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## Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 40048  
(For London Office only).

28 FEB 1949

Epon. Apt. No. 319.

Ship's Name <b>HADA</b>	Official Number	Nationality and Port of Registry <b>DUTCH DORDRECHT</b>	Gross Tonnage <b>500</b>	Date of Build <b>1949</b>	Port of Survey <b>SRONINGEN</b>
Moulded Dimensions: Length <b>43.390</b> Breadth <b>8.250</b> Depth <b>3.455</b>					Date of Survey <b>FEBRUARY 1949</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>765 m<sup>3</sup></b> tons.					Surveyor's Signature <i>[Signature]</i>
Coefficient of fineness for use with Tables <b>.728</b>					Particulars of Classification <b>+ 100 A1</b>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... <b>3.455</b>	(a) Where D is greater than Table depth (D - Table depth) R = <b>8.33(3.455 - 2.893) 10.956 = + 52 mm</b>	Moulded Breadth (B) <b>8.250</b>
Stringer plate ... <b>9</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>.571</b>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{8.250 \times 12}{50} = 1.98$
Sheathing on exposed deck <b>Pop 50% O.P.</b>	If restricted by superstructures <b>✓</b>	Ship's Round of Beam = <b>2.00</b>
$T \left( \frac{L-S}{L} \right) =$		Difference <b>+ 35</b>
Depth for Freeboard (D) = <b>3.464</b>		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{35}{4} \times \frac{2409}{4} = - 2 \text{ mm}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
R.Q.D. Aft...	11.975	11.975	16.45	✓	11.975
.. overhang ...	3.20				
R.Q.D. enclosed Forw...	14.850	14.850	8.45	8.45/970	12.937
.. overhang ...	5.30				
Bridge enclosed...	-				
.. overhang aft ...	-				
.. overhang forward	-				
F'cle enclosed ...	6.115	6.115	19.00	19.00/1950	6.115
.. overhang ...	-				
Trunk aft ...	-				
.. forward ...	-				
Tonnage opening aft ...	-				
.. forward	-				
Total ...	32.940	32.940			31.027

Standard Height of Superstructure	1.830 m
.. R.Q.D.	.997 m
Deduction for complete superstructure	514 mm
Percentage covered $\frac{S}{L} =$	75.91
.. $\frac{S_1}{L} =$	
.. $\frac{E}{L} =$	71.50
Percentage from Table, Line A. 2 B	64.84
(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 = 514 x .6484	- 333 mm

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	615	1	615	865	865	1	865
1/4 L from A.P. ...	274	4	1096	410	410	4	1640
3/4 L " ...	68	2	136	110	110	2	220
Amidships ...	-	4	-	0	-	4	-
3/4 L from F.P. ...	137	2	274	215	215	2	430
1/4 L " ...	547	4	2188	715	715	4	2860
F.P. ...	1231	1	1231	1565	1565	1	1565
Total ...			5540				7580

Mean actual sheer aft =	} Excess
Mean standard sheer aft =	
Mean actual sheer forward =	}
Mean standard sheer forward =	
Length of enclosed superstructure forward of amidships =	> .10
.. aft of ..	= .50

Correction =  $\frac{\text{Difference between sums of products}}{\text{HEIGHT OF 18}} \left( \frac{.75 - S}{2L} \right) = \frac{2040}{18} \left( \frac{.75 - .3795}{2} \right) = - 42 \text{ mm}$

If limited on account of midship superstructure.  $42 \times \frac{845}{970} = 37 \text{ mm}$

If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Corrected for Flush Deck (if required)
RAISED QUARTER	$\Delta = 882 \text{ m}^3$	Correction for coefficient $\frac{728 + .68}{1.36} = 1.408/1.36$
Depth to Freeboard Deck = <b>4.309</b>	Tons per inch immersion at summer load water line	Depth Correction ... <b>52</b>
Summer freeboard = <b>910</b>	T = 3.1	Deduction for superstructures ... <b>333</b>
Moulded draught (d) = <b>3.399</b>	Deduction = $\frac{\Delta}{40 T}$ inches	Sheer correction ... <b>37</b>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = <b>71</b> = <b>7 cm</b>	= <b>74 mm</b>	Round of Beam correction ... <b>2</b>
Addition for Winter North Atlantic Freeboard (if required) = <b>71 + 51 = 122</b> = <b>12 cm</b>	= <b>7 cm</b>	Correction for Thickness of Deck amidships ... <b>845</b>
		Other corrections, scantlings, etc. ...
		897 372 + 525
		Summer Freeboard = <b>907</b>

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

Tropical Fresh Water Line above Centre of Disc	8 cm
Fresh Water Line	7 cm
Tropical Line	1 cm (limited)
Winter Line below	7 cm
Winter North Atlantic Line	12 cm

Tropical Fresh Water Freeboard	83 cm
Fresh Water	84 cm
Tropical	90 cm (limited)
Winter	98 cm
Winter North Atlantic	103 cm



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.

Trade of ship OCEAN TRADE

Names of sister ships "MAGNA PETE" (CLASSED WITH B.C.) (summer freeb. 905<sup>1</sup>/<sub>2</sub> m. top set RQD)

Builder's name and yard number BODEWES SCHEEPSWERVEN, MARTENS HOEK, YARD NO: 373.

Owners J. SINT

Fee £ 142.-



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