

Rpt. C.11.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

No. 1783.

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Forecastle Head and Raised Quarter Deck.

KRISTEL (Type of Superstructures.)

Ship's Name "MARINE TRADER" Nationality and Port of Official Number British 159693 Gross Tonnage 1391 Date of Build 1918-1

EX "ARNA" - EX "GOWEST ROOM" 4.9 John's NFL

Moulded Dimensions: Length 245.0 Breadth 37.3.0 Depth 17'-10"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 3074 tons

Coefficient of fineness for use with Tables .783

Port of Survey 4. John's NFL

Date of Survey July 27, 1936.

Name of Surveyor A.M. Macfarlane

Particulars of Classification \* 100 A1-236.  
S.S. Ans. No. 1-34.  
As Am 703-3,30.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	17.83	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	37.0
Stringer plate	.04	(17.87 - 16.33) x 1.884 = + 2.90		Standard Round of Beam = $\frac{B \times 12}{50}$	8.88
Sheathing on exposed deck	✓	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	9.25
T $\left(\frac{L-S}{L}\right) =$				Difference	.37
Depth for Freeboard (D) =	17.87	If restricted by superstructures	✓	Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{.37}{4} \times 30.19 = -.03$

### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	82.42	82.42	4.00	✓	82.42
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	59.42	59.42	7.0	✓	59.42
" overhang aft ...					
" overhang forward	1.92	.96			.96
Fore enclosed ...	28.25	28.25	7.0	✓	28.25
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward					
Total ...	172.01	171.05			171.05

Standard Height of Superstructure	6.0
" " R.Q.D.	3.967
Deduction for complete superstructure	30.5
Percentage covered $\frac{S}{L} =$	70.22
" " $\frac{S_1}{L} =$	69.81
" " $\frac{E}{L} =$	69.81
Percentage from Table, Line A.	62.68
(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 =	30.5 x 62.68 = - 19.12

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	34.50	1		34.50	35.00	35.40	1		35.40
$\frac{1}{2}$ L from A.P. ...	15.36	4		61.44	14.25	14.65	4		58.60
$\frac{2}{3}$ L " ...	3.79	2		7.58	2.75	3.15	2		6.30
Amidships ...	-	4		-	-	-	4		-
$\frac{2}{3}$ L from F.P. ...	7.58	2		15.16	9.25	9.25	2		18.50
$\frac{1}{2}$ L " ...	30.72	4		122.88	32.50	32.50	4		130.00
F.P. ...	69.00	1		69.00	71.50	71.50	1		71.50
Total ...				310.56					320.30

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{9.74}{18} (.75 - .3511) = -.22$

If limited on account of midship superstructure.  $\frac{.179}{2} \times .22 = -.02$

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. ✓

Actual height of raised quarter deck = 4.000  
Standard " " = 3.967  
Difference = .033  
= .40

Deduction for Tropical Freeboard.  
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck =  
Summer freeboard =  
Moulded draught (d) =

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

$\Delta = 3410$

Tons per inch immersion at summer load water line

T = 20

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

= 4.26

= 4 1/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	2.90	
Deduction for superstructures	-	19.12
Sheer correction	-	0.20
Round of Beam correction	-	0.03
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	2.90	19.35

Summer Freeboard = 17.22

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

Existing freeboards as reassigned being more favorable than those computed under the Convention regulations

Tropical Fresh Water Line above Centre of Disc	6 1/4"
Fresh Water Line	4 1/4"
Tropical Line	2"
Winter Line below	2 1/2"
Winter North Atlantic Line	5 1/2"

Tropical Fresh Water Freeboard	0'-10 3/4"
Fresh Water	1'-0 3/4"
Tropical	1'-3"
Winter	1'-7 1/2"
Winter North Atlantic	1'-10 1/2"

87.8.36  
12.8.36

-16.45

# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

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HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway			Nos. 1 and 2		Nos. 3 and 4		Bunker Hatches		PORT & STAR.	
Dimensions of Hatchway			24'-11" x 16'-0"		19'-2" x 16'-0"		MIDSHIP-3'-10" x 16'-0"		3'-7" x 3'-3"	
COAMINGS	{	Height above Deck	36"		30"		18"		26"	
		Thickness {	Sides	4 1/2"	4 1/2"	36"	36"	36"		
			Ends	4 1/2"	4 1/2"	36"	36"	36"		
		Stiffeners	Bull 3" x 3" x 44		3" x 3" x 44		none		none	
		Brackets, Stays	2		1		none		none	
HATCH BEAMS	{	Number	2		2		none		none	
		Spacing	8'-3 1/2"	9'-7"	7'-7 1/2"					
		Scantling and Sketch	Top angles	3 1/2" x 3" x 42	3 1/2" x 3" x 42	2 1/2" x 3" x 42				
			Plate	19" x 38	22" x 38	22" x 38				
			Bottom angles	3 1/2" x 3" x 42	3 1/2" x 3" x 42	3" x 3" x 42				
Bearing Surface	3"	3"								
FORE AND AFTERS	{	Number	3		3					
		Spacing	4'-0"		4'-0"					
		Unsupported Lengths	8'-3 1/2"		8'-3 1/2"					
		Scantling and Sketch	7" x 7"		7" x 7"					
		Bearing Surface	Pine		Pine					
HATCH COVERS	{	Material	Pine		Pine		Pine		Pine	
		Thickness	2 1/2"		2 1/2"		2 1/2"		2 1/2"	
		How fitted	Flush		Flush		F. + A.		Flush	
		Bearing Surface	2 1/2"		2 1/2"		2 1/2"		2 1/2"	
		Spacing of Cleats	24"		24"		24"		24"	
Number of Tarpaulins			3		3		2		2	
*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 ?										

**FLUSH BUNKER SCUTTLES:-**  
Particulars of fidley, funnel and ventilator coamings:- Watertight hatch on aft deck - 14" x 18". Steel Coaming 7" x 3" x 36"  
Steel bolted cover to aft peak tank 40, and bolted cover top of freshwater tank.  
Steel watertight manhole cover - 18" x 14" x 40 fitted to aft peak tank.

**FIDLEY, FUNNEL & VENTILATOR COAMINGS:-**  
Particulars of Flush Bunker Scuttles:- Steel cover with fastenings fitted over fidley in good order.  
Funnel in good condition and well stayed.  
Engine room skylight, steel, well built.

Particulars of Companionways:- Hatchway on forecassle head - 43" x 21". Coaming 24" x 36". Hatches 2 1/2", pine, bearing surface 2 1/2", cleats, battens, tarpaulins + wedges as required. Companionway on bridge deck to crew quarters, steel, 7'-0" high sill 18" - wood door 3 1/2" thick 24" x 57".

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:- Forecassle deck - One ventilator, 12" diam x 36" x 36".  
One ventilator to hold - 20" x 36" x 36".  
Forecassle ventilator over storeroom 6" diam x 17" high.  
Fore well - One vent, 16" diam, 36" x 36". Aft deck - 2 vents, 16" diam, 36" x 36" coaming x 36" to hold. Also, 1 vent, 6" x 36" x 36" to tunnel recess.  
Bridge deck - 4 gooseneck vents - 21" above deck, and 2 across down mushroom vents.  
Wood plugs + canvas covers for closing.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:- Forecassle deck - Air pipe 2" diam x 36" high.  
Fore well - 2 air pipes - 2" diam x 44", and - 2 air pipes - 2" diam x 25" high. Aft deck - Air pipes - 2" x 27" above deck, (protected by Bridge deck overhang). Aft peak tank, air pipe 4" diam - 14" above deck.  
Wood plugs for closing air pipes.

Particulars of Gangway Cargo and Coaling Ports:-

None.

Marine Trader

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Particulars of Scuppers and Sanitary Discharge Pipes - Officers WC on bridge deck, discharge above freeboard deck.  
Crew WC on aft deck, discharge below freeboard deck. 2 scuppers in fore well + 3 scuppers in aft well.  
Wash places discharges above freeboard deck. All fitted with efficient non-return storm valves.

Particulars of Side Scuttles: No side scuttles below freeboard deck.  
Side scuttles in bridge deck space fitted with efficient deadlight covers.

Particulars of Guard Rails:- Open rails on forecassle head and bridge deck.

Particulars of Gangways, Lifelines, etc:- No gangway.  
Provision made for fitting lifelines on forward and aft deck.

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	82'-5"	40"	3'-2'-8" x 1'-8" 1'-3'-0" x 1'-8"	4	17.7 sq. ft.	16.5 sq. ft.
Forward Well	74'-11"	53"	2'-11" x 1'-8"	3	13.9 sq. ft.	14.6 sq. ft.
State position of each freeing port (F. and A. position and height above deck edge) After Well Deck:- Equally spaced along bulwark - 4 1/2" above deck Forward Well:- State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:- Shutters - bars. 2 aft openings bars only. 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	36"	40"	3 1/2" x 3 1/2" x 36"	32"	Continuous	none		4'-0"
Bridge, After Bulkhead			8"					
Bridge, Forward Bulkhead	16"	32"	3" x 3" x 44"	36"	Brackets	3'-0" x 4'-0"	26"	7'-0"
Forecassle Bulkhead	15"	32"	3" x 3" x 44"	28"	None	2'-1" x 5'-0"	15"	7'-0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	18"	32"	3 1/2" x 3 1/2" x 36"	32"	None	2'-0" x 4'-9"	8"	7'-0"
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	No openings
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	2 openings - 5'-0" x 4'-0" - fitted with hinged doors, rubber joint + wing bolts.
Forecassle Bulkhead	Steel doors, fitted with bolts and locks operating both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	Steel doors - fitted with bolts and locks operating both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	

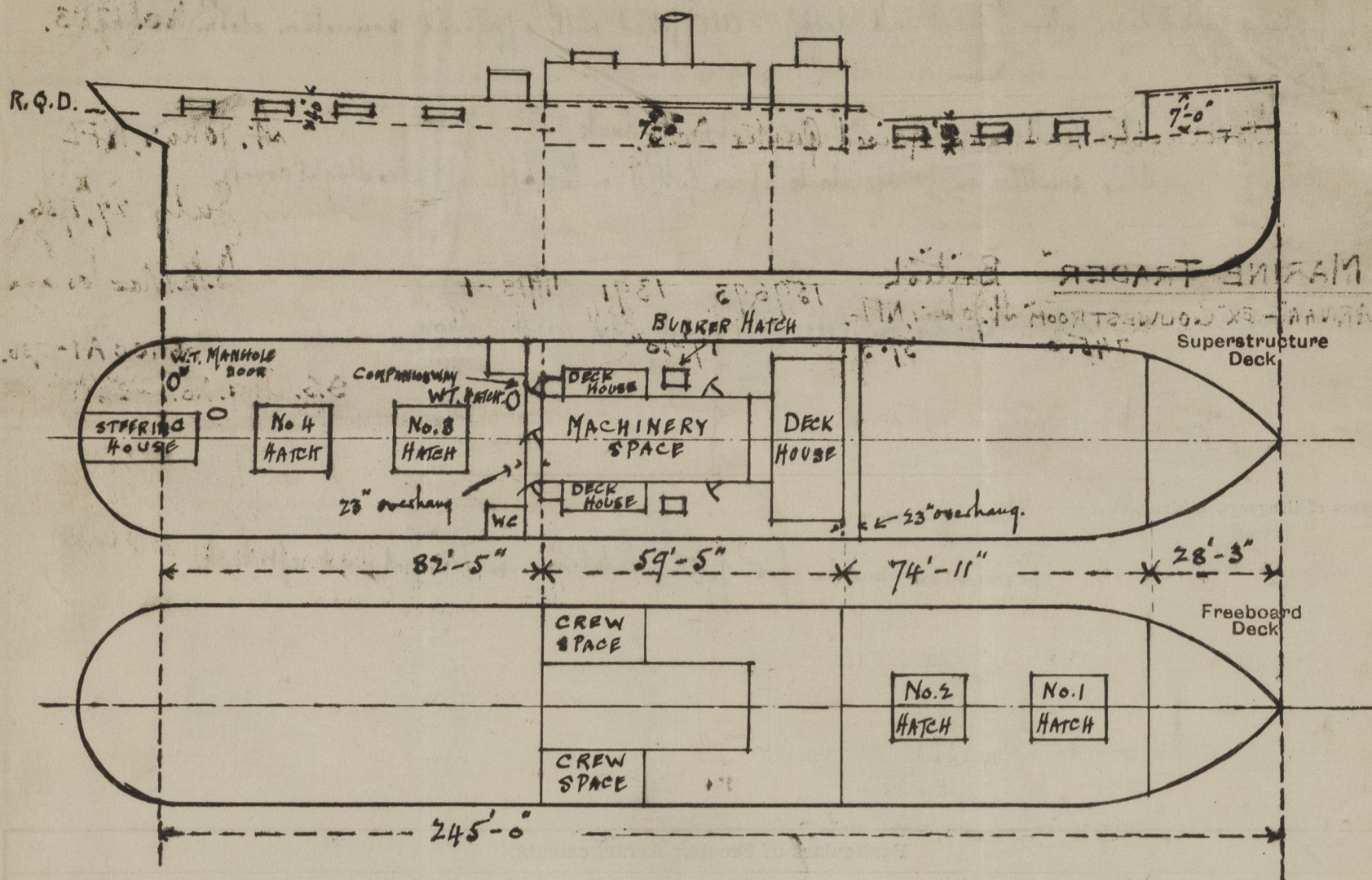
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Superstructure, bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



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

F. Vessel surveyed afloat.  
The vessel having been transferred to British Registry, the Owners have requested that a new Load Line Certificate be issued to replace the Danish one now carried on board.

I have compared the particulars of the vessel with the copy of the original freeboard report forwarded me, and find that the only changes are two openings which have been cut in the bridge front bulkhead, and an additional freeing port on each side of the aft well bulkheads.

NOTE:— This is a Newfoundland vessel, not-Canadian, please see your letter of the 9<sup>th</sup> September, 1935.

The Owners have informed me that a Timber Assignment is not required. D.M.M.

Builder's name and yard number

Rotterdam Droogd Maat. Yard No. 72

Names of sister ships

Owners

Newfoundland-West Indies Steamship Co., Ltd.

Fee \$40.00

Received by me



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