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Index. No.  
(For London Office only.)

Rpt. C.11.

ALEXANDRA HÖEGH 34497  
KOLLGRIM 34927  
INNERÖY 35103  
JOTUNFJELL 35176  
KOLLBJORG 38275  
SOLOR 35718  
TRONDHEIM. 35883.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Poop, bridge and forecastle.*Port of Survey *Göteborg*

(Type of Superstructures.)

Date of Survey *3<sup>rd</sup> November 1938*

Ship's Name

Nationality and Port of

Registry

Official Number

Gross Tonnage

Date of Build

*M/S "GARD"**Norwegian  
Haugesund**4412**8260**1938**11 mo*Name of Surveyor *T. Widen*Moulded Dimensions: Length *465'-2"* Breadth *60'-9"* Depth *34'-0"*Moulded displacement at moulded draught = 85 per cent. of moulded depth *18430 cub. metres = 18600 tons*Coefficient of fineness for use with Tables *.797*Particulars of Classification *\* 100 A.1.  
Carrying Petroleum in Bulk  
(Glass contemplated).*

## Depth for Freeboard (D)

Moulded depth ... *34'-0"* ... *34.00*Stringer plate ... *2 1/2"* ... *.07*

Sheathing on exposed deck

$$T \left( \frac{L-S}{L} \right) = \checkmark$$

Depth for Freeboard (D) = *34.07*

## Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R =

$$(34.07 - 31.01) 3 = +9.18"$$

(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R = *3.06*If restricted by superstructures *✓*

## Round of Beam correction

Moulded Breadth (B) *60'-9"*

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 14.58"$$

$$\text{Ship's Round of Beam} = \frac{386}{50} = 15.20"$$

Difference *express = .62*

Restricted to

$$\text{Correction} = \frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.62}{4} \times .6446 = -.10"$$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed EQUIV. ...	94.73	94.73	7'-6"	✓	94.73
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed. EQUIV. ...	32.65	32.65	7'-6"	✓	32.65
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	<del>115.60</del> 37.92	37.92	7'-6"	✓	37.92
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	165.30	165.30			165.30

Standard Height of Superstructure *7.50'*" " R.Q.D. *✓*Deduction for complete superstructure *42.00"*

$$\text{Percentage covered } \frac{S}{L} = 35.54$$

$$\frac{S_1}{L} = 35.54$$

$$\frac{E}{L} = 35.54$$

Percentage from Table, Line A. TANKER = *26.54*  
(corrected for absence of fore-castle (if required))Percentage from Table, Line B. *✓*  
(corrected for absence of fore-castle (if required)) *✓*Interpolation for bridge less than 2L (if required) *✓*

$$\text{Deduction} = 42.00 \times .2654 = 11.15"$$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	56.52	1		56.52	1016 " =	40.00	1		40.00
1/8 L from A.P. ...	25.15	4		100.60	371 " =	14.60	4		58.40
2/8 L " ...	6.22	2		12.44	64 " =	2.52	2		5.04
Amidships ...	-	4		-	0 " =	-	4		-
2/8 L from F.P. ...	12.43	2		24.86	193 " =	7.60	2		15.20
1/8 L " ...	50.30	4		201.20	886 " =	34.88	4		139.52
F.P. ...	113.03	1		113.03	2032 " =	80.00	1		80.00
Total ...				508.65					338.16

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{170.49}{18} (.75 - .1777) = +5.42"$$

If limited on account of midship superstructure. *✓*Mean actual sheer aft = *Deficient*  
Mean standard sheer aftMean actual sheer forward = *Deficient*  
Mean standard sheer forwardLength of enclosed superstructure forward of amidships = } *Deficient*  
" " aft of " = } *shears.*

## Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *34.07*Summer freeboard = *7.42*Moulded draught (d) = *26.65*

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = *6.66 = 6 3/4"*Addition for Winter North Atlantic Freeboard (if required) = *6.66 + 4.65 = 11.31" = 286%*

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 17120$$

Tons per inch immersion at summer load water line

$$T = 58.54$$

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

$$= \frac{17120}{40 \times 58.54} = 7.31" = 7 1/4" = 184%$$

*See end of report.*

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

$$\text{Correction for coefficient} = \frac{.68 + .797}{1.36} = \frac{1.477}{1.36}$$

Depth Correction ... *9.18*Deduction for superstructures ... *11.15*Sheer correction ... *5.42*Round of Beam correction ... *.10*

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

14.60 11.25 + 3.35

Summer Freeboard = *89.13*

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

Tropical Fresh Water Line above Centre of Disc ... *14.1" = 355%*Fresh Water Line " " ... *7 1/4" = 184%*Tropical Line " " ... *6 3/4" = 171%*Winter Line below " " ... *6 3/4" = 171%*Winter North Atlantic Line " " ... *11 1/4" = 286%*Tropical Fresh Water Freeboard ... *7'-5" = 2261"*Fresh Water " " ... *6'-3" = 1906"*Tropical " " ... *6'-9 3/4" = 2077"*Winter " " ... *6'-10 1/4" = 2090"*Winter North Atlantic " " ... *7'-11 1/4" = 2472"*Winter North Atlantic " " ... *8'-4 1/4" = 2547"*



Gard

Particulars of fiddle, funnel and ventilator coamings:— Motor ship. Fiddle, funnel and ventilators on top of engine casing about 16 ft. above poop deck, efficiently constructed and supported. Fiddle fitted with brimmed steel covers.

Particulars of Companionways:— *None fitted*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— All ventilators with cowlings 3 ft. high or above, efficiently constructed and supported. All ventilators provided with means of closing.

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

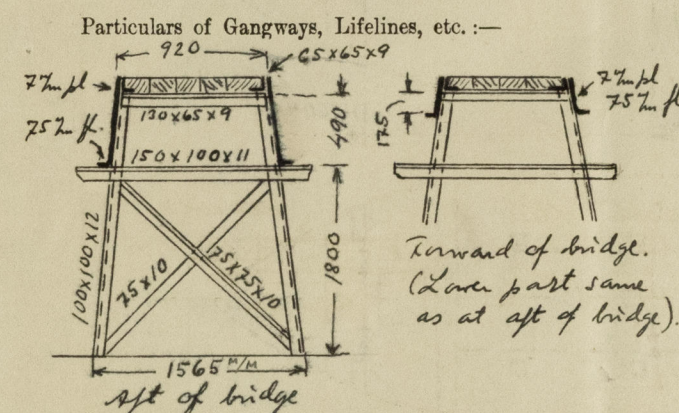
Steel pipes, goose neck type, 19"-22" high, on poop deck, from double bottom compartments and after peak.  
 " " , " " " , 36" " , " foreboard ", from coffer dams and deep tank.  
 All air pipes provided with means of closing.

Particulars of Gangway Cargo and Coaling Ports:— *None fitted* ✓

Particulars of Scuppers and Sanitary Discharge Pipes:— Sanitary discharge pipes from deck house on bridge led overboard above the foreboard deck. Sumps from steering gear compartment and poop space led to the engine room bilges. Sanitary discharge pipes (except from W.C.S below) from poop space and deck house on poop deck led overboard about 2'00" below the foreboard deck and fitted with storm valves at the ship's side. Discharge pipes (copper) from 3 W.C.S in poop, which are of "Shank's" type "Mediteranean" T-5506 (fitted with automatic non-return valves) are led overboard in the engine room about 2'50" below the foreboard deck with cut storm valves at the ship's side.

Particulars of Side Scuttles:— Side scuttles in poop, bridge and fore-castle are of substantial construction and fitted with hinged dead-lights.

Particulars of Guard Rails:— Open rails on freeboard deck, aft part of forecastle deck and on poop deck with 2 rods and top tube, of substantial construction. Standards spaced 5'-2" to 5'-3" apart with stays at every 2<sup>nd</sup> standard. Height of rail on upper deck and forecastle deck 3'-6" and on poop deck 3'-9".



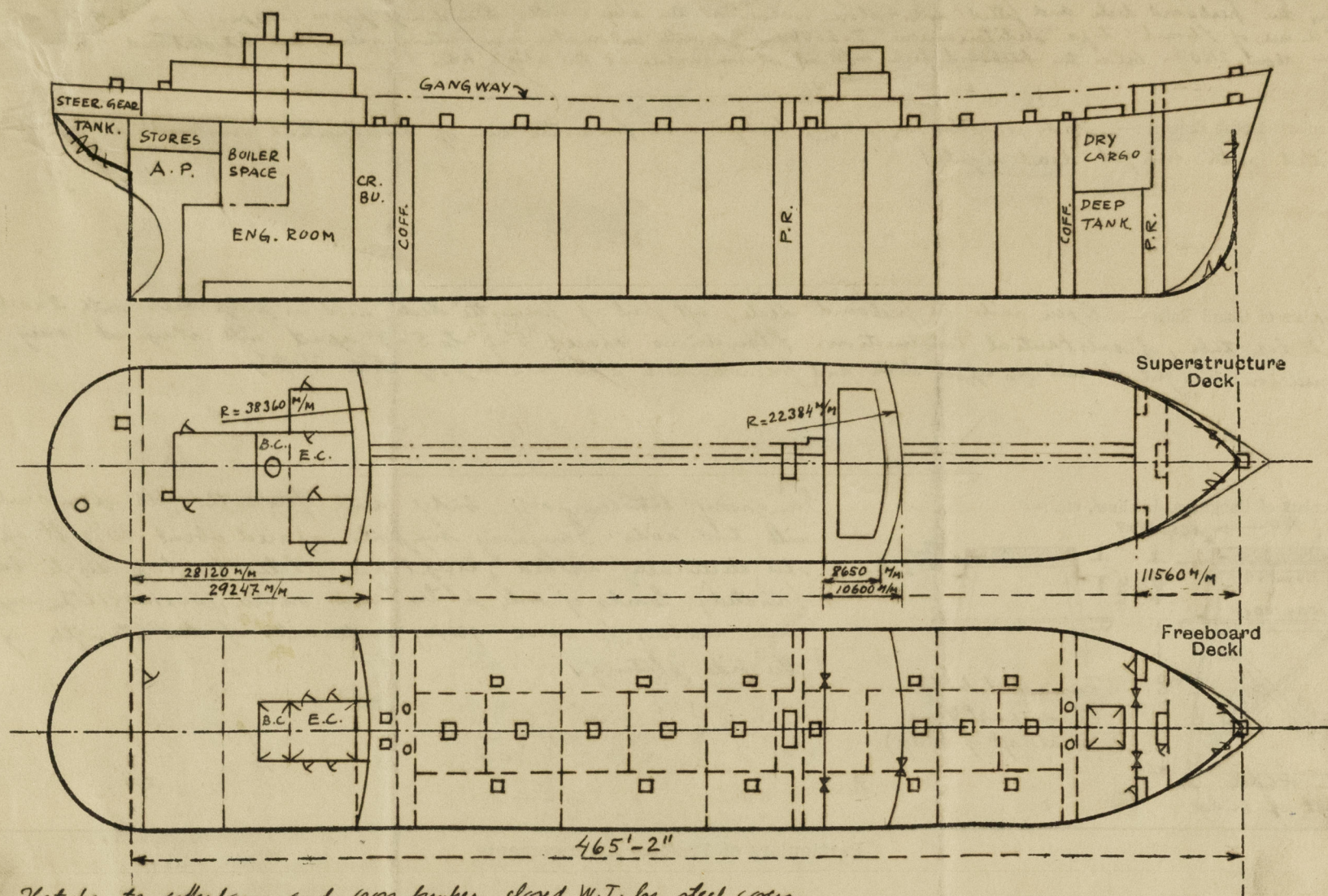
gangway between joist, bridge and forecath with open rails with two rods. Gangway supports spaced about  $10\frac{1}{2}$  ft. apart. All electrically welded, except tide plates to top angle bars. (inserted). Ends of tide plates land on the  $100 \times 100 \times 12$  in supports with welding to same giving continuity of the strength of the tide plating.

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 ... ..	} <i>Open rails fore and aft.</i>					
Forward Well ... ..						
State position of each freeing port ... .. } After Well :— (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 :—						
Additional area where sheer is less than standard.						

Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating mm	Stiffeners mm	Spacing mm	End Attachments of Stiffeners	Size of Openings mm	Height of Sills	Height of Casings
Poop Bulkhead ... ..	✓	11	2 Bulkheads and 750x90x12	250-800	Welded to deck top and bottom.	No openings.	✓	7'-6" ✓
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead ... ..	✓	10	7 150x75x8	760	None	1230x1530 ✓	22" ✓	7'-6" ✓
Bridge, Forward Bulkhead ... ..	✓	11	7 230x90x10 1/2	780	Welded to deck top and bottom.	915x1220 ✓	23 1/2" ✓	7'-6" ✓
Forecastle Bulkhead ... ..	✓	7 1/2	L 115x65x8	800	None	920x1530 ✓	23" ✓	7'-6" ✓
Trunk, Aft ... ..	✓							
Trunk, Forward ... ..	✓							
Exposed Machinery Casings on Free- board or Raised Quarter Deck ...	✓	100% of poop deck 11	7 250x90x12	780	Welded to deck top and bottom.	No openings.	✓	7'-6" ✓
Exposed Machinery Casings on Super- structure Decks ... ..	✓	8 1/2 ft	7 120x65x8	800	None	2-1/4" side scuttles at front.	✓	7'-6" ✓
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ... ..	✓	8 1/2 ft	L 115x65x8	800	None top, cov. bott.		✓	Aft. 16' ✓
Entrance to pump room Deckhouse on Flush Deck Ships ...	✓	8 1/2	100x12 ft. bar welded.	660	Welded to top. None at bottom.	700x1500 ✓	18" ✓	7'-6" ✓
Particulars of Closing Appliances (state if capable of being manipulated from both sides).								
Poop Bulkhead ... ..	No openings. (Only 3 side scuttles with hinged deadlights.) ✓							
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead ... ..	Portable 7 1/2" steel plate (stiffened), secured by hook bolts, spaced 12" apart and not passing through bulkhead.							
Bridge, Forward Bulkhead ... ..	Hinged 12" steel door, secured by 6 wing bolts, manipulated from outside and closed W.T. ✓							
Forecastle Bulkhead ... ..	Portable 7 1/2" steel plate, secured by hook bolts, spaced 12" apart and not passing through bulkhead.							
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	No openings.							
Exposed Machinery Casings on Super- structure Decks ... ..	Two 16" side scuttles at front.							
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ... ..								
Entrance to pump room Deckhouse on Flush Deck Ships ...	Hinged 7" steel door, closed W.T., 4 handles, manipulated from both sides. ✓							



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:—



Hatches to cofferdams and cross bunker closed W.T. by steel covers.  
Entrance to forward pump room: Opening 525 x 1450 mm, 18" fill, 5 mm flanged steel door, closed W.T., manipulated from both sides.

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

Displacement in salt water at 75%, 85% and 95% of moulded depth and tons per inch at same (moulded) draught:

	Displacement.	Tons per inch.
75%	16295	58.2
85%	18720	59.2
95%	21200	60.3

$$\text{Poop} = 92.26 + \left(\frac{2}{3} \times 3.69\right) = 94.73.$$

$$\text{Bridge} = 28.38 + \left(\frac{2}{3} \times 6.398\right) = 32.65$$

Builder's name and yard number Eriksbergs Mekan. Verkstads A.B., No 283.

Names of sister ships M/s "Alexandra Hoegh", M/s "Kollgrin", M/s "Immerig", M/s "Jotunfjell", M/s "Kollbjørn", M/s "Polar" (Nos. 258, 262, 263, 271, 264, 277 reg.)

Owners M/s Corona, Haugesund, Norway.

Fee Nr. 420:- approx.

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