

Rpt.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

-1 DEC 1932

Index No. 32364
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Forecastle, Bridge & Poop (enclosing the main-deck)
very casing)

Port of Survey GenoaDate of Survey 26th, 27th & 28th / 11 / 1932Name of Surveyor J. Purcell & Co. TownshendParticulars of Classification + 100 A 1
Carrying gen. in bulk.

Ship's Name "BENEDICK"
Nationality and Port of Registry British Liverpool
Official Number 149687
Gross Tonnage 6978
Date of Build 1928-8mo

Moulded Dimensions: Length 430'-0" Breadth 58'-0" Depth 32'-8 1/2" 15510 tons
Moulded displacement at moulded draught = 85 per cent. of moulded depth not available
Coefficient of fineness for use with Tables 783

Depth for Freeboard (D) 32.71
Moulded depth ... 32'-8 1/2"
Stringer plate ... 0'-0 13/20"
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = 32.76

Depth correction
(a) Where D is greater than Table depth
(D-Table depth) R = (32.76 - 28.67) 3 + 12.27
(b) Where D is less than Table depth (if allowed)
(Table depth-D) R =
If restricted by superstructures

Round of Beam correction
Moulded Breadth (B) 58'-0"
Standard Round of Beam = $\frac{B \times 12}{50} =$ 13.92
Ship's Round of Beam = 1'-2 1/2"
Difference 1.58 in.
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ 1.58 x .6313 = -1.01

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>88'-9 1/2"</u>	<u>88.79</u>	<u>7'-6"</u>		<u>88.79</u>
overhang ...					
R.Q.D. enclosed ...					
overhang ...					
Bridge enclosed ...	<u>30'-0"</u>	<u>30.00</u>	<u>7'-6"</u>		<u>30.00</u>
overhang aft ...					
overhang forward ...					
enclosed ...	<u>39'-9"</u>	<u>39.75</u>	<u>7'-6"</u>		<u>39.75</u>
overhang ...					
Trunk aft ...					
forward ...					
Tonnage opening aft ...					
forward ...					
Total ...	<u>158.54</u>	<u>158.54</u>			<u>158.54</u>

Standard Height of Superstructure 7.5
R.Q.D. 42.0
Deduction for complete superstructure 42.0
Percentage covered $\frac{S}{L} =$ 36.87%
 $\frac{S_1}{L} =$ 36.87%
 $\frac{E}{L} =$ 36.87%
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. TANKER 27.87
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required) TANKER
Deduction = 42.0 x .2787 = -11.71

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>53.00</u>	1		<u>53.00</u>	<u>66"</u>	<u>66.0</u>	1		<u>66.00</u>
L from A.P. ...	<u>23.58</u>	4		<u>94.32</u>	<u>28"</u>	<u>28.84</u>	4		<u>115.36</u>
2/3 L ...	<u>5.83</u>	2		<u>11.66</u>	<u>7"</u>	<u>7.21</u>	2		<u>14.42</u>
Amidships ...		4			<u>0"</u>		4		
2/3 L from F.P. ...	<u>11.66</u>	2		<u>23.32</u>	<u>15"</u>	<u>13.72</u>	2		<u>27.44</u>
L ...	<u>47.17</u>	4		<u>188.68</u>	<u>55"</u>	<u>54.90</u>	4		<u>219.60</u>
F.P. ...	<u>106.00</u>	1		<u>106.00</u>	<u>126"</u>	<u>126.0</u>	1		<u>126.00</u>
Total ...				<u>476.98</u>					<u>568.82</u>

Mean actual sheer aft = Even
Mean standard sheer aft

Mean actual sheer forward = Even
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = 7
aft of " = 7

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) =$ 476.98 - 568.82 = -91.84
 $\frac{-91.84}{18} \left(\frac{75-184.3}{2 \times 430} \right) =$ -2.89
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 = 32.76
Summer freeboard = 6.06
Moulded draught (d) = 26.70

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.68 = 6 3/4

Addition for Winter North Atlantic Freeboard (if required) = 4.3 = 4 1/4

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ 14950

Tons per inch immersion at summer load water line

$T =$ 50.5

Deduction = $\frac{\Delta}{40T}$ inches

= 7.42

= 7 1/2

TABULAR FREEBOARD corrected for Flush Deck (if required)
Correction for coefficient $\frac{783 + .68}{1.36} = \frac{1.463}{1.36}$

	+	-
Depth Correction ...	<u>12.27</u>	
Deduction for superstructures ...		<u>11.71</u>
Sheer correction ...		<u>2.89</u>
Round of Beam correction ...		<u>.09</u>
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. ...		
	<u>12.27</u>	<u>14.69</u>

Summer Freeboard = 7

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

Tropical Fresh Water	above Centre of Disc	<u>14 1/4"</u>
Fresh Water Line	"	<u>7 1/2"</u>
Tropical Line	"	<u>6 3/4"</u>
Winter Line	below	<u>6 3/4"</u>
Winter North Atlantic Line	"	<u>6 3/4"</u>

Tropical Fresh Water Freeboard	<u>6.03/4</u>
Fresh Water	<u>4.10 1/2</u>
Tropical	<u>5.5 1/2</u>
Winter	<u>5.6 1/2</u>
Winter North Atlantic	<u>6.7 1/2</u>

2 DEC 1932

7 OCT 1936

Lloyd's Register Foundation

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway				On freeboard decks					On poop decks		
				Forward hold	Ramp room for	Main cargo tanks	Summer tanks	Oil fuel	Bunkers	Insulated space	Steering gear space
Dimensions of Hatchway				11'-3" x 12'-0"	1'-11" x 2'-6"	6'-0" x 4'-0"	6'-0" x 3'-0"	4'-0" x 4'-0"	2'-6" x 2'-0"	2'-10" x 2'-10"	3'-11" x 3'-11"
COAMINGS	{	Height above Deck (average)	30"	38"	38"	38"	38"	38"	27"	27"	
		Thickness { Sides	44"	40"	40"	40"	40"	40"	40"	40"	
		Ends	7" B.A.	✓	✓	✓	✓	✓	None	None	
		Stiffeners ...	✓	✓	✓	✓	✓	✓			
		Brackets, Stays ...	None	✓	✓	✓	✓				
HATCH BEAMS	{	Number	One								
		Spacing	5' - 7½"								
		Scantling and Sketch	12" ÷ 7" x 32" 4 angles 11 3/4" x 3" x 40"								
		Bearing Surface	3"								
FORE AND AFTERS	{	Number									
		Spacing									
		Unsupported Lengths									
		Scantling* and Sketch	Please see plan attached								
		Bearing Surface									
HATCH COVERS	{	Material	Steel	Steel	Steel	Steel	Steel	Steel	P. P.	P. P.	
		Thickness	55"	62"	62"	62"	62"	62"	3"	3"	
		How fitted	W. T.	O. T.	O. T.	O. T.	O. T.	O. T.	Shwarship	Bought.	
		Bearing Surface	✓	✓	✓	✓	✓	✓	2"	2"	
Spacing of Cleats or Fastenings			17½"	12"	14½" & 12"	14½" & 12"	12"	12"	11½"	17½"	
Number of Tarpaulins			✓	✓	✓	✓	✓	✓	3	3	
*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? yes											

Particulars of fiddley, funnel and ventilator coamings:— Fiddley, funnel and ventilator coamings in efficient condition - Gratings of donkey boilers space covered by strong hinged steel covers. Engine room skylight & covers of steel of efficient construction -

Particulars of Flush Bunker Scuttles:— On poop deck port side a flush scuttle fitted to galley coal space, 21" in diam., of cast iron, efficiently built.

Particulars of Companionways:— *None.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— Forecastle Deck. One vent, 10" in diam., 34" x 37" coaming, one vent, 6" in diam., 30" x 37" coaming, to new spaces — One vent, 9" in diam., 36" x 37" coaming, to tween decks above fore peak tank; one vent, 24" in diam., 28" x 44" coaming to hold & tween decks forward — Freeboard Deck in forward well. One vent, 15" in diam., 37" x 40" coaming, to pump room forward — One vent, 18" in diam., 36" x 40" coaming to hold & tween decks forward — Top of pump room casing in after well. Two vents, 24" in diam., 31" x 31" coaming — Boop Deck. Six cast iron mushrooms to new spaces, 6" in diam., 12" x 40" coaming — All vents provided with wood plugs & canvas covers — Coamings efficiently riveted to decks.

Particulars of Air Pipes in exposed positions on freeboard, ~~raised quarter~~, or superstructure decks: All air pipes are of the swan neck type of ^{steel or} C.I. & provided with canvas covers or gauze.

Particulars	Forecastle Deck	Freeboard Deck	Poop Deck
2, 3" diam., opening 3" above deck, from forepeak & w. B. Tank.	2, 3" diam., opening 3" above deck, from forepeak & w. B. Tank.	3, 2" diam., opening 12" above deck, from oil & water tanks.	
2, 4" " " 15" " " " new spaces.	2, 4" " " 15" " " " new spaces.	10, 2 1/2" " " 3" " " " " " " "	
2, 3" " " 3" " " " forward cofferdam.	2, 3" " " 3" " " " forward cofferdam.	3, 3" " " 9" " " " " " " "	
" " aft. 4, 4" " " 40" " " " oil fuel bunkers.	" " aft. 4, 4" " " 40" " " " oil fuel bunkers.	3, 3 1/2" " " 14" " " " " " " "	
2, 2 1/2" " " 31" " " " after cofferdam.	2, 2 1/2" " " 31" " " " after cofferdam.	4, 3 1/2" " " 14" " " " " " " "	
		2, double 6" x 4" oval, " 15" " " " steering gear space.	

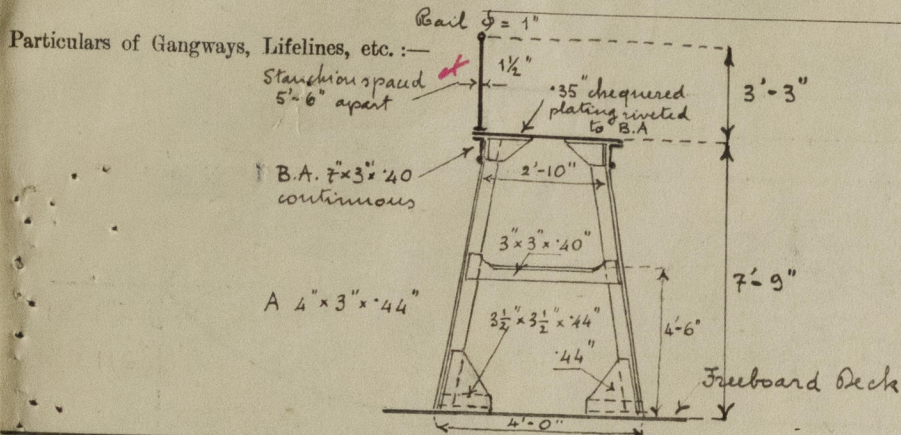
Regulars of Gangway Cargo and Coaling Ports:— *None.*

Benedick

Particulars of Scuppers and Sanitary Discharge Pipes - All scuppers leading below Freeboard Deck are provided with storm covers. Please see position as shown on sketch on p. 4 - Sill of lowest scupper 6'-6" below Freeboard Deck.

Particulars of Side Scuttles: All side scuttles in Forecastle, Bridge & Poop spaces are of substantial construction and provided with hinged deadlights - All scuttles 11" in diam.

Particulars of Guard Rails: - Forecastle and Poop decks: Rails 3'-8" high; stanchions 1½" in diam. spaced 4'-4" apart; rail 1" in diam. & two rods 7/8" in diam. - On Freeboard Deck in after well on both sides for a length of 18'-6": Rails 3'-8" high; stanchions 1½" in diam. spaced 4'-2" apart; rail 1" in diam. & two rods 7/8" in diam. -



Gangway fitted between Forecastle & Bridge Decks, Bridge & Poop Decks - Supports, as per sketch, are spaced 7'-9" apart & efficiently riveted to deck.

1 3/4" wire rope with legging covers fitted at half height at 2/11/42

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 ...	151'5" with open rails for a length of 18'5"	3'-8"	5'-0" x 1'-8" 3'-9" x 1'-8" φ = 1'-3"	11 1 1	98 sq. ft. and open rails for a length of 18'5"	25% area of bulwarks = 139 sq. ft.
Forward Well ...	120'	3'-8"	5'-0" x 1'-8"	13	109 sq. ft.	25% area of bulwarks = 110 sq. ft.

State position of each freeing port (F. and A. position and height above deck edge) ... } After Well: - } Distributed uniformly, as far as possible, throughout the length of well; height above deck edge ... }
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: - One angle bar 2 3/4" x 2 3/4" x .28"
 Additional area where sheer is less than standard. X In each well are 3 mooring pipes over 1'-4" x 1'-0" on each side close to terminal bulwarks of erections -

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 ...	24" x .44"	.44"	B.A. 3 1/2" x 3 1/2" x .50"	30"	Riveted top & bottom	4'-6" x 3'-6"	19"	7'-6"
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead ...	.40"	.40"	A 3" x 3" x .40"	33"	Bracketed at top	5'-0" x 2'-0" & 4'-6" x 3'-6"	18"	7'-6"
Bridge, Forward Bulkhead ...	27" x .44"	.40"	B.A. 3 1/2" x 3 1/2" x .50"	33"	Bracketed top & bottom	5'-0" x 3'-0"	16"	7'-6"
Forecastle Bulkhead ...	17 1/2" x .32"	.32"	A 3" x 3" x .40"	33" ÷ 44"	None	6'-4" x 2'-0" & 5'-0" x 4'-1"	18"	7'-6"
Trunk, Aft ...								
Trunk, Forward ...								
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 ...	.32"	.32"	A 3" x 3" x .32" & every third A 4" x 3" x .44"	30"	Riveted at top Bracketed at top	4'-10" x 2'-0"	18"	7'-6"
Pump room casing on Freeboard Deck Deckhouses on Flush Deck Ships ...	.40"	.40"	A 4" x 3" x .44"	40"	None	4'-5" x 3'-4"	19"	7'-6"

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

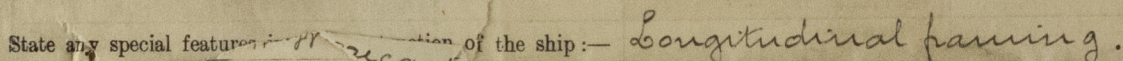
Poop Bulkhead ...	1 opening closed full height by storm boards 3" thick in channels riveted in bulkhead plating - Scuttle substantially built φ = 11" provided with deadlight -
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	3 steel doors; 1 teak door 2" thick; 2 openings closed full height by storm boards 3" thick in channels riveted to bulkhead plating - Doors may be manipulated only from one side - Scuttles φ = 11" with deadlights.
Bridge, Forward Bulkhead ...	1 steel hinged W.T. door substantially built, fastenings spaced 22" apart (capable of being manipulated from both sides) - Efficient scuttles φ = 11" with deadlights -
Forecastle Bulkhead ...	5 teak doors 2" thick (capable of being manipulated from both sides) - 1 opening closed full height by storm boards 3" thick in channels riveted to bulkhead plating -
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 ...	1 steel door (capable of being manipulated from both sides) for access to a machinery store room entirely enclosed by efficient steel bulkheads -
Pump room casing on Freeboard Deck Deckhouses on Flush Deck Ships ...	1 steel hinged W.T. door (manipulated from one side only) .40" thick, fastenings spaced 16" & 18" apart. 2 steel skylights with steel covers efficiently built on the top of the casing -

© 2020

Lloyd's Register Foundation

00162/2

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangways, 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:—



The only particulars available with regard to the displacement are as under:

Draft	Displacement	Tons per inch
25'-9 $\frac{1}{4}$ "	14.300 tons	50.30
" 24'-0"	13.200 "	50.06
" 23'-0"	12.600 "	49.80
" 22'-0"	12.030 "	49.55

Received by me.....✓

Sund. fee 200-