

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Single Screw Motor Steamer, Sailing Ship, Tanker

having Single Deck Poop - Bridge - Forecastle
(Type of Superstructures.)

Port of Survey _____

Date of Survey 25.10.34

Name of Surveyor _____

Particulars of Classification 100M carrying petroleum in bulk
Contaminated

Ship's Name Oden
(Proposal No 813)
YARD No 57 AND 58.

Nationality and Port of Registry _____ Official Number _____ Gross Tonnage _____ Date of Build _____

Moulded Dimensions: Length 480'-0" Breadth 65'-3" Depth 35'-11"

Moulded displacement at moulded draught = 85 per cent. of moulded depth ab. 20500 tons

Coefficient of fineness for use with Tables 1.794

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	35'-11"	(a) Where D is greater than Table depth (D - Table depth) R = $(35.99 - 32.00) 3.99$	3.99	Moulded Breadth (B)	65'-3"
Stringer plate	21 1/4"	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	+ 11.97"	Standard Round of Beam = $\frac{B \times 12}{50}$	15.66"
Sheathing on exposed deck	none			Ship's Round of Beam	400 1/4" (15 3/4")
T $\left(\frac{L-S}{L}\right) =$		If restricted by superstructures		Difference	Excess .09"
Depth for Freeboard (D) =	35.99			Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{.09}{4} \times .6388 = -.01"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <u>29 ft.</u>	45.57	78.63	7.67	✓	78.63
„ overhang ...	2.00				
R.Q.D. enclosed	53				
„ overhang ...	37.64	53			53
Bridge enclosed <u>Equi.</u>	34.42	37.64	7.50	✓	37.64
„ overhang aft ...					
„ overhang forward					
F'cle enclosed ...	40.67/34.33		7.50	✓	37.05
„ overhang ...	37.05	37.05			
Trunk aft					
„ forward ...					
Tonnage opening aft					
„ „ forward	.26	.26			.26
Total	173.38	173.38			173.38

Standard Height of Superstructure	7.50
„ „ R.Q.D.	✓
Deduction for complete superstructure	42.00"
Percentage covered $\frac{S}{L} =$	36.1%
„ „ $\frac{S_1}{L} =$	36.1%
„ „ $\frac{E}{L} =$	36.1%
Percentage from Table, Line A. Tanker.	27.1%
(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 =	42.00 x 27.1% = -11.34"

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	58.00	1	✓	58.00	1195	47.05	1	✓	47.05
1/4 L from A.P. ...	25.81	4	✓	103.24	255	10.04	4	✓	40.16
1/2 L „ ...	6.38	2	✓	12.76	0	0	2	✓	0
Amidships ...	✓	4	✓	0	0	0	4	✓	0
3/4 L from F.P. ...	12.76	2	✓	25.52	0	0	2	✓	0
1/4 L „ ...	51.62	4	✓	206.48	765	30.12	4	✓	120.48
F.P. ...	116.00	1	✓	116.00	2525	99.41	1	✓	99.41
Total	522			522.00					307.10

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{214.90}{18} \left(.75 - \frac{.1806}{2} \right) = +6.80"$

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 = 35.99

Summer freeboard = 8.08

Moulded draught (d) = 27.91

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.98' = 7"

Addition for Winter North Atlantic Freeboard (if required)

required = 4.8 + 7 = 11 3/4"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Tons per inch immersion at summer load water line

T =

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

=

 $\frac{d}{4} = 7"$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{.794 + .68}{1.36} = \frac{1.474}{1.36}$

+

-

Depth Correction ...
Deduction for superstructures	11.97	✓	
Sheer correction	6.80	✓	
Round of Beam correction	-.01	✓	
Correction for Thickness of Deck amidships	-		
Other corrections, scantlings, etc.	-		
	18.77	11.46	+ 7.31
Summer Freeboard =	96.98		17.02

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

Tropical Fresh Water Line above Centre of Disc	14"
Fresh Water Line	7"
Tropical Line	7"
Winter Line below	7"
Winter North Atlantic Line	11 3/4"

Tropical Fresh Water Freeboard	8'-11"
Fresh Water	7'-6"
Tropical	7'-6"
Winter	8'-8"
Winter North Atlantic	9'-0 3/4"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	as per Rule	...	...	...	...	...	...
	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:— *as per rule*

Particulars of Flush Bunker Scuttles:— *none*

Particulars of Companionways:— *as per rule*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— *as per rule*

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

Particulars of Gangway Cargo and Coaling Ports:— *none*

Particulars of Scuppers and Sanitary Discharge Pipes —

Particulars of Side Scuttles:

Particulars of Guard Rails:—

Particulars of Gangways, Lifelines, etc.:— *Gangway between poop and bridge & in bridge and fore castle.*

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 ...					<i>as per rule</i>	
Forward Well ...						

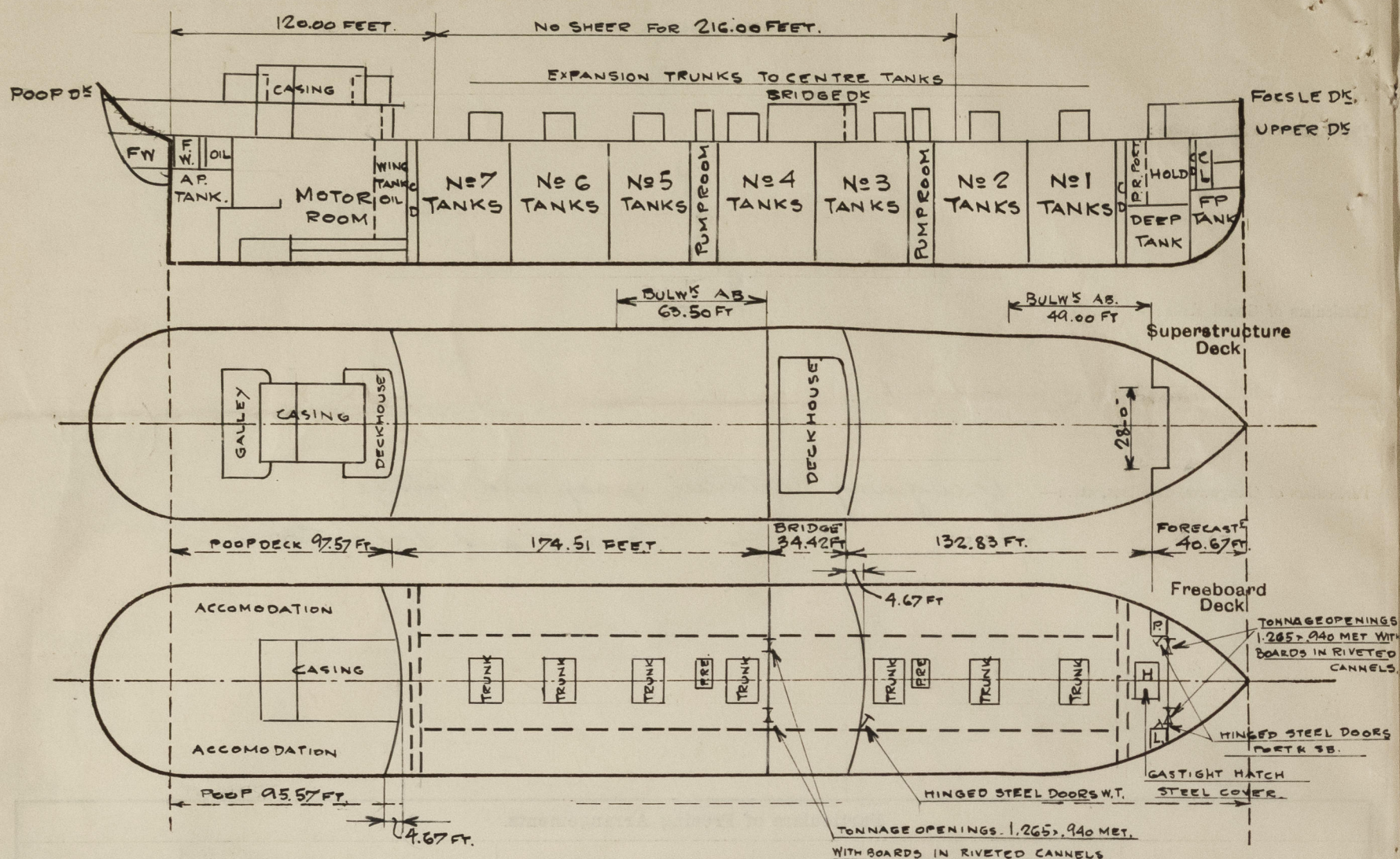
State position of each freeing port ... } After Well:—
 (F. and A. position and height above deck edge) } Forward Well:—
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
 Additional area where sheer is less than standard.

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 ...								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...								
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...								
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 ...								
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 on Freeboard or 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 ...	

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:—



Fire castle 40.67 ✓
Recess $\frac{28 \times 6.34}{49.00}$ ✓
37.05 ✓ eqn.

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

Posp. 95.57
 $\frac{2}{3} \times 4.67 = \frac{3.11}{98.68}$

Bridge
 $\frac{2}{3} \times 4.67 =$

$$\begin{array}{r} 34.42 \\ 3.11 \\ \hline 37.53 \end{array}$$

Builder's name and yard number.

Names of sister ships

Owners.

Fee £ : : Received by me.