

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

JUN 10 1938

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having POOP and bulk Forecastle

(Type of Superstructures.)

Ship's Name GOLDFINDER	Nationality and Port of Registry <u>Norwegian</u> <u>Breid</u> <u>London</u> <u>Tromsø</u>	Official Number <u>166615</u>	Gross Tonnage <u>270</u> <u>293.62</u>	Date of Build <u>1938</u>
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Port of Survey Hamburg
Date of Survey 8th June 1938
Name of Surveyor R. B. Shephard

Moulded Dimensions: Length 39.600m Breadth 7.15m Depth 2.900m
Moulded displacement at moulded draught = 85 per cent. of moulded depth 527m³
Coefficient of fineness for use with Tables .755

Particulars of Classification +100A1
(contemplated)

<p>Depth for Freeboard (D)</p> <p>Moulded depth ... <u>2.900</u></p> <p>Stringer plate ... <u>.008</u></p> <p>Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>✓</u></p> <p>Depth for Freeboard (D) = <u>2.908</u></p>	<p>Depth correction</p> <p>(a) Where D is greater than Table depth (D - Table depth) R = $8.33(2.908 - 2.640) \times 10 = 22 \text{ m/m}$</p> <p>(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u></p> <p>If restricted by superstructures <u>✓</u></p>	<p>Round of Beam correction</p> <p>Moulded Breadth (B) <u>7.15m</u></p> <p>Standard Round of Beam = $\frac{B \times 100}{50} = 143 \text{ mm/m}$</p> <p>Ship's Round of Beam = <u>140 mm</u></p> <p>Difference <u>Deficiency</u> <u>3 mm/m</u></p> <p>Restricted to</p> <p>Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{3}{4}(.6061) = \text{Nil}$</p>
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>10.165</u>	<u>10.165</u>	<u>2.000</u>	<u>✓</u>	<u>10.165</u>
" overhang ...	<u>✓</u>				
R.Q.D. enclosed ...	<u>✓</u>				
" overhang ...	<u>✓</u>				
Bridge enclosed ...	<u>✓</u>				
" overhang aft ...	<u>✓</u>				
" overhang forward ...	<u>✓</u>				
F'cle enclosed ...	<u>4.825</u>	<u>4.825</u>	<u>1.000</u>	<u>1.176</u>	<u>3.100</u>
" overhang Sidehouse ...	<u>.608</u>	<u>.608</u>	<u>2.000</u>	<u>side houses</u>	<u>.608</u>
Trunk aft ...	<u>✓</u>				
" forward ...	<u>✓</u>				
Tonnage opening aft ...	<u>✓</u>				
" " forward ...	<u>✓</u>				
Total ...	<u>15.598</u>	<u>15.598</u>			<u>13.873</u>

Standard Height of Superstructure	<u>1.83m</u>
" " R.Q.D.	<u>✓</u>
Deduction for complete superstructure	<u>483 m/m</u>
Percentage covered $\frac{S}{L} =$	<u>39.39</u>
" " $\frac{S_1}{L} =$	<u>39.39</u>
" " $\frac{E}{L} =$	<u>35.03</u>
Percentage from Table, Line A.	<u>.1927</u>
(corrected for absence of forecastle (if required))	<u>✓</u>
Percentage from Table, Line B.	<u>✓</u>
(corrected for absence of forecastle (if required))	<u>✓</u>
Interpolation for bridge less than .2L (if required)	<u>✓</u>
Deduction = $483 \times .1927 =$	<u>93</u>
<u>* See page 4.</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>584</u>	<u>1</u>	<u>✓</u>	<u>584</u>	<u>815</u>	<u>815</u>	<u>1</u>	<u>✓</u>	<u>815</u>
$\frac{1}{8}L$ from A.P. ...	<u>260</u>	<u>4</u>	<u>✓</u>	<u>1040</u>	<u>317</u>	<u>317</u>	<u>4</u>	<u>✓</u>	<u>1268</u>
$\frac{2}{8}L$ " ...	<u>65</u>	<u>2</u>	<u>✓</u>	<u>130</u>	<u>67</u>	<u>67</u>	<u>2</u>	<u>✓</u>	<u>134</u>
Amidships ...	<u>✓</u>	<u>4</u>	<u>✓</u>	<u>✓</u>			<u>4</u>	<u>✓</u>	<u>✓</u>
$\frac{3}{8}L$ from F.P. ...	<u>130</u>	<u>2</u>	<u>✓</u>	<u>260</u>	<u>184</u>	<u>130</u>	<u>2</u>	<u>✓</u>	<u>260</u>
$\frac{4}{8}L$ " ...	<u>519</u>	<u>4</u>	<u>✓</u>	<u>2076</u>	<u>663</u>	<u>519</u>	<u>4</u>	<u>✓</u>	<u>2076</u>
F.P. ...	<u>1168</u>	<u>1</u>	<u>✓</u>	<u>1168</u>	<u>1427</u>	<u>1168</u>	<u>1</u>	<u>✓</u>	<u>1168</u>
Total ...			<u>✓</u>	<u>5258</u>					<u>5721</u>

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{463}{18} = 25.72$

If limited on account of midship superstructure. no allowance

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 = Nil
" " aft of " = Nil

Standard ordinates used
See page 4.

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = <u>9.54</u></p> <p>Summer freeboard = <u>92</u></p> <p>Moulded draught (d) = <u>8.62</u></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $2.15 = 2\frac{1}{4}$ inches</p> <p>Addition for Winter North Atlantic Freeboard required = $2\frac{1}{4} + 2\frac{1}{4} = 4\frac{1}{2}$ inches = <u>108 m/m</u></p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line $\Delta = 578 \text{ tons}$</p> <p>Tons per inch immersion at summer load water line $T = 6.15$</p> <p>Deduction = $\frac{\Delta}{T}$ inches = $\frac{578}{6.15} = 94$ inches = $2.35 = 2\frac{3}{8}$ inches</p> <p>@ 2.5m draft BK, $\Delta = 541 \text{ tons}$</p> <p>" 2.7m " " = 589 "</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient $\frac{755 + .68}{1.36} = 1.435$</p> <table border="1" style="width: 100%;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td><u>22</u></td> <td><u>-</u></td> </tr> <tr> <td>Deduction for superstructures ...</td> <td><u>-</u></td> <td><u>93</u></td> </tr> <tr> <td>Sheer correction ...</td> <td><u>-</u></td> <td><u>-</u></td> </tr> <tr> <td>Round of Beam correction ...</td> <td><u>-</u></td> <td><u>-</u></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td><u>-</u></td> <td><u>-</u></td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td><u>-</u></td> <td><u>-</u></td> </tr> <tr> <td></td> <td><u>22</u></td> <td><u>93</u></td> </tr> </table> <p>Summer Freeboard = <u>278 = 10.95m</u></p>		+	-	Depth Correction ...	<u>22</u>	<u>-</u>	Deduction for superstructures ...	<u>-</u>	<u>93</u>	Sheer correction ...	<u>-</u>	<u>-</u>	Round of Beam correction ...	<u>-</u>	<u>-</u>	Correction for Thickness of Deck amidships ...	<u>-</u>	<u>-</u>	Other corrections, scantlings, etc. ...	<u>-</u>	<u>-</u>		<u>22</u>	<u>93</u>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck

Tropical Fresh Water Line above Centre of Disc ... <u>1 1/2</u> ... <u>114 m/m</u>	Tropical Fresh Water Freeboard ... <u>0-6 1/2</u> ... <u>165</u>
Fresh Water Line " " ... <u>2 1/4</u> ... <u>57</u>	Fresh Water " " ... <u>0-8 3/4</u> ... <u>222</u>
Tropical Line " " ... <u>2 1/4</u> ... <u>57</u>	Tropical " " ... <u>0-8 3/4</u> ... <u>222</u>
Winter Line below " " ... <u>2 1/4</u> ... <u>57</u>	Winter " " ... <u>1-1 1/4</u> ... <u>336</u>
Winter North Atlantic Line " " ... <u>4 1/4</u> ... <u>108</u>	Winter North Atlantic " " ... <u>1-3 1/4</u> ... <u>387</u>

24 JUN 1938

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Freeboard Deck									
Description of Hatchway	no 1	no 2	To Bunker	To Store					
Dimensions of Hatchway	9095x4.1		300 dia	490x430					
COAMINGS	Height above Deck	800 ✓	300	150					
	Thickness	9.5 ✓	10	8					
	Stiffeners	BA 180x75x10	✓	✓					
	Brackets, Stays	BA ✓ 3 ea side	✓	✓					
HATCH BEAMS	Number	5 ✓							
	Spacing	1520 ✓							
	Scantling and Sketch	300x85 90x90x9 ✓ 4L's							
	Bearing Surface	75							
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
Bearing Surface									
HATCH COVERS	Material	W.P. ✓	steel W.T.	steel W.T.					
	Thickness	60 ✓	9	7					
	How fitted	F&A ✓	✓	✓					
	Bearing Surface	65 ✓	✓	✓					
Spacing of Cleats	530/609								
Number of Tarpaulins	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? Efficient transverse locking bars fitted, 3 each to nos 1 & 2 hatchways ✓

Particulars of fiddle, funnel and ventilator coamings:— Funnel and ventilators efficient ✓
 Engine room skylight of steel strongly constructed ✓

Particulars of Flush Bunker Scuttles:—

None ✓

Particulars of Companionways:— To crew space on fwd deck at fore-castle end, strongly constructed of steel, opening 1330x830, coaming 620 above fwd deck, two hinged steel doors, manipulated from both sides. ✓
 To accom. aft, from poop deck, strongly constructed of steel, opening 580x640, coaming 450, two hinged steel doors, manipulated from both sides, with steel slide over. ✓

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

On fwd deck, to cargo space, 2 @ 300 dia, coamings 900x10 ✓
 " fwd " " crew space, 2 @ 250 " " 900x9 ✓
 Coamings fitted with wood plugs & canvas covers.

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

On fore-castle & poop decks, to F&A Peak Tanks, 460 to opening. ✓
 Fitted with wood plugs ✓

Particulars of Gangway Cargo and Coaling Ports:—

None ✓

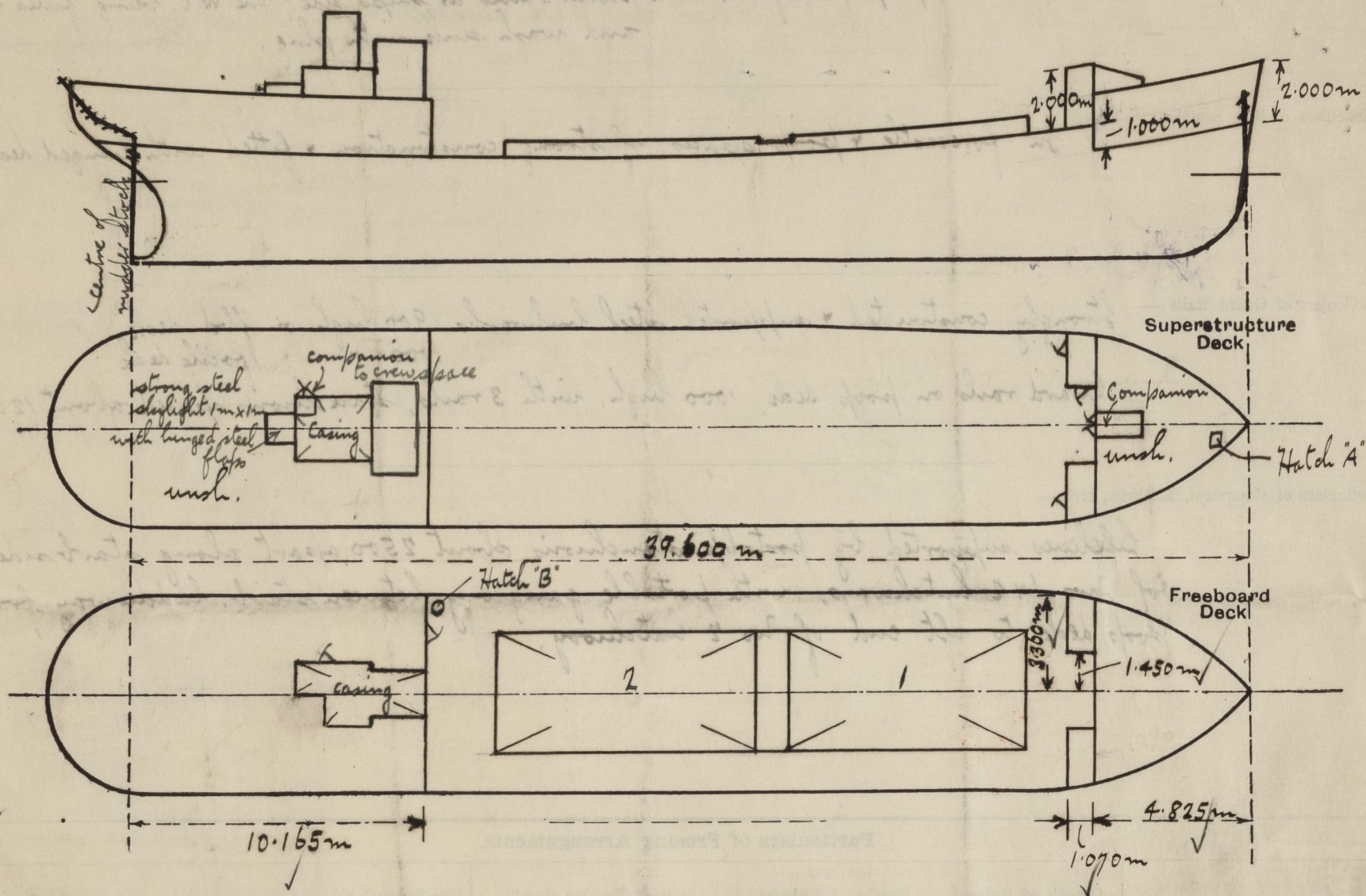


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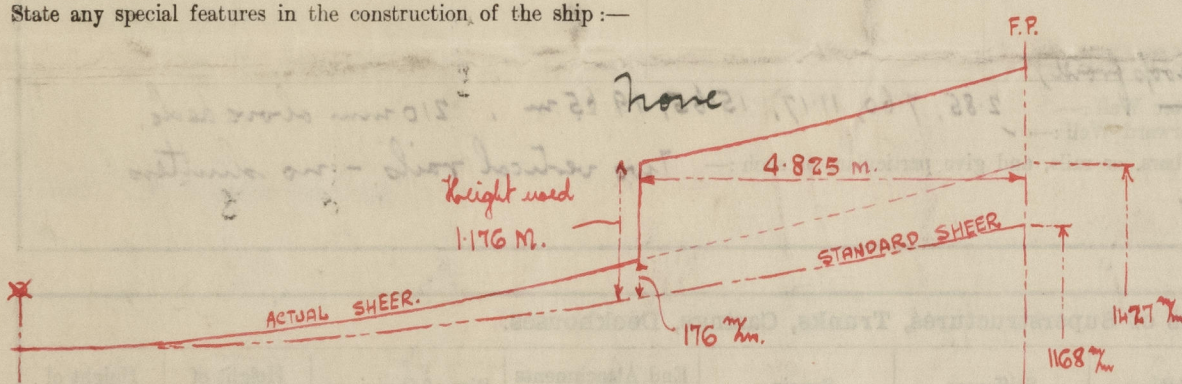
Goldfinder.

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 shown on the following sketches:—



$$\begin{aligned} \text{Sidehouses } 1.070 \times 1.45 &= 1.5515 \text{ m} \\ 3.360 &= 1.070 \\ \hline &= 6.08 \text{ m} \end{aligned}$$

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



Shear plotted.

Actual shear at forecastle end = 842 mm

Standard " " " " = 666 mm

Excess 176 mm to be added to actual height of superstructure.

Builder's name and yard number G. Rendk jun. K. G., Harburg, No 636

Names of sister ships

Owners A/S Nortrade, Trondheim

to be charged with F.E.

Fee £ : : Received by me



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