

13298.

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. _____
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Gothenburg</u>
having <u>Poop, Bridge and Forecastle</u>					Date of Survey <u>7th, 9th and 20th of October 1941</u>
(Type of Superstructures.)					Name of Surveyor <u>Bertrand Grawers</u>
Ship's Name <u>M/S TANKLAND</u>	Nationality and Port of Registry <u>Swedish Gothenburg</u>	Official Number <u>8498</u>	Gross Tonnage <u>8044 (Swed.)</u>	Date of Build <u>1941</u>	Particulars of Classification <u>contemplated + 100 A1 carrying Petroleum in Bulk</u>
Moulded Dimensions: Length <u>141.921</u> m Breadth <u>18.518</u> m Depth <u>10.363</u> m					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>18370</u> m ³					
Coefficient of fineness for use with Tables <u>7935</u>					
Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth <u>10363</u>		(a) Where D is greater than Table depth (D - Table depth) R = <u>8.33(10385 - 9.461) 30 = +231</u>		Moulded Breadth (B) <u>18518</u> mm	
Stringer plate <u>32</u> <u>5</u> <u>21.5</u> mm <u>22</u>		(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>924</u>		Standard Round of Beam = $\frac{B \times 8}{50} = 370$	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam = <u>386</u> mm	
Depth for Freeboard (D) = <u>10385</u>				Difference <u>Excess = 16</u> "	
				Restricted to	
				Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{16}{4} \times 0.6437 = -3$ mm	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S) mm	Equivalent Enclosed Length (S ₁)	Height mm	Height Correction	Effective Length (E)
Poop enclosed	<u>28.684</u>	<u>29063</u>	<u>2286</u>	-	<u>29063</u>
„ overhang	<u>29063</u>				
R.Q.D. enclosed					
„ overhang	<u>9950</u>				
Bridge enclosed... ..	<u>9.625</u>	<u>9950</u>	<u>2286</u>	-	<u>9950</u>
„ overhang aft					
„ overhang forward					
Fore enclosed	<u>11560</u>	<u>11560</u>	<u>2286</u>	-	<u>11560</u>
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft					
„ „ forward					
Total	<u>50.573</u>	<u>50.573</u>			<u>50573</u>

Standard Height of Superstructure	<u>2290</u> mm
„ „ R.Q.D.	
Deduction for complete superstructure	<u>1067</u> mm
Percentage covered $\frac{S}{L} =$	<u>35.63</u>
„ „ $\frac{S_1}{L} =$	<u>35.63</u>
„ „ $\frac{E}{L} =$	<u>35.63</u>
Percentage from Table, Line A. Tanker	
(corrected for absence of forecastle (if required))	<u>26.63</u> %
Percentage from Table, Line B.	
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = 1067×0.2663	<u>= -284</u> mm

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	<u>1436</u>	1	<u>1436</u>	<u>1016</u>	<u>1016</u>	1	<u>1016</u>
$\frac{1}{4}$ L from A.P.	<u>638</u>	4	<u>2552</u>	<u>371</u>	<u>371</u>	4	<u>1484</u>
$\frac{1}{2}$ L „	<u>160</u>	2	<u>320</u>	<u>64</u>	<u>64</u>	2	<u>128</u>
Amidships	<u>0</u>	4	-	<u>0</u>	<u>0</u>	4	<u>0</u>
$\frac{3}{4}$ L from F.P.	<u>319</u>	2	<u>638</u>	<u>193</u>	<u>193</u>	2	<u>386</u>
$\frac{1}{4}$ L „	<u>1276</u>	4	<u>5104</u>	<u>886</u>	<u>886</u>	4	<u>3544</u>
F.P.	<u>2032</u>	1	<u>2032</u>	<u>2032</u>	<u>2032</u>	1	<u>2032</u>
Total			<u>12922</u>				<u>8590</u>

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 =
L

„ „ aft of „ =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(0.75 - \frac{S}{2L} \right) = \frac{4332}{18} \left(0.75 - 0.1782 \right) = +138$ mm

If limited on account of midship superstructure.

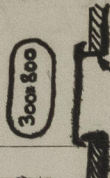
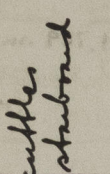
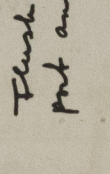
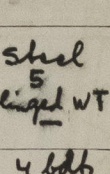
If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	<u>2009</u> mm
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $2009 \times \frac{7935+68}{1.36}$	<u>2177</u>
Depth to Freeboard Deck = <u>10385</u> Ft.	$\Delta = 17046$ tons		
Summer freeboard = <u>2259</u>	Tons per inch immersion at summer load water line	Depth Correction <u>231</u>	
Moulded draught (d) = <u>8126</u>	T = <u>58.84</u>	Deduction for superstructures <u>284</u>	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = <u>169</u> mm	Deduction = $\frac{\Delta}{40 T}$ inches = <u>7.24</u> = <u>184</u> mm	Sheer correction <u>138</u>	
Addition for Winter North Atlantic Freeboard (if required) = <u>169 + 116 = 285</u>	See end of report	Round of Beam correction <u>3</u>	
		Correction for Thickness of Deck amidships	
		Other corrections, scantlings, etc.	
		<u>369</u> <u>287</u> <u>+ 82</u>	
		Summer Freeboard = <u>2259</u> mm	

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

Tropical Fresh Water Line above Centre of Disc	<u>353</u> mm	Tropical Fresh Water Freeboard	<u>1906</u> mm
Fresh Water Line „ „ „ „ „ „	<u>184</u>	Fresh Water „ „ „ „ „ „	<u>2075</u> "
Tropical Line „ „ „ „ „ „	<u>169</u>	Tropical „ „ „ „ „ „	<u>2090</u> "
Winter Line below „ „ „ „ „ „	<u>169</u>	Winter „ „ „ „ „ „	<u>2428</u> "
Winter North Atlantic Line „ „ „ „ „ „	<u>285</u>	Winter North Atlantic „ „ „ „ „ „	<u>2544</u> "

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

Description of Hatchway		HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS								
		Upper deck				Poop deck				
Dimensions of Hatchway		To fore peak	To dry cargo hold	To cargo tanks	To fore-castle	To stores	To steering gear compartment			
COAMINGS	Height above Deck	230	810	810	390	530	620		150mm	
	Thickness	230x90x12	11	10	10	8	8			
	Sides									
	Ends									
Stiffeners			180x10	90x10						
Brackets, Stays										
HATCH BEAMS	Number								150mm	
	Spacing									
	Scantling and Sketch									
	Bearing Surface									
FORE AND AFTERS	Number								150mm	
	Spacing									
	Unsupported Lengths									
	Scantling* and Sketch									
Bearing Surface										
HATCH COVERS	Material	Wood	Steel	Steel	Steel	Wood	Wood		150mm	
	Thickness	63	11	15	5	63	63			
	How fitted	Transverse	Hinged WT	Hinged OT	Hinged WT	F&A	F&A			
	Bearing Surface									
Spacing of Cleats		~450	~380	~360	4 bolts	~560	~460			
Number of Tarpaulins		1				2	2			

*Are wood fore and afters steel shod at all bearing surfaces? —

Are battens and wedges efficient and in good condition? Yes

Are tarpaulins in good condition and in accordance with rule requirements? Yes

Are lashings provided in accordance with rule requirements? No lashings

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 Are battens and wedges efficient and in good condition? Yes
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Particulars of fiddle, funnel and ventilator coamings:— Motor ship. Fiddle, funnel and ventilators on top of engine casing, about 16' above poop deck, efficiently constructed and supported. Fiddle fitted with hinged steel cover. Engine skylight of steel.

Particulars of Flush Bulkhead Scuttles:— To steering gear compartment of steel and closed watertight as above.

Particulars of Companionways:— None fitted

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— All ventilators with steel coamings 3' high or above, efficiently constructed and supported and all provided with means of closing

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— All air pipes of steel pipe of goose neck type and more than 950mm high on freeboard deck and 480mm to 840mm high on superstructure decks. All air pipes fitted with canvas cover for closing same.

Particulars of Gangway Cargo and Coaling Ports:— None fitted.

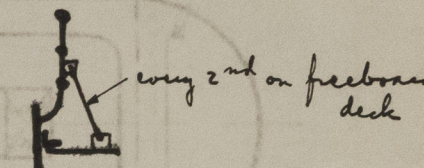
Tankland.

Particulars of Scuppers and Sanitary Discharge Pipes — Scuppers and sanitary discharges from spaces on bridge deck led overboard above the freeboard deck. Scuppers from fore-castle space drained to freeboard deck through the bulkhead. Scuppers and sanitary discharges from spaces inside and on the poop deck are led overboard in way of engine space about 2000mm below the freeboard deck and fitted with storm valves at ship's side. Discharges from WC's in poop space fitted with automatic non return valve and led overboard about 2000mm below freeboard deck.

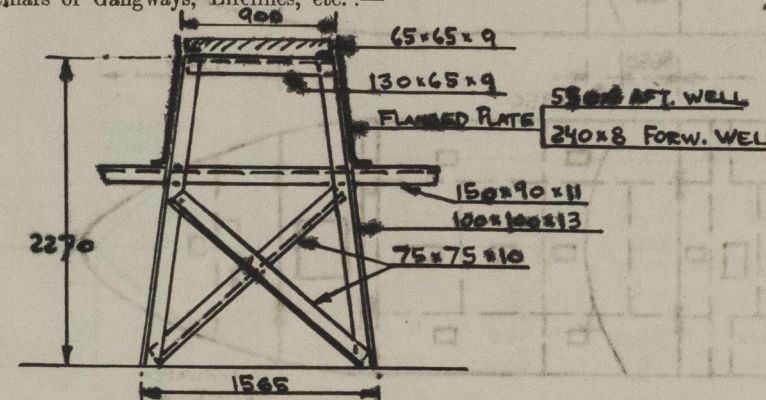
Particulars of Side Scuttles: Side scuttles in poop bridge and poop space are of substantial construction and all fitted with hinged dead lights.

Particulars of Guard Rails:— Open rails on freeboard, fore-castle and poop decks.

Height of rail on freeboard deck = 1080mm, standard spacing ~1500mm
 " " " " fore-castle " 1080mm " " ~1850mm
 " " " " poop " 1120mm " " ~1600mm
 " " " " gangway 1020mm " " ~1400mm



Particulars of Gangways, Lifelines, etc.:



Gangway fitted between poop bridge and fore-castle with open rails on top with 3 rods. Gangway supports spaced about 10 1/2'. Gangway completely welded except side plates to the fore and aft stringer angle on top of gangway (riveted)

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	Open rail fore and aft					
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.

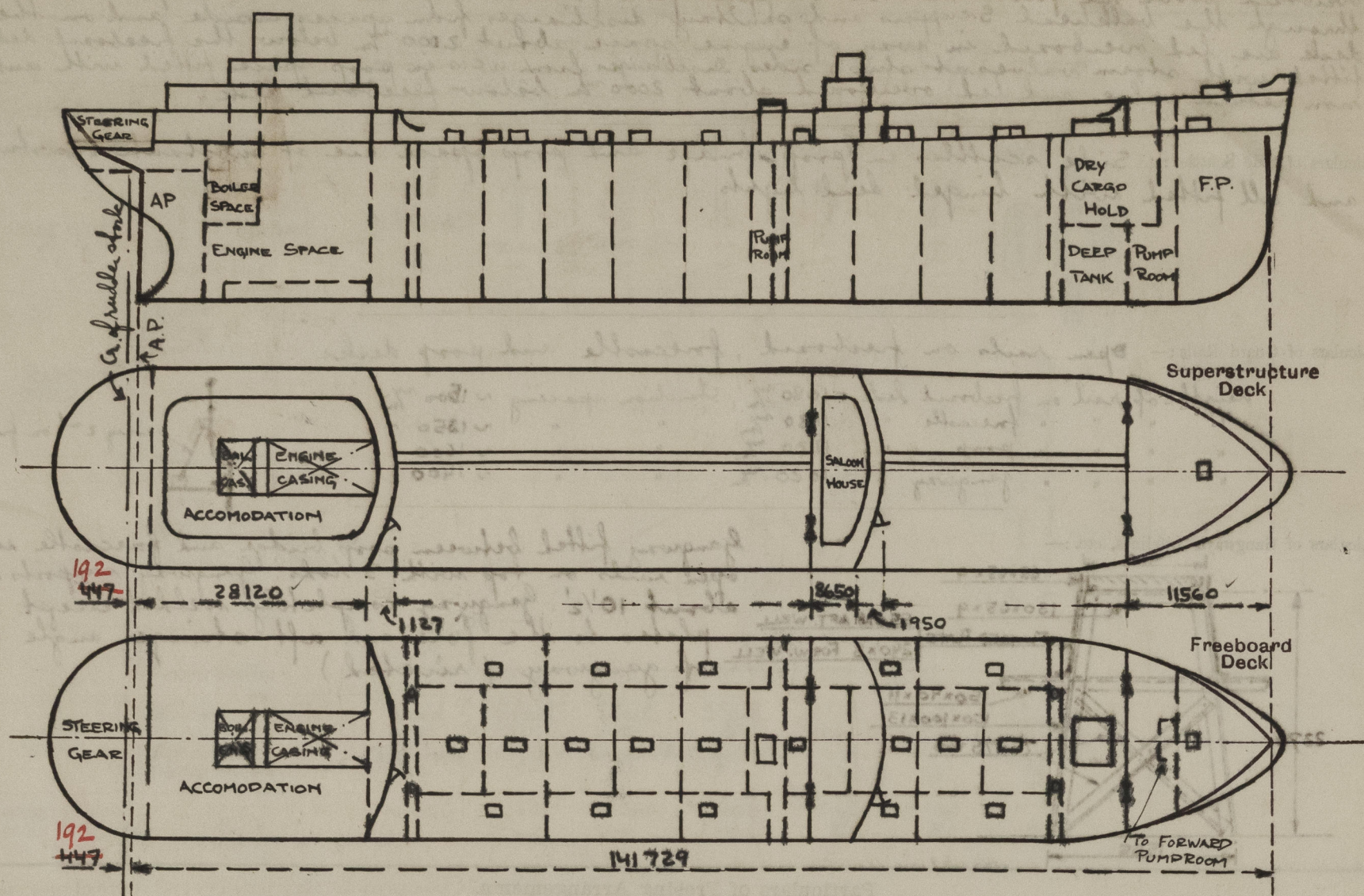
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	12	250x90x12	780	780	Welded top and bottom	1360x600	630	2286
Raised Quarter Deck Bulkhead	—	—	—	—	—	—	—	—
Bridge, After Bulkhead	10	150x75x8	756	756	No attachment	2030x1230	None	2286
Bridge, Forward Bulkhead	11	230x90x10.5	770	770	Welded top and bottom	1220x915	600	2286
Fore-castle Bulkhead	7.5	115x65x8	755	755	No attachment	2100x920	None	2286
Trunk, Aft	—	—	—	—	—	—	—	—
Trunk, Forward	—	—	—	—	—	—	—	—
Exposed Machinery Casings on Freeboard	Poop front centre portion							
Exposed Machinery Casings on Superstructure Decks	8.5	130x65x8	778	778	No attachment	None	None	2286
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	—	—	—	—	—	—	—	—
Punch Room entrance	8.5	Not built with	95x12	720	Cont. top Weld. bottom	1525x710	480	2250

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

Poop Bulkhead	Hinged steel door closed watertight and operated from both sides.
Raised Quarter Deck Bulkhead	—
Bridge, After Bulkhead	Portable steel plates secured by hook bolts not passing through the bld. Spac. 12"
Bridge, Forward Bulkhead	Hinged steel door closed watertight and operated from both sides.
Fore-castle Bulkhead	Portable steel plates secured by hook bolts not passing through the bld. Spac. 12"
Exposed Machinery Casings on Freeboard	No opening.
Exposed Machinery Casings on Superstructure Decks	No opening (two 14" side scuttles).
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	—
Deckhouses on Flush Deck Ships	Hinged steel door closed watertight and operated 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 crossbunkers closed watertight by ordinary manhole steel covers.
 Entrance to forward pumproom inside forecabin, steel casing with 520 x 1460 mm opening and sill 470 mm high. The opening closed by hinged flanged steel door operated from both sides and closed watertight.

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

Displacement and tons/inch in salt water at a moulded draught of 75, 85 and 95% of moulded depth:

	Displacement	Tons/inch
75 %	16 220	58.4
85 %	18 640	59.7
95 %	21 100	60.9

$$\text{Poop } 28120 + 192 + \frac{2}{3} \times 1127 = 29063$$

$$\text{Bridge } 8650 + \frac{2}{3} \times 1950 = 9950.$$

Builder's name and yard number Eriksbergs Mek Verkstads AB, Gothenburg No 296

Names of ^{similar} ~~sister~~ ships my Pontfield (No 289), my Vardefjell (No 292)

Owners Rederiaktiebolaget Motorfark

Apprx.
 Fee £ 420. : Received by me _____