

LLOYD'S REGISTER OF SHIPPING

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

For LONDON OFFICE ONLY

Received _____
 Index No. _____
 Govt. Copy _____
 Owners C11 _____

Ship's Name <i>Denny Bros. L^{td}</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey <i>London</i>
Yard No. <i>1502</i>					Date of Survey <i>11/11/60</i>
Moulded Dimensions: Length <i>341'</i> Breadth <i>59'</i> Depth <i>21' Vchule DK</i> <i>36' sup DK</i>					Surveyor's Signature <i>[Signature]</i>
Freeboard Length _____					Particulars of Classification <i>+100A1 "Super Ferry" "for Service across Suez straight and on New Zealand Home Trade Waters"</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) _____ tons					
Coefficient of fineness for use with Tables _____					

DEPTH FOR FREEBOARD (D). Moulded depth Stringer plate Wood Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <i>14.63</i>	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = <i>1/15 = 22.73</i> (b) Where D is less than Table depth (if allowed) (Table depth-D) R = <i>(22.73 - 14.63) 2.623 = 21.30</i> If restricted by superstructures <i>8.10</i>	ROUND OF BEAM CORRECTION. Moulded Breadth (B) _____ Standard Round of Beam = $\frac{B \times 12}{54} =$ _____ Ship's Round of Beam <i>Standard</i> = _____ Difference _____ Restricted to _____ Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S}{L} \right) =$ _____
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
F'cle enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total					

Standard Height of Superstructure *6.91*
 " " R.Q.D. *✓*
 Deduction for complete superstructure *38.07*
 Percentage covered $\frac{S}{L} =$ _____
 " " $\frac{S_1}{L} =$ _____
 " " $\frac{E}{L} =$ _____ } *100%*
 Percentage from Table, Line A.
 (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 = *say 38*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<i>44.10</i>	1			<i>6</i>	<i>103</i>	1		
$\frac{1}{4}L$ from A.P.		4					4		
$\frac{3}{4}L$ "		2					2		
Amidships	<i>0</i>	4	<i>0</i>		<i>0</i>	<i>0</i>	4	<i>0</i>	
$\frac{3}{4}L$ from F.P.		2					2		<i>103</i>
$\frac{1}{4}L$ "		4					4		<i>169</i>
F.P.	<i>88.20</i>	1			<i>12</i>	<i>169</i>	<i>1</i>		<i>272</i>
Mean Total Ordinate				<i>22.05</i>	<i>+ 97</i>				<i>45.33</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{22.28 - 22.05}{2 \times 100} = -5.82$
 If limited on account of midship superstructure. *NO*
 If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100ft. *Yes 5.12*

Mean actual sheer aft = _____
 Mean standard sheer aft = _____ } *Excess*
 Mean actual sheer forward = _____
 Mean standard sheer forward = _____ } *Excess*
 Length of enclosed superstructure forward of amidships = $\frac{L}{2} =$ *css 10*
 " " aft of " = _____

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck <i>14.63</i> Summer freeboard <i>Negative</i> Moulded draught (d) = <i>15.30</i> Keel allowance = _____ Extreme draught = _____ 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 <i>Nil</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr><td>Depth Correction</td><td></td><td><i>21.30</i></td></tr> <tr><td>Deduction for superstructures</td><td></td><td><i>38.00</i></td></tr> <tr><td>Sheer correction</td><td></td><td><i>5.12</i></td></tr> <tr><td>Round of Beam correction</td><td></td><td><i>-</i></td></tr> <tr><td>Correction for Thickness of Deck amidships</td><td></td><td><i>-</i></td></tr> <tr><td>Other corrections, scantlings, etc.</td><td></td><td><i>-</i></td></tr> <tr><td>Summer Freeboard</td><td><i>64.42</i></td><td><i>-64.42</i></td></tr> </tbody> </table>		+	-	Depth Correction		<i>21.30</i>	Deduction for superstructures		<i>38.00</i>	Sheer correction		<i>5.12</i>	Round of Beam correction		<i>-</i>	Correction for Thickness of Deck amidships		<i>-</i>	Other corrections, scantlings, etc.		<i>-</i>	Summer Freeboard	<i>64.42</i>	<i>-64.42</i>
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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	...	Tropical Fresh Water Freeboard	...
Fresh Water Line	"	Fresh Water	"
Tropical Line	"	Tropical	"
Winter Line	below	Winter	"
Winter North Atlantic Line	"	Winter North Atlantic	"

Actual Virtual = *15.67*

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

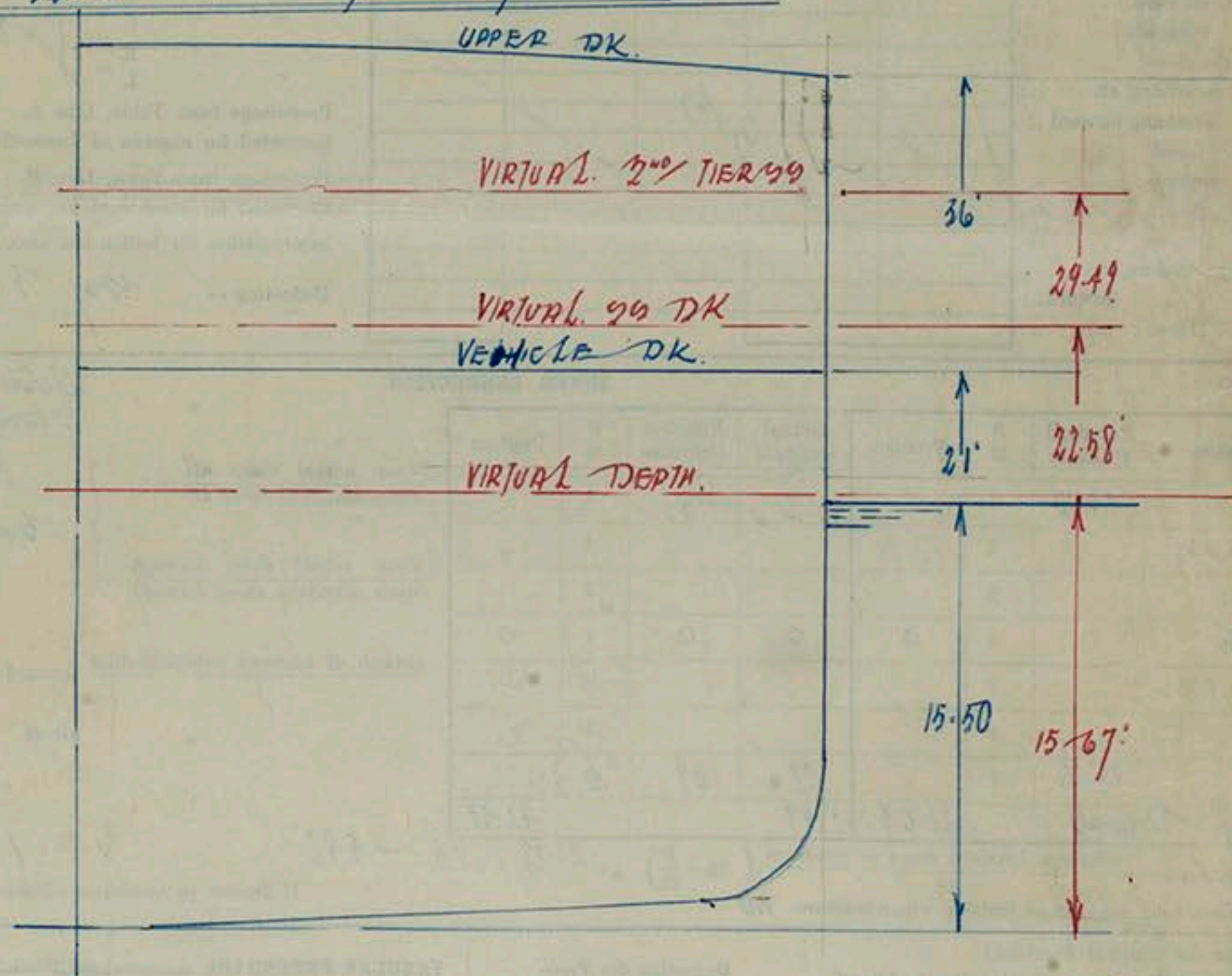
1 1/2" Inj. Free board. 53.98
 - (38.00 + 5.12) - 43.12
 Free board 10.80

Table Depth 22.73
 Free board .90
 Draught 21.83
 Design draught 15.50
 Difference 6.33 $\times \left(\frac{1.28}{12 - 2.623} \right) = 8.10$

Table Depth 22.73
 Free board 8.10
 Virtual Depth 14.63

or Negative Free board .87
 Virtual Depth 14.63
 Draught 15.50

Note: Actual Virtual = 15.50 + .17 = 15.67



Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950", paragraph 11.)