

Rpt. C.11.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index No. **34265**  
(For London Office only.)

10 NOV 1932.

Computation of Freeboard for **Tanker**, Tanker  
 being  **poop, bridge & fore-castle.**

Port of Survey **LOS ANGELES, CALIF.**

Date of Survey **October 11, 1932.**

Name of Surveyor **W.J. Alderson.**

Particulars of Classification **\*100 A1**

Carrying **Petroleum in bulk.**

Ship's Name **"VELMA"**

Nationality and Port of Registry **Norwegian Oslo**

Official Number **----**

Gross Tonnage **9720**

Date of Build **1930 8**

Moulded Dimensions: Length **474'** Breadth **64'** Depth **37'-3"**

Moulded draught = 85 per cent. of moulded depth **22139** tons

Content of fitness for use with Tables **.807**

Depth for Freeboard (D) <b>37.25</b>		Depth correction		Round of Beam correction	
Moulded depth	<del>37.25</del>	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	<b>64.0'</b>
Stringer plate	<b>.875"</b>	<b>(37.32 - 31.60) 3 = +17.16"</b>		Standard Round of Beam = $\frac{B \times 12}{50}$	<b>15.36</b>
Sheathing on exposed deck	<b>.07</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	<b>= 15.75"</b>
$T \left( \frac{L-S}{L} \right) =$	<input checked="" type="checkbox"/>	If restricted by superstructures	<input checked="" type="checkbox"/>	Difference	<b>.39</b>
Depth for Freeboard (D) =	<b>37.32</b>			Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right)$	<b>= <math>\frac{.39}{4} \times .6257 = .06</math></b>

### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
poop enclosed ...	<b>103</b>	<b>103.00</b>	<b>8.25'</b>	<input checked="" type="checkbox"/>	<b>103.00</b>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	<b>35.16'</b>	<b>35.16</b>	<b>8.25'</b>	<input checked="" type="checkbox"/>	<b>35.16</b>
" overhang aft ...					
" overhang forward ...					
Fore-castle enclosed ...	<b>39.25'</b>	<b>39.25</b>	<b>8.25'</b>	<input checked="" type="checkbox"/>	<b>39.25</b>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<b>177.41</b>	<b>177.41</b>			<b>177.41</b>

Standard Height of Superstructure **7.5**

" " R.Q.D.

Deduction for complete superstructure **42.00**

Percentage covered  $\frac{S}{L} = 37.43\%$

" "  $\frac{S_1}{L} = 37.43\%$

" "  $\frac{E}{L} = 37.43\%$

Percentage from Table, Line A. (corrected for absence of fore-castle (if required))

Percentage from Table, **Line B. TANKER** **28.43%** (corrected for absence of fore-castle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = **42.00 x .2843 = - 11.94**

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<b>57.40</b>	<b>1</b>		<b>57.40</b>	<b>38.00</b>	<b>38.00</b>	<b>1</b>		<b>38.00</b>
1/2 L from A.P. ...	<b>5.16"</b>	<b>4</b>		<b>20.64</b>	<b>5.16</b>	<b>5.16</b>	<b>4</b>		<b>20.64</b>
1/2 L " ...	<b>6.32</b>	<b>2</b>		<b>12.64</b>	<b>0</b>	<b>0</b>	<b>2</b>		<b>0</b>
Amidships ...	<b>0</b>	<b>4</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>		<b>0</b>
1/2 L from F.P. ...	<b>12.64</b>	<b>2</b>		<b>25.28</b>	<b>0</b>	<b>0</b>	<b>2</b>		<b>0</b>
1/2 L " ...	<b>19.80</b>	<b>4</b>		<b>79.20</b>	<b>19.80</b>	<b>19.80</b>	<b>4</b>		<b>79.20</b>
F.P. ...	<b>76.00</b>	<b>1</b>		<b>76.00</b>	<b>76.00</b>	<b>76.00</b>	<b>1</b>		<b>76.00</b>
Total ...				<b>516.60</b>					<b>213.84</b>

Mean actual sheer aft = **Deficient**  
Mean standard sheer aft

Mean actual sheer forward = **Deficient**  
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = } **Tanker**  
" " aft of " = }

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{302.76}{18} \times (.75 - .1871) = + 9.47$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.807 + .68}{1.36} = \frac{1.487}{1.36}$	<b>81.20</b>
Depth to Freeboard Deck = <b>37.32</b>	$\Delta = 20,002$		<b>88.78</b>
Summer freeboard = <b>8.62</b>	Tons per inch immersion at summer load water line		
Moulded draught (d) = <b>28.70</b>	$T = 62.88$		
Correction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>7.17 - 7 1/4</b>	Deduction = $\frac{\Delta}{40T}$ inches = <b>7.95</b>		
Addition for Winter North Atlantic Freeboard (if required) = <b>4.74 = 4 3/4</b>	= <b>8"</b>		
	= <b>203 m/m</b>		
		Depth Correction ... <b>17.16</b>	
		Deduction for superstructures ... <b>11.94</b>	
		Sheer correction ... <b>9.47</b>	
		Round of Beam correction ... <b>.06</b>	
		Correction for Thickness of Deck amidships ... <input checked="" type="checkbox"/>	
		Other corrections, scantlings, etc. ... <input checked="" type="checkbox"/>	
		<b>26.63</b>	
		<b>12.00</b>	
		<b>+ 14.63</b>	
		Summer Freeboard = <b>103.41</b>	

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

Tropical Fresh Water Line above Centre of Disc <b>15.14"</b>	= <b>387.7</b>	Tropical Fresh Water Freeboard <b>8'-7 1/2"</b>	= <b>2629</b>
Fresh Water Line " <b>8.7"</b>	= <b>203</b>	Fresh Water " <b>7'-4 1/4"</b>	= <b>2242</b>
Tropical Line " <b>7 1/4"</b>	= <b>184</b>	Tropical " <b>7'-11 1/2"</b>	= <b>2426</b>
Winter Line below " <b>7 1/4 6 1/2"</b>	= <b>184</b>	Winter " <b>8'-0 1/4"</b>	= <b>2445</b>
Winter North Atlantic Line " <b>12.00</b>	= <b>305</b>	Winter North Atlantic " <b>9'-2 3/4"</b>	= <b>2813</b>
		" <b>9'-7 1/2"</b>	= <b>2934</b>

MARKING FORM FOR REGISTRATION 1909  
4 FEB 1937  
RECEIVED

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS						
Description of Hatchway	No.1	19 O.T. Main	2 on Poop	1 on F'castle head		
Dimensions of Hatchway	6'9"x10'	2'6"x5'9"	2'0"x2'6"	3'8"x2'10"	2'0"x2'6"	
COAMINGS	Height above Deck	33"	36"	24"	24"	
	Thickness	7/16"	7/16"	3/8"	3/8"	
	Sides	7/16"	7/16"	3/8"	3/8"	
	Stiffeners	---	---	---	---	
HATCH BEAMS	Number	---	---	---	---	
	Spacing	---	---	---	---	
	Scantling and Sketch	---	---	---	---	
	Bearing Surface	---	---	---	---	
FORE AND AFTERS	Number	---	---	---	---	
	Spacing	---	---	---	---	
	Unsupported Lengths	---	---	---	---	
	Scantling and Sketch	---	---	---	---	
HATCH COVERS	Material	Steel	Steel	Wood	Wood	Steel
	Thickness	7/16"	7/16"	2 1/2"	2 1/2"	3/8"
	How fitted	Jointed	Jointed	---	---	W.T. Joint
	Bearing Surface	& screw dogs	& screw dogs	2 1/2"	2 1/2"	& dogs
Spacing of Cleats	---	---	18"	24"	---	
Number of Tarpaulins	---	---	2	2	---	

Particulars of fiddle, funnel and ventilator coamings:— Fiddle Openings have steel gratings & permanently hinged steel covers. Boat Deck. Ventilators 2 - 27" dia. 3 ft. coamings to E.R. 2 - 12" and 1 - 16" to accommodations, coamings 36" high. Fiddle Top 3 - 24" dia. 3 ft. coamings.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

None outside houses.

Main Pump Room House on After Deck: 10'6" x 5'6" x 8 ft. high. Plating 5/16". Deck angle 3 1/2" x 3 1/2" x 5/16". One W.T. door at after end 5'6" x 2'0" secured by dogs operated on both sides. *Stiffeners 5 x 3 x 36 angles spaced 82 1/2" no 12"*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

On Poop:— 6 - 15" dia. with 36" coamings. 1 - 12" with 36" coamings. After end of after well: 2-24" carried above boat deck secured at poop deck by plate and angles. 1-12" with 36" coamings. 2 -36" to pump room 19'6" high. Fore end of forward well: 2 -12" with 36" coamings. Forecastle: 4 - 12" with 36" coamings. All ventilators with 36" coamings fitted with plugs and canvas covers.

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

All tank air pipes connected to outlets carried high up on masts. Valves at each hatch coaming. Poop: 2 - 3" dia. 2'3" high, 2 - 2" dia. 3 ft. high. After Well: 2 - 4" dia. 7'6" high. 2 - 4" dia. 3'2" 2 - 3 1/2" dia. 7'6" high. Forward Well: 4 - 3" dia. 3 ft. high. 2 - 4" dia. 3 ft. high.

All air pipes are fitted with screwed plugs to part projecting below the wire gauge screens.

Particulars of Gangway Cargo and Coaling Ports:—

None.

Particulars of Scuppers and Sanitary Discharge Pipes —

None from any space below the freeboard deck. All discharges from scuttles fitted with storm valves.

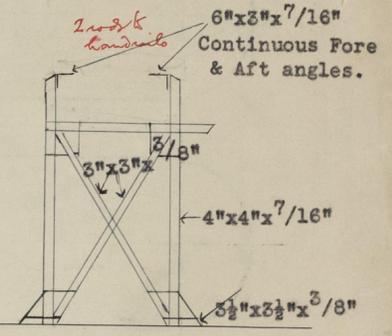
Particulars of Side Scuttles:—

None below the freeboard deck. All scuttles in Poop Bridge & Forecastle fitted with C.I. dead lights.

Particulars of Guard Rails:— Poop & Forecastle, and Rails & Stanchions 3'9" high spaced 4'8" on Poop. 3'9" on F'castle. Three Rails. Bridge Bulwark plate & rail 3'0" high 1/4" plate. Forward & After Wells: Rails & Stanchions 5'5" spacing. 3'6" high, three rails.

Particulars of Gangways, Lifelines, etc.:— From Poop to Bridge & Bridge to Forecastle. Rails & Stanchions 3'6" high on both sides of the fore and aft gangway.

Gangway supports 8 ft. apart



Particulars of Freeing Arrangements.

	Length of Bulkheads No bulwarks	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	189'9"	All Rails & Stanchions.		---	---	---
Forward Well	107'6"					

State position of each freeing port (F. and A. position and height above deck edge) } After Well: --- } Forward Well: ---  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: ---  
Additional area where sheer is less than standard. ---

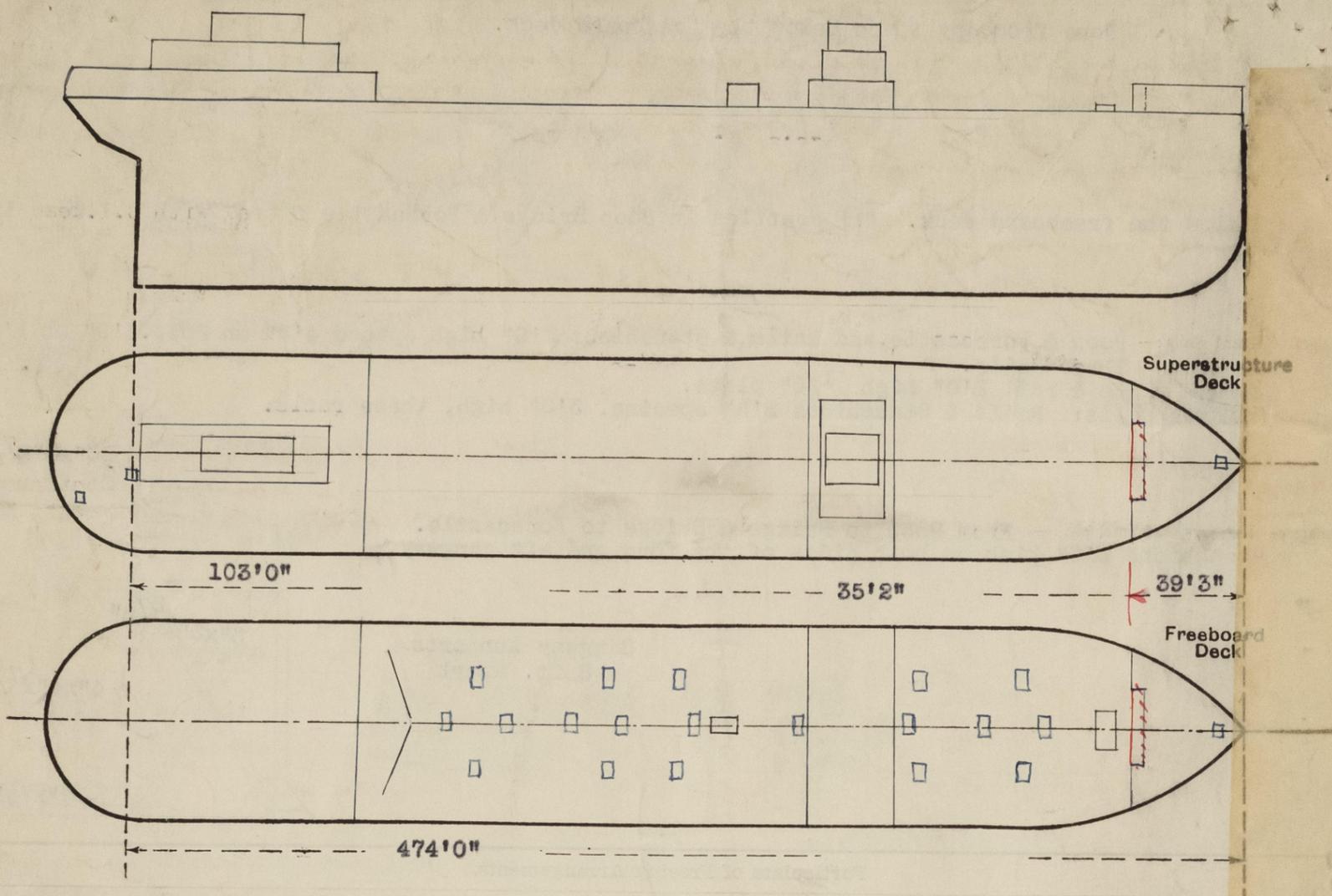
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	17x3 1/2 x 7/16	3/8"	10x3 1/2 x 7/16	25 1/2"	Clips top & bottom	None	---	8'3"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	13 1/2 x 3 1/2 x 7/16	5/16"	6"x3"x3/8"	2'9"	No brackets	5'x3' 2"	22"	8'3"
Bridge, Forward Bulkhead	13 1/2 x 3 1/2 x 7/16	3/8"	9"x3 1/2 x 7/16	2'9"	Brackets top and bottom	5'x3'	22"	8'3"
Forecastle Bulkhead	13x3x3/8	1/4"	4'x3'x3/8"	2'6"	No brackets	5'x3'	22"	8'3"
Trunk, Aft	---							
Trunk, Forward	---							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	---							
Exposed Machinery Casings on Superstructure Decks	6x3 1/2 x 7/16	3/8"	5x3x5/16	2'9"	Brackets on some stiffeners	9 doors at sides	15"	7'9"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	---					5'x2'to2'6"		
Deckhouses on Flush Deck Ships	---							

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

Poop Bulkhead	No openings. 8 Port lights 13" dia. with glasses & hinged deadlights.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	Two openings fitted with bolted & jointed plates. Cannot be manipulated from both sides.
Bridge, Forward Bulkhead	Two openings fitted with hinged doors & bolted joints. -do- -do-
Forecastle Bulkhead	Two openings fitted with doors & bolted joints. -do- -do-
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	---
Exposed Machinery Casings on Superstructure Decks	Doors at sides operated from both sides. (1 P+S hinged steel)
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:—

Two longitudinal bulkheads in way of the oil tanks. Machinery aft.

The vessel was examined on dry dock at this time. The bottom and rudder were in good order.

*W. J. Alderson*

Builder's name and yard number Gotaverken A/B

Names of sister ships \_\_\_\_\_

Owners Skibs.A/S Nordheim. (Halfdan Ditlev-Simonsen & Co.Mgrs.)

Fee £ To be charged.

Received by me \_\_\_\_\_

*110.00*

*2.50*

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*W.J.*



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