

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

 Index. No. **31644**  
 (For London Office only.)

No 3813

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

having poop, bridge, forecastle

(Type of Superstructures.)

Ship's Name <b>"TOLEDO"</b>	Nationality and Port of Registry <b>Norwegian Tonsberg</b>	Official Number <b>4621</b>	Gross Tonnage <b>1926</b>	Date of Build <b>7</b>
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Port of Survey Oslo

Date of Survey 18/6 + 21/6 1932

Name of Surveyor Plaide

Moulded Dimensions: Length 375'-0" ✓ Breadth 52'-3" ✓ Depth 29'-5" ✓

Moulded displacement at moulded draught = 85 per cent. of moulded depth 10,597 tons

Coefficient of fineness for use with Tables .757 ✓

Particulars of Classification 100 A1  
*Carrying oil above 150 ft. in forward*

Depth for Freeboard (D) <u>29.43</u>	Depth correction	Round of Beam correction
Moulded depth ... .. <u>29'-5"</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(29.46 - 25.00) 2.884 = +12.86</u> ✓	Moulded Breadth (B) <u>52.25</u>
Stringer plate ... .. <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{52.25 \times 12}{50} = 12.54$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <u>✓</u>	If restricted by superstructures <u>✓</u>	Ship's Round of Beam = <u>13</u>
Depth for Freeboard (D) = <u>29.46</u>		Difference <u>.46</u>
		Restricted to <u>✓</u>
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.46}{4} \times .4727 = -.05$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	32'-5"	32.42	8'-0"	✓	32.42
" overhang ...	6'-2"	.27	+25.00		.27
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	128'-4"	128.33	8'-0"	✓	128.33
" overhang aft ...	4'-2"	.28			.28
" overhang forward ...	3'-2"	.14			.14
Fore enclosed ...	36'-0"	36.00	8'-0"	✓	36.00
" overhang ...	3'-2"	.29			.29
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	198.25	197.73			197.73

Standard Height of Superstructure <u>7.25'</u> ✓	
" " R.Q.D. <u>✓</u>	
Deduction for complete superstructure <u>40.33'</u> ✓	
Percentage covered $\frac{S}{L} = \frac{52.87}{52.25} = 1.0118$	
" $\frac{S_1}{L} = \frac{52.73}{52.25} = 1.0092$	
" $\frac{E}{L} = \frac{52.73}{52.25} = 1.0092$	
Percentage from Table, Line A. (corrected for absence of forecastle (if required)) <u>✓</u>	
Percentage from Table, Line B. (corrected for absence of forecastle (if required)) <u>38.73%</u>	
Interpolation for bridge less than 2L (if required) <u>✓</u>	
Deduction = <u>40.33' × .3873 = -15.62'</u>	

*Measured w floating dk* SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	47.50	1	47.50	43"	42.00	1	42.00
1/4 L from A.P. ...	21.14	4	84.56	21"	18.27	4	73.08
2/4 L " ...	5.22	2	10.44	7"	4.57	2	9.14
Amidships ...	✓	4	✓	-	✓	4	✓
3/4 L from F.P. ...	10.44	2	20.88	12"	11.09	2	22.18
1/4 L " ...	42.28	4	169.12	45"	44.34	4	177.36
F.P. ...	95.00	1	95.00	102"	102.00	1	102.00
Total ...			427.50				425.76

 Mean actual sheer aft = Deficient > 75%  
 Mean standard sheer aft

 Mean actual sheer forward = Excess  
 Mean standard sheer forward

 Length of enclosed superstructure forward of amidships = .159  
 " " aft of " = .183

 Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{1.74}{18} \times (.75 - .2643) = +.05$  ✓

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 = 29.46 Ft.

Summer freeboard = 5.40

Moulded draught (d) = 24.06

## Deduction for Tropical freeboard and addition for

 Winter freeboard =  $\frac{d}{4}$  inches = 6.01 = 153 ✓

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

 $= \frac{6.01}{40 \times 153} = 153$  ✓

 $= 153$  ✓

## TABULAR FREEBOARD corrected for Flush Deck (if required)

 Correction for coefficient  $\frac{.757 + .68}{1.36} = \frac{1.437}{1.36}$ 
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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	30.6
Fresh Water Line " "	15.3
Tropical Line " "	15.3
Winter Line below " "	15.3
Winter North Atlantic Line " "	✓

Tropical Fresh Water Freeboard ...	13.39
Fresh Water " ...	14.92
Tropical " ...	14.92
Winter " ...	17.98
Winter North Atlantic " ...	✓

25 JUL 1932



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	N° 1	N° 2	N° 3	N° 4	N° 5	N° 6	N° 7	N° 8	N° 9
Dimensions of Hatchway	29' 3" x 18'	30' 4" x 18'	28' 0" x 18'	30' 4" x 18'	28' 0" x 18'	30' 4" x 18'	28' 0" x 18'	30' 4" x 18'	28' 0" x 18'
COAMINGS	Height above Deck	36"	36"	36"	36"	36"	36"	36"	36"
	Thickness	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
	Stiffeners	7 x 3" x 24"	7 x 3" x 24"	7 x 3" x 24"	7 x 3" x 24"	7 x 3" x 24"	7 x 3" x 24"	7 x 3" x 24"	7 x 3" x 24"
	Brackets, Stays	3	3	2	3	3	2	3	3
HATCH BEAMS	Number	6	6	6	6	6	6	6	6
	Spacing	Equal sp.	Equal sp.	Equal sp.	Equal sp.	Equal sp.	Equal sp.	Equal sp.	Equal sp.
	Scantling and Sketch	1 1/2" x 3 1/2"	as N° 1	as N° 1	as N° 1	as N° 1	as N° 1	as N° 1	as N° 1
	Bearing Surface	2 3/4"	2 3/4"	2 1/2"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"
FORE AND AFTERS	Number	✓	✓	✓	✓	✓	✓	✓	✓
	Spacing	✓	✓	✓	✓	✓	✓	✓	✓
	Unsupported Lengths	✓	✓	✓	✓	✓	✓	✓	✓
	Scantling and Sketch	✓	✓	✓	✓	✓	✓	✓	✓
HATCH COVERS	Material	wood	Same as	wood	Same as	wood	Same as	wood	Same as
	Thickness	2 1/2"	as N° 1	2 1/2"	as N° 1	2 1/2"	as N° 1	2 1/2"	as N° 1
	How fitted	7 x 4"	as N° 1	7 x 4"	as N° 1	7 x 4"	as N° 1	7 x 4"	as N° 1
	Bearing Surface	3"	as N° 1	3"	as N° 1	3"	as N° 1	3"	as N° 1
Spacing of Cleats	24" - 25"	24" - 26"	24" - 26"	24" - 26"	24" - 26"	24" - 26"	24" - 26"	24" - 26"	24" - 26"
Number of Tarpaulins	3	3	3	3	3	3	3	3	3

\*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 fiddle, funnel and ventilator coamings:— Tunnel and ventilator coaming on boat deck, 8' above bridge dk, in good condition. No fiddle openings (N° 1).

Particulars of Flush Bunker Scuttles:—

none

Particulars of Companionways:— one on poop: 4'0" x 3'5" - 10". steel opening 3'3" x 24"; sill 1 1/4" x 2 1/4" teak door. One - - to tunnel: 2'4" x 2'4" x 4'10". Sill 1 1/2" x 1". steel hinged door. 32" in opening 3'5" x 22". 3 small steel skylights on poop, to accommodation. Steel hinged covers, strongly constructed.

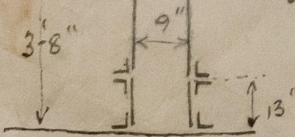
Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— Forecastle: one 12'4" x 4'0" x 30". Two 18'4" x 4'0" x 38" to N° 1 hold. Upper dk. fore: Two derrick post vents 21" to N° 4 hold. Two 19'4" x 4'0" x 36" to N° 2 hold. Bridge dk.: Three 9 1/2" x 3'6" x 30" to prov. room & two dk. fore. Two derrick post vents 21" to N° 3 hold. Two 9 1/2" x 3'6" x 30". Upper dk. aft: Two 16'4" x 19'4" x 38" supported at bridge, N° 4 hold. Two 20'4" x 4'0" x 36" to N° 2 hold. Two derrick post vents 21" to N° 5 hold. Poop dk.: Four 10'4" x 3'5" x 32". Four 6'4" x 3'3" above wood dk. x 28". One 8'4" x 3'6" x 32" (above steel dk.). One in tunnel companionway 9 1/2" x 16" x 32".

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— Forecastle: one 3 1/2", 15 1/4" above dk. one 2 1/4", 9 1/2" above dk. one 3 1/2" x 11". 3 off. 3 1/4" x 14 1/2". Forewell: one, P.S. 3 1/2" x 26 1/2" above deck. Bridge dk.: Six 3 1/2" x 26" x 28" above wood dk. P.S. Two 4" - 24" - 26" P.S. one 2 1/2" - 32". one 1 7/8" - 36". Afterwell: Two 3" - 30" P.S. one 3 1/2" x 28". P.S. Poop: Five, P.S. 3 3/4" - 14" - 15" above dk. wood plug. one 3 1/2" - 15".

Particulars of Gangway Cargo and Coaling Ports:—

Vent. on bridge dk. to deep tank P.S.

none



Toledo.

Particulars of Scuppers and Sanitary Discharge Pipes:— Two P.S. from poop, led overboard below upper deck, fitted with storm valves. Two from officers side house, P.S. Two from messhouse house 88 & 1 port, fitted with storm valves. 3 scuppers in tween decks (bridge), P.S., led overboard below upper deck, with storm valves.

Particulars of Side Scuttles:— All have hinged deadlights. None below freeboard deck.

Particulars of Guard Rails:— Poop & forecandle: Stanchions 3'6" high, 1 1/4" dia. sp. 4'2" - 4'9". 3 Rails. 1 3/4".

Particulars of Gangways, Lifelines, etc.:— None (tunnel escape aft).

Particulars of Freeing Arrangements.						
	Length of Bulkhead	Height of Bulkhead	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	86' - 4"	3' - 6"	39" x 19" oval	4	18 1/2 ft <sup>2</sup>	17 1/2
Forward Well	91' - 11"	3' - 6"	39" x 19" oval	4	-	18

State position of each freeing port (F. and A. position and height above deck edge):  
 After Well: 16'4" 33'0" 53'4" 87'4" from bridge after end  
 Forward Well: 15'4" 36'0" 52'10" 74' fore - - 15' above dk. edge.  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 3 rails.  
 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	16" x 40	3/4	7 x 3" x 42" angle	24" - 36"	top & bottom	5'1 1/2" x 28"	14"	8'
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	16" x 40	3/4	6 3/4" x 3" x 42" angle	26" - 30"	top & bottom	4'0" x 3'1"	16 1/2"	8'
Bridge, Forward Bulkhead	16" x 44"	3/8	9 x 3 1/2" x 48" Lg	26" - 33"	-	4'11" x 3'6"	18"	
Forecastle Bulkhead	16" x 34"	3/8	7 x 3" x 40" Lg	30" - 36"	-	4'1" x 36 1/2"	15"	8'
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	9" above wood dk. x 32"	28	3 x 2 1/2" x 30" angle	28"	Brackets at top, cast at bottom	5'3" x 27"	9" above wood dk.	8'
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	28	3 x 2 1/2" x 30" angle	28"	continuous from casing above	none	✓	✓
Deckhouses on Flush Deck Ships								

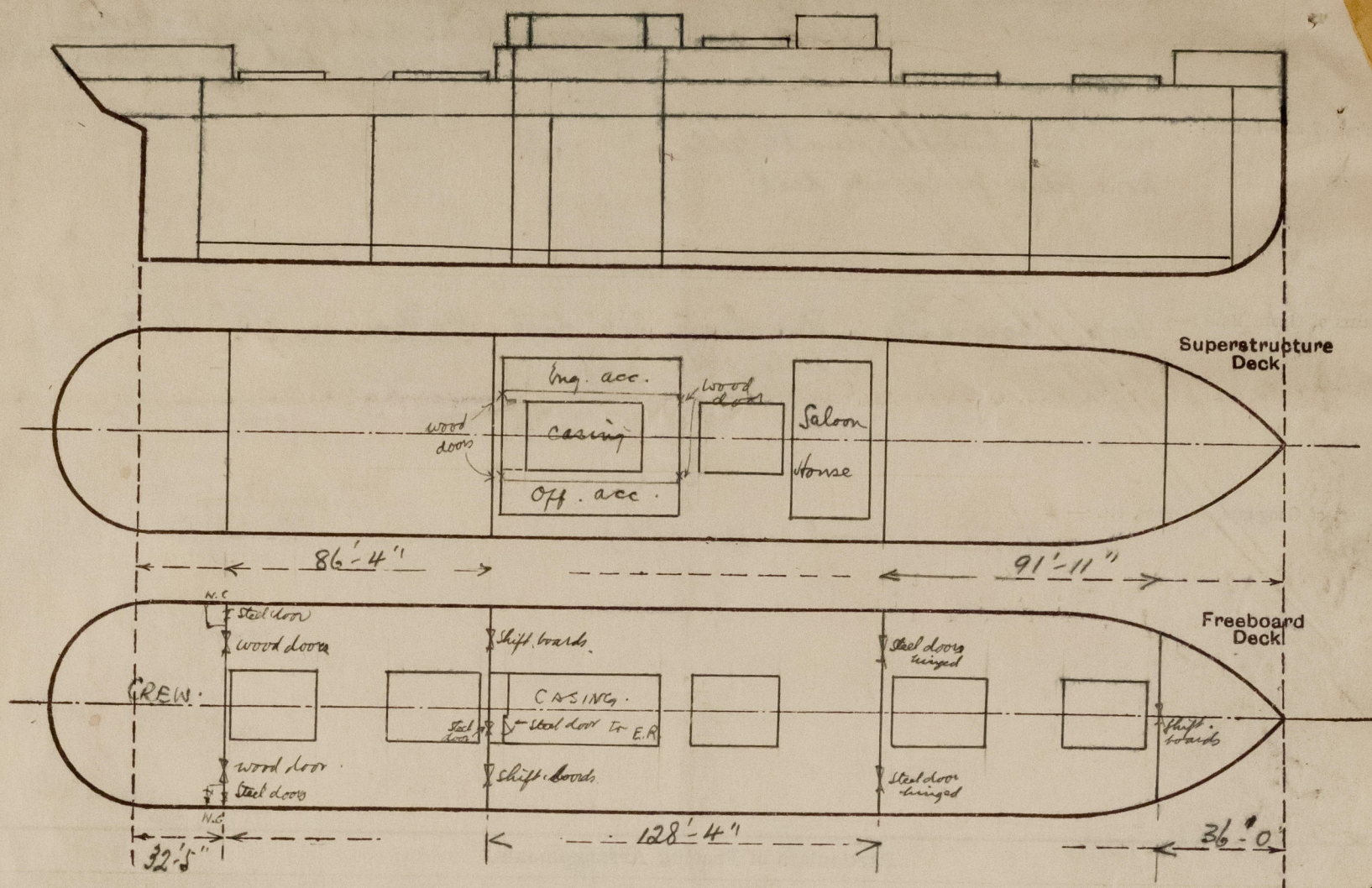
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	Two 2" teak doors to accommodation. Two 38 steel doors P.S. (W.C.°). Both sides.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	Two 2 1/2" boards in riveted channels. One steel hinged rafter backed door to engine room, which door to E.R. from door manipulated from E.R. only.
Bridge, Forward Bulkhead	Two steel hinged doors, 44", rafter backed. Manipulated from outside only. Fitted with 3 steel angle battens.
Forecastle Bulkhead	2 1/2" boards in riveted channels.
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 hinged door P.S.
Deckhouses on Flush Deck Ships	



# TOLEDO.

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:—



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

The owners also desire a timber freeboard assignment.  
(see attached sheet.)

Present freeboards, assigned by Norske Veritas 15/7/26

F.W.	4'-11"	} measured from top of steel dk. at side, upper dk.
T.	4'-11 1/2"	
S.	5'-5"	
W.	5'-10"	
B.T. summer	5'-5"	

The survey was held in floating dock at the same time as the annual bottom survey.

Builder's name and yard number Odense Staalskibsverft No 23

Names of sister ships

Owners W. Wilhelmson, Oslo

Fee £ 234.00

Received by me



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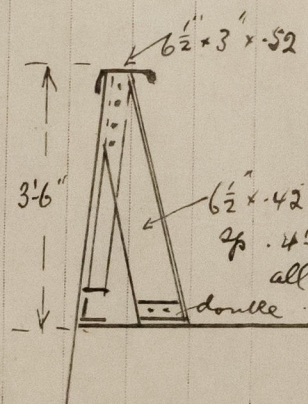
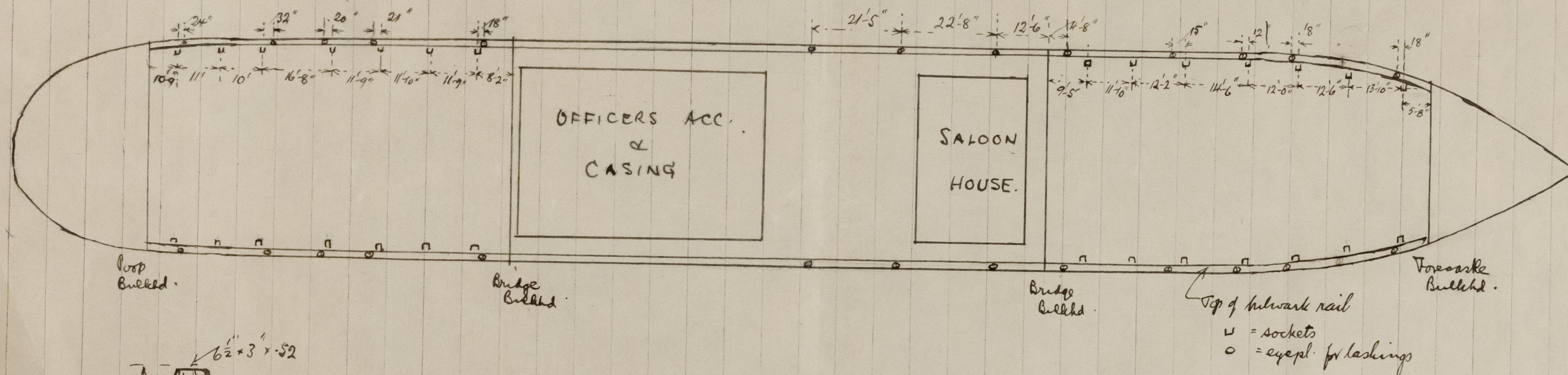


# TIMBER CARGO FREEBOARD

To be attached to  
Freeboard Lpt. N° 3813.  
Oslo

M/V "TOLEDO"

SKETCH SHOWING POSITION OF SOCKETS FOR UPRIGHTS, &C



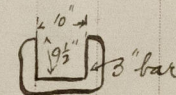
Bulwark stanchions  
on upper dk. & on  
bridge dk.

Longitudinal subdivision of tanks: All tanks except N° 1 & 5 are  
trimming tanks.

Sockets for uprights fitted <sup>on deck</sup> in the positions shown above  
eyeplates for lashings fitted on bulwark top rail - - -

Chain lashings are on board.

Electric steering gear in poop, with spare means of steering in order.



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