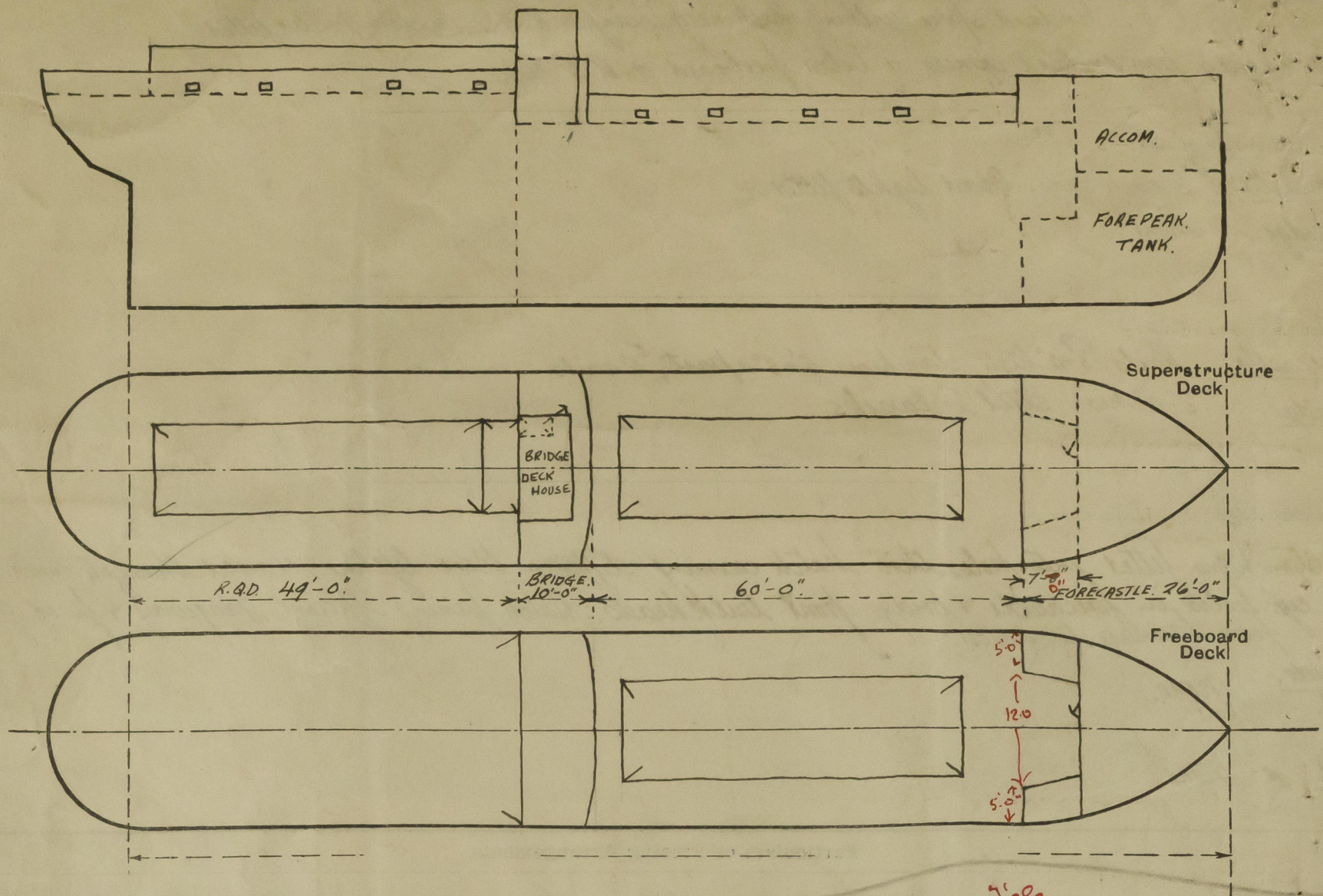
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead ...	Single plate ¼"	¼"	5 x 3 x 5/16" ANGLES	28"	Extended top & bottom.	None.	✓	✓
Bridge, After Bulkhead	" "	¼"	5 x 3 x 5/16" "	28"	"	"	✓	✓
Bridge, Forward Bulkhead	3/8"	¼"	6 x 3 x 3/8" BA.	31"	Angle iron lugs top & bottom 2 levels	"	✓	✓
Fore-castle Bulkhead	¼"	¼"	4 x 2½ x 5/16" ANGLES.	26"	None.	1/4'-5" x 1'-8"	15"	✓
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	3/8"	¼"	2½ x 2½ x ¼" ANGLES.	36"	Bracketted at top & bottom to bulkhead	2 each side. 4'-6" x 21"	17"	6'-8½"
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 ...	✓
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Fore-castle Bulkhead	Parallel P.P. door 1½" thick panels 5" thick, Manipulate both sides.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	Steel half doors ¼" thick (closing full height). Manipulate " "
Exposed Machinery Casings on Super-structure Decks	✓
Machinery Casings within Superstruc-tures 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:—



3' cle.
 $19.0 + \frac{7 \times 10}{22} = 19.0 + 3.18$
 $= 22.18$
 overhang 3.82.

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

Vessel now under survey for SS No 3. Examined in dry dock.

Builder's name and yard number

Names of sister ships

Owners

Howden Bros, Ltd.

Fee £ 5 : 2 : 0.

Received by me



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