

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Amsterdam report

1609 2  
28 FEB 1946Index. No. 38445  
(For London Office only.)Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~ MOTORVESSELhaving A RAISED QUARTERDECK AND A RAISED FOREDECK.Port of Survey DEN HELDER

(Type of Superstructures.)

Date of Survey 4<sup>th</sup> and 19<sup>th</sup> February 1946.

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"HELENA"	DUTCH. GRONINGEN.	✓	182 TONS	1934

Name of Surveyor C. H. MEEUWISSE.

Moulded Dimensions: Length 31.10 M Breadth 6.13 M Depth 2.50 M.  
 Moulded displacement at moulded draught = 85 per cent. of moulded depth TO BE ASSUMED tons  
 Coefficient of fineness for use with Tables TO BE ASSUMED NO PARTICULARS AVAILABLE.

Particulars of Classification 100 A1 CAPITAL SERVICE, CLASS CONTEMPLATED.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	2.500 M	(a) Where D is greater than Table depth (D - Table depth) R =	833(2.507 - 2.073) 7.853 = 28 mms	Moulded Breadth (B)	6.13
Stringer plate	0.0075 M	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	434	Standard Round of Beam = $\frac{B \times 12}{50}$	123
Sheathing on exposed deck	✓			Ship's Round of Beam	140 m/m.
$T \left( \frac{L-S}{L} \right) =$				Difference	17
Depth for Freeboard (D) =	2.507	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right)$	$= \frac{17}{4} \times \frac{51}{588} = 2 \text{ mms}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>i</sub> )	VIRTUAL Height ABOVE STANDARD SHEER	Height Correction	Effective Length (E)
Poop enclosed ...	9.505	9.505	1838	✓	9.505
" overhang ...	✓				
R.Q.D. enclosed ...	4.945		AS PER SKETCH		
" overhang ...	4.560				
Bridge enclosed...	✓				
" overhang aft ...	✓				
" overhang forward	✓		595	595	1106
Wale enclosed ...	3400	3400	630	630/1830	1170
" overhang ...	✓		(MEAN)		
Trunk aft ...	✓		Virtual		
" forward ...	✓				
Tonnage opening aft ...	✓				
" " forward	✓				10611
Total ...	12905	12905			10675

Standard Height of Superstructure	1830
" " R.Q.D.	915
Deduction for complete superstructure	412
Percentage covered $\frac{S}{L} =$	41.62
" " $\frac{S_i}{L} =$	41.62
" " $\frac{E}{L} =$	34.87
Percentage from Table, Line A.	18.67
(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 = $412 \times \frac{185}{1867} =$	77 mms

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	513	1	513	3475	971	971	1	971	
$\frac{1}{4}$ L from A.P. ...	228	4	912	2870	366	366	4	1464	
$\frac{3}{4}$ L " ...	57	2	114	2570	66	66	2	132	
Amidships ...	-	4	-	2504	-	-	4	-	
$\frac{3}{4}$ L from F.P. ...	114	2	228	2688	184	184	2	368	
$\frac{1}{4}$ L " ...	456	4	1824	3048	544	544	4	2176	
F.P. ...	1026	1	1026	3675	1171	1171	1	1171	
Total ...			4617					6282	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75 - S}{2L} \right) = \frac{1665}{18} \left( \frac{75 - 208}{74} \right) = 50$

If limited on account of midship superstructure. YES - NIL

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

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 2.507  
 Summer freeboard = 2.00  
 Moulded draught (d) = 2.307

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d \text{ mms}}{48} = 48 = 5 \text{ cms}$ 

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 $\frac{d}{48} = 5 \text{ cms}$ 

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

Correction for coefficient Rel

	+	-
Depth Correction	28	76
Deduction for superstructures	-	77
Sheer correction	-	-
Round of Beam correction	-	2
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	8
	28	79
Summer Freeboard =	208	209

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck: - 20 cms

Tropical Fresh Water Line above Centre of Disc	...	5 cm	Tropical Fresh Water Freeboard	...	15 "
Fresh Water Line	"	"	Fresh Water	"	24 "
Tropical Line	"	"	Tropical	"	24 "
Winter Line below	"	4 "	Winter	"	24 "
Winter North Atlantic Line	"	"	Winter North Atlantic	"	24 "

As previously assigned by Dutch Authorities  
 14. 3. 46



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...
	Brackets, Stays	...	...	...	...	...	...	...	...
HATCH BEAMS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
FORE AND AFTERS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...
	Scantling* and Sketch	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...

Particulars of fiddle, funnel and ventilator coamings :-

ON THE TOP OF THE ENG. ROOM CASING, ONE OPENING 600 X 450 MM, COAMING: ANGLE 60 X 60 X 6 MM, CLOSED BY PORTABLE STEEL COVER, SECURED BY INSIDE STRONGBACK.

Particulars of Flush Bunker Scuttles :-

NONE FITTED.

Particulars of Companionways :-

ONE COMPANION WAY FITTED ON FORECASTLEDECK, ACCESS TO CREW'S ACCOMM. STEEL CONSTRUCTION, 1400 X 1000 MM, STRONGLY BUILT, PITCH-PINE WOOD DOOR, HINGED, 1270 X 630 MM, 35 MM THICK, SILL 610 MM ABOVE MAINDECK. ONE COMP. WAY, ON R.Q. DECK, ACCESS TO ACCOMM. AFT, 645 MM HIGH, 470 MM BREADTH, 520 MM LONG, STEEL CONSTRUCTION STRONGLY BUILT, STEEL SLIDING COVER AND 2 HINGED STEEL DOORS, SILL 130 MM. 4 SKYLIGHTS ON R.Q. DECK (MARKED "SL") AND ONE SAME OVER GALLEY. ONE ACCESS HATCHWAY OVER STORESPACE AFT STEEL STRONGLY BUILT, 620 X 720 MM X 200 MM HIGH. PORTABLE STEEL COVER, BATTERING DOWN ARRANGEMENT AND CANVAS COVER FITTED. Particulars of Ventilators in exposed positions on freeboard and superstructure decks :- 2 VENTILATOR COAMINGS FITTED ON FREEBOARD DECK, VIZ. ONE VENT. FORM. OF NO I HOLD AND ONE SAME AFT OF NO II HOLD, STEEL COAMING, 8 MM THICK, 190 MM, 910 MM HIGH, CONNECTED WITH L75 X 75 X 8 MM RIVETED TO DECKPLATING, WOOD PLUGS AND CANVAS COVERS AVAILABLE.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :-

ONE AIRPIPE, 2" FITTED ON R.C. DECK, TO FOREPEAK TANK, GOOSENECK, OPENING 450 MM ABOVE THE DECKPLATING AT SIDE OF COMP. WAY FORM. ONE HAND PUMP TO F.P. TANK, 1 1/2", OUTLET 750 MM. ON R.Q. DECK: 2 CHIMNEY'S COAMINGS, LEADING TO ACCOMM. AFT. STEEL, 8 MM THICK, 150 MM, HIGH 800 MM, STEEL COVERS FOR PLUGGING OFF AVAILABLE. ONE AIRPIPE TO A.P. TANK, 1 1/2", HIGH 450 MM GOOSENECK.

Particulars of Gangway Cargo and Coaling Ports :-

NONE FITTED.

Particulars of Scuppers and Sanitary Discharge Pipes :-

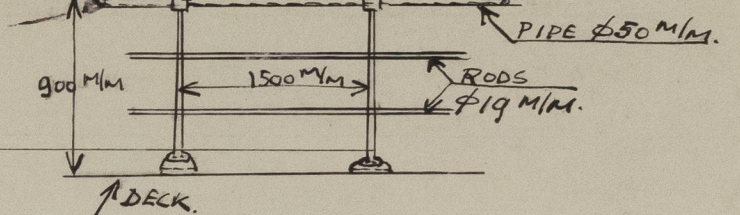
A W.C. FITTED ON F.S. DECK, STEEL SCUPPERPIPE 100 MM TO VESSEL'S SIDE, 1.30 M BELOW DECK, NON-RETURN VALVE FITTED TO SHELLPLATING. A W.C. FITTED ON ACCOMM. DECK (BELOW R.Q. DECK), STEEL SCUPPERPIPE 100 MM THROUGH EN'S ROOM AND CONNECTED TO SHELLPLATING BY STEEL SLIDING VALVE, MANIPULATED IN E.R., OPENING APPROX. 1 M. ABOVE THE KEEL.

Particulars of Side Scuttles :-

IN R.Q. DECK SIDE PLATING, 5 B. & P. SIDE EACH, 5 SIDE SCUTTLES FITTED, 19" FITTED WITH STRONG GLASSES AND HINGED DEAD LIGHTS. LOWEST SIDE SCUTTLE OPENING: 3.85 M ABOVE THE KEEL.

Particulars of Guard Rails :-

GUARD RAILS FITTED ON R.Q. DECK, CONSISTING OF STEEL STANCHIONS SPACED 1500 MM APART AND STEEL TUBE AND RODS AS PER SKETCH.



Particulars of Gangways, Lifelines, etc. :-

NONE FITTED.

## 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	18,195 M	0,870 M.	0,68 x 0,45 M	4	1,224 M <sup>2</sup>	1,25 M <sup>2</sup>
Forward Well						

State position of each freeing port ... After Well :- } SITUATION AS PER SKETCH, SILL 120 MM (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 :- 2 RODS FITTED, 16 MM.  
 Additional area where sheer is less than standard.

## Particulars of Superstructures, Trunks, Casings, Deckhouses.

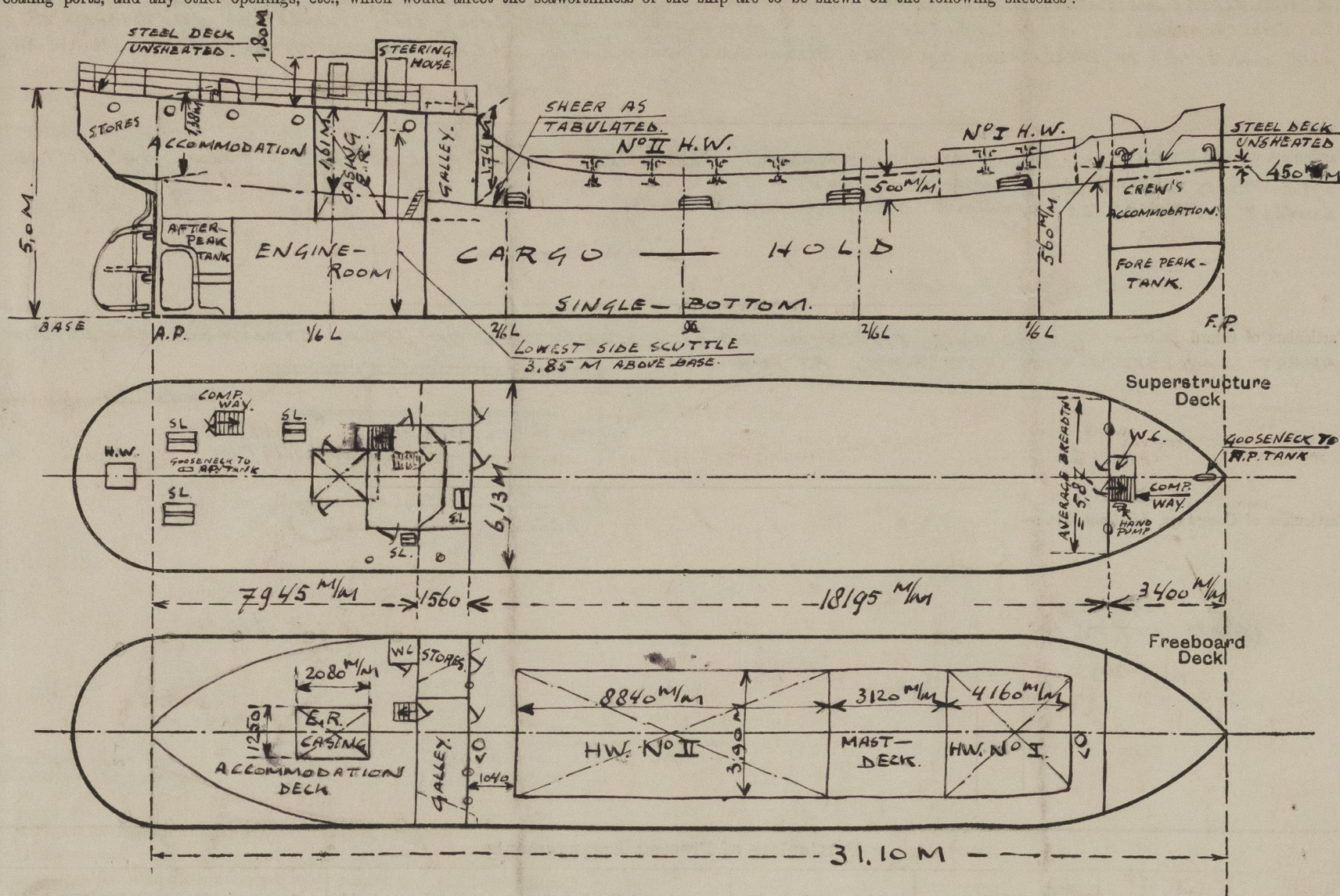
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
R.Q. Bulkhead (FORM)	500 X 6	6	115 X 65 X 8	600	BRACKET AT TOP AND BOTTOM 300 X 300 X 7	ONE OPENING 1300 X 500 (STORES) ONE 1130 X 540	500	1,74
Raised Quarter Deck Bulkhead (AFTER)	500 X 6	6	115 X 65 X 8	600	DITTO	ONE OPENING 1130 X 540	500	1,70
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	500 X 6	6	115 X 65 X 8	600	BRACKET 200 X 200 AT TOP. AT DECK ATTACHED TO BEAMS.	5 B. SIDE ONE 1130 X 540 ON PLATE 150 X 330	450	1,80
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).

R.Q. Bulkhead (FORM)	1 HINGED STEEL DOOR, STRONGLY CONSTRUCTED, W.T. 4 BOFS, MANIPULATED FROM BOTH SIDES, SPACED 600 MM APART.
Raised Quarter Deck Bulkhead (AFTER)	ONE HINGED STEEL DOOR, STRONGLY CONSTRUCTED, W.T. 4 BOFS, MANIPULATED FROM BOTH SIDES, SPACED 500 MM APART.
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	5 B. AND P. SIDE EACH, ONE HINGED STEEL DOOR, STRONGLY CONSTRUCTED, MANIPULATED FROM BOTH SIDES.
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:—



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

2 PORTLIGHTS FITTED IN STEP TO RAISED FOREDECK & 6" FITTED WITH HINGED DEADLIGHTS.

THE ASSIGNMENT OF FREEBOARD WHILST CLASSED "G.L." AND WHICH WAS APPROVED BY THE DUTCH AUTHORITIES WAS:

SUMMER (BELOW DECKLINE) 20 9/M., LEVEL WITH CENTRE OF DISC

WINTER: 4 9/M. BELOW CENTRE OF DISC.

ALLOWANCE FOR FRESH WATER: 5 9/M.

THE TRADING LIMITS DETERMINED BY THE DUTCH AUTHORITIES ("REGION E"): THE BALTIC UNTIL THE 61° N. LATITUDE AND THE LINE THE ORKNEY - SHETLAND ISLES IN THE WEST, THE CHANNEL, THE BRISTOL CHANNEL THE ST. GEORGE CHANNEL AND THE IRISH SEA TILL THE LINE CAPE ST. MATTHIEU - LANDSEND - CARNSORE POINT IN THE SOUTH AND THE LINE WHITE HEAD PORT-PATRIE IN THE NORTH.

Actual sheer at AP = 971  
Standard " " " = 513

458

Height poop " " = 1380

Virtual ht of poop = 1838

Actual sheer at FP = 1171

Standard " " " = 1026

145

Height forecaste = 450

Virtual height = 595

Builder's name and yard number J. VOS & ZOON, SHIPBUILDERS, YARD NUMBER 80.  
GRONINGEN.

Names of sister ships

Owners MR. J. PRONK, GRONINGEN.

Fee fl. 90,-

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