

Rpt. C.11.

Index. No. 13693
(For London Office only.)

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having *Poop, Bridge and Fore Castle*

Port of Survey *Amsterdam*

(Type of Superstructures.)

Date of Survey *Building*

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

M.V. MIRALDA

THE HAGUE

162134

8013

1936

Name of Surveyor *H. P. Jonker*

Moulded Dimensions: Length *140.210* Breadth *14.900* Depth *10.363* *ft*
Moulded displacement at moulded draught = 85 per cent. of moulded depth *17620* *ft*
Coefficient of fineness for use with Tables *794*

Particulars of Classification *7-100 A1*
Carrying Petroleum in bulk
Contemplated

Depth for Freeboard (D) <i>m</i>		Depth correction		Round of Beam correction	
Moulded depth	<i>10.363</i>	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	<i>14.900 m</i>
Stringer plate	<i>0.20</i>	<i>8.33 (10.383 - 9.347) x 30 = +259</i>		Standard Round of Beam = $\frac{B \times R}{50}$	<i>360 m</i>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	<i>✓</i>	Ship's Round of Beam	<i>360 m</i>
Depth for Freeboard (D) =	<i>10.383</i>	If restricted by superstructures		Difference	<i>Nil</i>
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	<i>Nil</i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>equivalent</i>	<i>24452</i>	<i>28102</i>	<i>2206</i>	<i>✓</i>	<i>28102</i>
" overhang ...	<i>28102</i>		<i>+64 m wood</i>		
R.Q.D. enclosed					
" overhang					
Bridge enclosed <i>equivalent</i>	<i>13085</i>	<i>13920</i>	<i>2206</i>	<i>x 2286 / 2290</i>	<i>13896</i>
" overhang aft	<i>13920</i>				
" overhang forward					
Fore enclosed	<i>14722</i>	<i>14722</i>	<i>2206</i>	<i>✓</i>	<i>14722</i>
" overhang			<i>+64 m wood</i>		
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	<i>56.744</i>	<i>56.744</i>			<i>56.720</i>

Standard Height of Superstructure *2290*
" " R.Q.D. *✓*
Deduction for complete superstructure *1067*
Percentage covered $\frac{S}{L} = 40.47$
" " $\frac{S_1}{L} = 40.47$
" " $\frac{E}{L} = 40.46$
Percentage from Table, Line A. *Tanker 31.46*
(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 = *1067 x 31.46 = - 336*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>1422</i>	<i>1</i>	<i>1422</i>	<i>1423</i>	<i>1423</i>	<i>1423</i>	<i>1</i>	<i>1423</i>	
$\frac{1}{8}L$ from A.P. ...	<i>632</i>	<i>4</i>	<i>2528</i>	<i>632</i>	<i>632</i>	<i>632</i>	<i>4</i>	<i>2528</i>	
$\frac{2}{8}L$ " ...	<i>158</i>	<i>2</i>	<i>316</i>	<i>156</i>	<i>156</i>	<i>156</i>	<i>2</i>	<i>312</i>	
Amidships ...	<i>-</i>	<i>4</i>	<i>-</i>	<i>0</i>	<i>-</i>	<i>-</i>	<i>4</i>	<i>-</i>	
$\frac{3}{8}L$ from F.P. ...	<i>316</i>	<i>2</i>	<i>632</i>	<i>311</i>	<i>311</i>	<i>311</i>	<i>2</i>	<i>622</i>	
$\frac{4}{8}L$ " ...	<i>1263</i>	<i>4</i>	<i>5052</i>	<i>1266</i>	<i>1266</i>	<i>1266</i>	<i>4</i>	<i>5064</i>	
F.P. ...	<i>2844</i>	<i>1</i>	<i>2844</i>	<i>2846</i>	<i>2846</i>	<i>2846</i>	<i>1</i>	<i>2846</i>	
Total			<i>12794</i>					<i>12795</i>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{1}{18} (75 - 2023) = \text{Nil}$

If limited on account of midship superstructure.

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 = *10383*
Summer freeboard = *2060*
Moulded draught (d) = *8323*

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = *173 = 17 cm*
Addition for Winter North Atlantic Freeboard (if required) = *173 + 115 = 288 cm = 29 cm*

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 16730 \text{ m}^3$
Tons per inch immersion at summer load water line
 $T = 2182$

Deduction = $\frac{\Delta}{40T}$ inches = *19 cm*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{794 + 68}{1.36} = \frac{1.474}{1.36} =$
Depth Correction ... *259*
Deduction for superstructures ... *336*
Sheer correction ...
Round of Beam correction ...
Correction for Thickness of Deck amidships ...
Other corrections, scantlings, etc. ...

Summer Freeboard = *2061*

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

Tropical Fresh Water Line above Centre of Disc ... *36 cm*
Fresh Water Line " " ... *19*
Tropical Line " " ... *17*
Winter Line below " " ... *17*
Winter North Atlantic Line " " ... *29*
Tropical Fresh Water Freeboard ... *170*
Fresh Water " ... *187*
Tropical " ... *189*
Winter " ... *223*
Winter North Atlantic " ... *235*

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PARTICULARS OF PROJECTIONS, ETC.

HATCHWAYS ON FREEBOARD AND DECK DECKS		ON FORECASTLE DECK		ON POOP DECK	
Description of Hatchway		ON FORECASTLE DECK	ON POOP DECK	ON FORECASTLE DECK	ON POOP DECK
Dimensions of Hatchway		24'5" x 30'5"	16'0" x 16'0"	12'2" x 12'2"	12'2" x 12'2"
COAMINGS	Height above Deck	6'90"	2'30"	2'60"	2'60"
	Thickness	10"	10"	10"	10"
	Stiffeners	10"	10"	10"	10"
	Brackets, Stays	none	230x90x10"	230x90x10"	230x90x10"
HATCH BEAMS	Number	3	3	3	3
	Spacing	12'0"	12'0"	12'0"	12'0"
	Scantling and Sketch	3"	3"	3"	3"
	Bearing Surface	none	none	none	none
FORE AND AFTERS	Number	1	1	1	1
	Spacing	12'0"	12'0"	12'0"	12'0"
	Unsupported Lengths	12'0"	12'0"	12'0"	12'0"
	Scantling and Sketch	3"	3"	3"	3"
HATCH COVERS	Material	STEEL W.T. COVER	STEEL W.T. COVER	STEEL W.T. COVER	STEEL W.T. COVER
	Thickness	12 1/2"	12 1/2"	12 1/2"	12 1/2"
	How fitted	STIFFENED WITH	STIFFENED WITH	STIFFENED WITH	STIFFENED WITH
	Bearing Surface	4 L 10x15x9"	4 L 10x15x9"	4 L 10x15x9"	4 L 10x15x9"
Spacing of Cleats		3'0"	3'0"	3'0"	3'0"
Number of Tarpaulins		1	1	1	1

Particulars of fiddle, funnel and ventilator coamings:— Fiddle openings on casing top angle coamings 100x65x8" provided with strong steel hinged covers.

Motorroom skylight all steel, provided with steel flaps strongly constructed. Fiddle, funnel and ventilator coamings in efficient condition.

Particulars of Companionways:— On Foreboard deck, one steel companion way in Forward well and one in Afterwell leading to pump room 4'30" x 2'55" x 2'13" high plating 3/16" thick stiffeners L 100x65x8" spaced 5'0" to 7'0" brackets top and bottom steel hinged W.T. door on after side of deck house 1'52" x 7'60" sill 4'50" capable of being operated from both sides.

Particulars of Companionways:— On Foreboard deck: one companion way on SB and PS built in Fore Castle bulkhead, leading to forward tween deck, steel hinged W.T. door 1'40" x 7'20" sill 5'50" operated from both sides. On Poop deck: steel companion way built to after bulkhead, deck house, W.T. door 1'40" x 6'20" sill 3'00" one companion way on SB and PS built in side bulkhead of deck house W.T. door 1'60" x 7'10" sill 4'00" above wood deck capable of being operated from both sides.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— On Fore Castle deck: to accom. in Fore castle space 11 ventilator coamings 9'15" x 1'50" diam x 4 1/2" To tween deck and pump room in forward hold 5 vent: 9'15" x 2'50" diam x 8" and one ventilator: to space above fore peak tank 9'15" x 3'00" diam x 8 1/2". On Poop deck: to accommodation in Poop space and to tween deck: 6 vent: 7'60" x 3'05" diam x 8 1/2", 2 ventilators 4'60" x 3'50" diam x 10", 3 vent: 4'60" x 2'00" diam x 4 1/2", one vent: 4'60" x 1'52" diam x 4 1/2". On Foreboard deck: to forward and after pump room, 2 vent: 5'00" x 6'10" diam x 10" bracketed to pump room deck house. On Bridge deck: 5 ventilators to bridge space 4'60" x 1'52" diam x 4 1/2" bracketed to pump room. On Fore castle deck: 5 vent: 5'00" x 6'10" diam x 10" bracketed to fore castle or poop bulkhead.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— On Fore Castle deck: one air pipe to fore peak tank 4'50" x 7'5" diam. To deck tank 4 air pipes 9'00" x 9'00" diam. To tank built in tween deck one air pipe 9'00" x 7'5" diam. On Poop deck: to after peak tank one air pipe 9'00" x 7'5" diam. To double bottom tanks and cofferdams in motorroom two air pipes 9'00" x 5'0" diam and 4 air pipes 9'00" x 4'5" diam. On Foreboard deck: to forward cofferdam 3 air pipes 2'25" diam, to after cofferdam one air pipe 1'50" x 1'25" diam. To Cross Bunkers 2 air pipes 2'25" x 1'00" diam. To Sealing tanks 2 air pipes 2'25" x 7'5" diam.

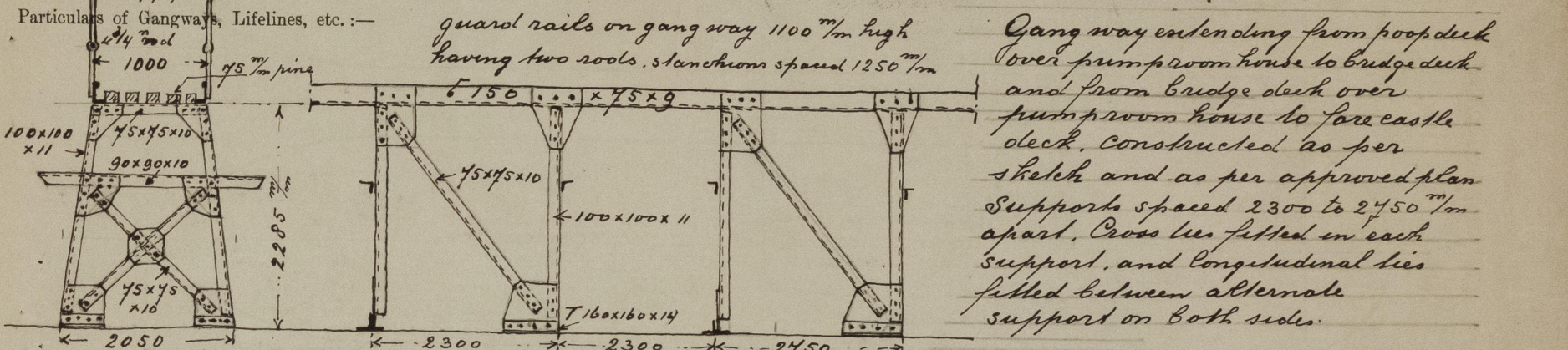
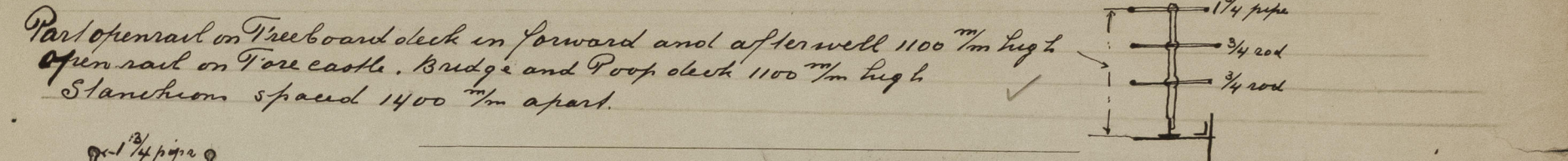
Particulars of Gangway Cargo and Coaling Ports:— All cargo and wing tanks have a combined gas escape pipe 100" diam extending 15' 6" above deck bracketed to fore or after mast. All ventilator coamings are closed with steel covers screwed down or with wood plugs and canvas covers. All air pipes are fitted with gauze, and canvas covers are provided for closing the openings.

Particulars of Scuppers and Sanitary Discharge Pipes:— Afterwell 6 Scuppers, Forward well 4 scuppers and through stinger angle Scupper pipes. W.C. and Wash places: Accom. in Fore Castle space, discharge through ship side below fore deck storm valve, fitted. Scupper pipes and wash places on deck houses built on bridge deck, discharge through ship side just above fore deck storm valve, fitted. Scupper pipes 4" top space and Tween deck W.C. and wash places built in Poop space discharge through ship side below foreboard deck storm valve fitted. All storm valves are fitted in steel casings to shell. All above scupper and sanitary discharge pipes are also provided with slide valves operated from the tween deck.

Scupper pipes and sanitary pipes from spaces in deck houses built on Poop deck discharge through ship side about 8" below foreboard deck No storm valve fitted.

Particulars of Side Scuttles:— Side Scuttles to accommodation in Fore Castle and Poop space and to store room in Bridge space are all of substantial construction and fitted with permanently attached dead lights.

Particulars of Guard Rails:— Part open rail on Foreboard deck in forward and after well 11'00" high. Open rail on Fore castle, Bridge and Poop deck 11'00" high. Stanchion spaced 14'00" apart.



Particulars of Freeing Arrangements.						
Length at side of	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well 4'90" 15"	25'34" 5"	11'00"	9'50" x 5'00" oval 23'64" 70" open rail	3	111 dft ²	
Forward Well 3'59" 20"	16'45" 8"	11'00"	9'50" x 5'00" oval 19'46" 2" open rail	2	44 dft ²	

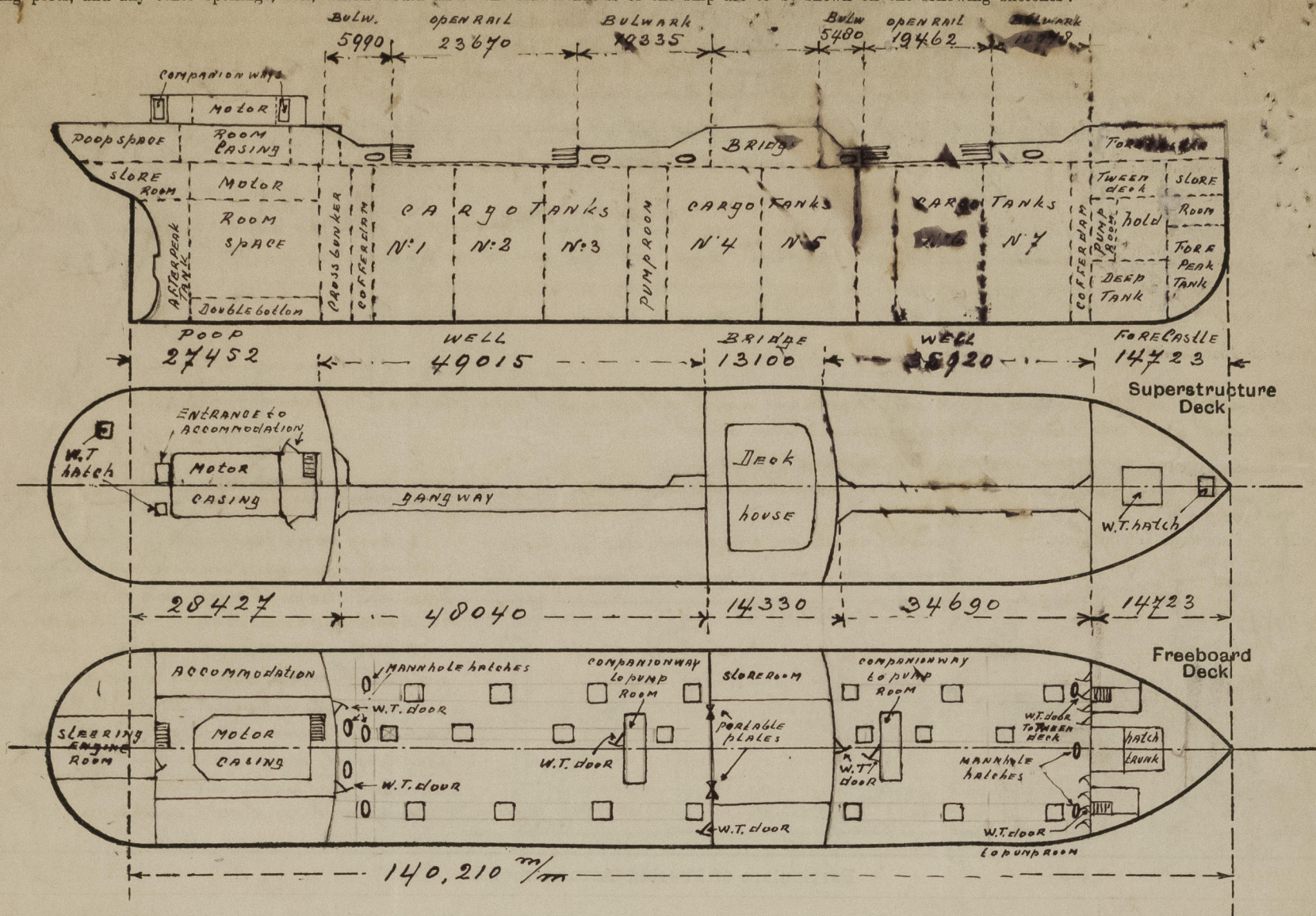
State position of each freeing port (F. and A. position and height above deck edge) After Well:— } 3'40" above deck edge
Forward Well:— }
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— three vertical rods 25" diam
Additional area where sheer is 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	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Raised Quarter Deck Bulkhead	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Bridge, After Bulkhead	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Bridge, Forward Bulkhead	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Forecastle Bulkhead	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Trunk, Aft	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Trunk, Forward	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Exposed Machinery Casings on Superstructure Decks	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"
Deckhouses on Flush Deck Ships	160x160x14	11	120x45x12 at 150x50x10 at side	4'00"	brackets top and bottom	4'60" x 12'00"	6'00"	22'06"

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	2 steel hinged watertight doors capable of being operated from both sides
Raised Quarter Deck Bulkhead	1 steel hinged watertight door on SB side, closed and operated from both sides
Bridge, After Bulkhead	2 steel portable plates 9" fastened with hook bolts 25" spaced 3'50" apart
Bridge, Forward Bulkhead	1 steel hinged W.T. door capable of being operated from both sides
Forecastle Bulkhead	2 steel hinged W.T. doors capable of being operated from both sides
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	6 steel hinged doors, strongly constructed operated from both sides
Exposed Machinery Casings on Superstructure Decks	no openings
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	no openings
Deckhouses on Flush Deck Ships	no openings

Miralda

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 vessel has been built in accordance with the approved plans

Poop. a. 28427
 dit. 27452
 975
 $\times \frac{2}{3} = 650$
 27452
 28102

Bridge a. 14330
 dit. 13100
 1230
 $\times \frac{2}{3} = 820$
 13100
 13920

At moulded draught	8.370 m	displacement	16743 tb^3
At " " "	8400 m	" " " "	21.06 tb^3 per cc tb
" " " "	8600 m	" " " "	21.96 " " "
" " " "	8800 m	" " " "	22.06 " " "
" " " "	9000 m	" " " "	22.05 " " "
" " " "	9200 m	" " " "	22.23 " " "
" " " "	9400 m	" " " "	22.31 " " "

Builder's name and yard number N. V. Nedderlandsche Scheepsbouw Maatschappij, Yard N° 236

Names of sister ships H. V. "MACOMA" N. V. Nedderl. Scheepsb. Maats. yard 235 Amst. Report N° 13674

Owners Petroleum Maatschappij "La Corona"

Fee £ 200

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