

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. 35203.  
(For London Office only.)

25 FEB 7

Computation of Freeboard for STEAM TUG.  
having Freecastle

(Type of Superstructures.)

Ship's Name "UPESI"	Nationality and Port of Registry Dutch Gravenhage	Official Number ✓	Gross Tonnage not yet measured under deck 3,362 167.45	Date of Build 1936/37
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Moulded Dimensions: Length 31.00 M<sup>2</sup> Breadth 6.75 M<sup>2</sup> Depth 3.36 M<sup>2</sup>  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 393.5 M<sup>3</sup> tons  
Coefficient of fineness for use with Tables .660. (.68 lowest in tables)

Port of Survey Rotterdam  
Date of Survey Building  
Name of Surveyor L. Vuyk.  
Particulars of Classification +100 A1  
"For towing purposes"  
contemplated.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... 3.360	(a) Where D is greater than Table depth (D-Table depth) R = 833(3.403 - 2.066) 7.828 = + 87 m/m	Moulded Breadth (B) 6.75
Stringer plate ... 7	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 1.337	Standard Round of Beam = $\frac{B \times 12}{50} = 135$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) = 63 \times \frac{16880}{31.000}$	If restricted by superstructures	Ship's Round of Beam = 140 m/m
Depth for Freeboard (D) = 3.403		Difference 5
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{5}{4} \times 8839 = - 1 \frac{m}{m}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	3.60	3.60	1.83	✓	3.60
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	3.60	3.60			3.60

Standard Height of Superstructure 1.83 m  
" " R.Q.D. ✓  
Deduction for complete superstructure 411 m/m.  
Percentage covered  $\frac{S}{L} = 11.61$   
" "  $\frac{S_1}{L} = 11.61$   
" "  $\frac{E}{L} = 11.61$   
Percentage from Table, Line A. 5.80  
(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 =  $411 \times .058 = 24 \frac{m}{m}$ .

lowest point of sheer 2.60 M<sup>2</sup> abaft amidships. SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	512	1	512	380	380	1	380
$\frac{1}{6}$ L from A.P. ...	228	4	912	138	138	4	552
$\frac{2}{6}$ L " ...	57	2	114	10	10	2	20
Amidships ...	-	4	-	12	-	4	-
$\frac{2}{6}$ L from F.P. ...	114	2	228	159	132	2	264
$\frac{1}{6}$ L " ...	455	4	1820	537	489	4	1956
F.P. ...	1024	1	1024	1311	1142	1	1142
Total ...			4610	1323			4314

Mean actual sheer aft = Deficient, 60.27% standard  
Mean standard sheer aft  
Mean actual sheer forward = Excess  
Mean standard sheer forward  
Length of enclosed superstructure forward of amidships =  
" " aft of " =  
after Sheer  
Standard  
512-1 512 380-1 380  
228-3 684 138 3 414  
57-3 171 10 3 30  
824 = 60.27%

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{296}{18} \left( .75 - .0580 \right) = \frac{296}{18} \times .6920 = +11 \frac{m}{m}$   
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.	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 438 \text{ m}^3$ Tons per inch immersion at summer load water line T = 1.83 Deduction = $\frac{\Delta}{40 T} \text{ inches} = 6 \text{ cms.}$	TABULAR FREEBOARD corrected for Fresh Deck (if required) Correction for coefficient ✓
Depth to Freeboard Deck = 3.369 Summer freeboard = .300 Moulded draught (d) = 3.069		Depth Correction ... 87 Deduction for superstructures ... 24 Sheer correction ... 11 Round of Beam correction ... 1 Correction for Thickness of Deck amidships ... 34 Other corrections, scantlings, etc. ...
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48} \text{ inches} = 64 \frac{m}{m}$ Addition for Winter North Atlantic Freeboard (if required) = 114 m/m		98 59 + 40 Summer Freeboard = 298 m/m

## SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:— 30 cms.

Tropical Fresh Water Line above Centre of Disc ... 12 cms.	Tropical Fresh Water Freeboard ... 18 "
Fresh Water Line " " ... 6 "	Fresh Water " " ... 24 "
Tropical Line " " ... 6 "	Tropical " " ... 24 "
Winter Line below " " ... 6 "	Winter " " ... 36 "
Winter North Atlantic Line " " ... 11 "	Winter North Atlantic " " ... 41 "

5-MAR 1937

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RECEIVED  
17 MAR 1937



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway	...	...	...	FOREHOLD HATCHWAY					
Dimensions of Hatchway	...	...	...	2100 x 1000					
COAMINGS	Height above Deck	...	...	600 mm ABOVE WOOD DECK					
	Thickness	...	...	9.35					
	Stiffeners	...	...	none					
	Brackets, Stays	...	...	none					
HATCH BEAMS	Number	...	...	2					
	Spacing	...	...	2.50 m					
	Scantling and Sketch	...	...	See sketch					
	Bearing Surface	...	...	75%					
FORE AND AFTERS	Number	...	...	one at centre					
	Spacing	...	...	2.50 m					
	Unsupported Lengths	...	...	180 x 155 mm					
	Scantling and Sketch	...	...	See sketch					
HATCH COVERS	Material	...	...	pin					
	Thickness	...	...	57 mm					
	How fitted	...	...	girthwatches					
	Bearing Surface	...	...	45% & 65%					
Spacing of Cleats	...	...	...	610 mm					
Number of Tarpaulins	...	...	...	two					
*Are wood fore and afters steel shod at all bearing surfaces? <i>no. X</i> Are battens and wedges efficient and in good condition? <i>yes. ✓</i> Are tarpaulins in good condition and in accordance with rule requirements? <i>yes. ✓</i> Are lashings provided in accordance with rule requirements? <i>yes. ✓</i>									

Particulars of fiddle, funnel and ventilator coamings: *Engine room skylight all steel with steel flaps strongly constructed. Fiddle, funnel and ventilators in efficient condition.*

Particulars of Flush Bunker Scuttles: *Three each side in alleyway along boiler room casing. 16" dia. opening, screw down type, chain connection fitted. ✓*

Particulars of Companionways: *Two steel companionways in casing over after cabin with 690 mm above steel deck, steel hinged double doors operated from both sides, steel sliding top fitted. ✓*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: *36 32 on forecastle deck 2 vents 140 mm dia. coaming 920 x 8 mm to enclose forecastle on main deck 1 vent 220 mm " 920 x 8 mm " " " 2 vents 220 mm " 920 x 8 mm " forehold.*

*Wood plugs and canvas covers for all vents on board.*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks: *on forecastle deck 1 off 2" dia. x 18" high from forepeak on main deck 2 off 2" " x 32" " double bottom tank 1 off 3" " x 35" " afterpeak.*

*Canvas covers for all air pipes on board. ✓*

Particulars of Gangway Cargo and Coaling Ports: *✓*

Particulars of Scuppers and Sanitary Discharge Pipes: *4 scuppers from foreboard deck cut through stringer angle. San. discharges: One on starboard and two on port amidships below foreboard deck with cast steel chest and metal stormvalves to ship side.*

Particulars of Side Scuttles: *none below foreboard deck.*

Particulars of Guard Rails: *on forecastle deck open railing with 2 rds. 35" high, stanchions spaced 3' 8" apart. on foreboard deck steel bulwarks 3' 3" high, efficiently constructed and supported.*

Particulars of Gangways, Lifelines, etc.: *Provision made for rigging lifelines, which are available in any part of the ship which might have to be used by the crew in the regular working of the vessel.*

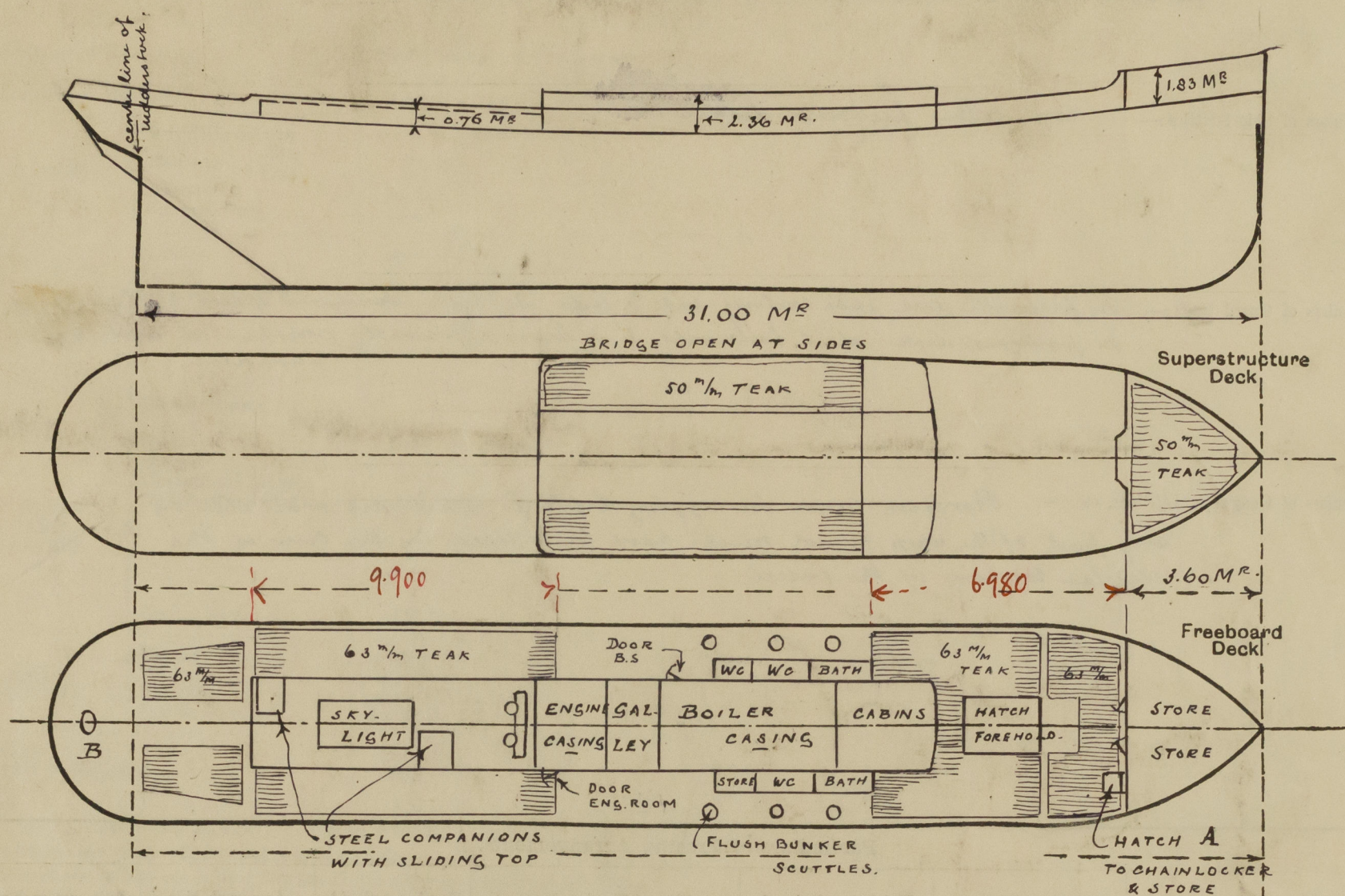
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	27.40 M <sup>2</sup>	1.00 M <sup>2</sup>	640 x 430 mm	5	1.38	
Forward Well						
State position of each freeing port ... After Well: 60 mm above deck edge. (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: <i>one horizontal rail 19 mm.</i> 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	✓							
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	✓							
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	vertical plating 6 mm	65 x 50 x 6 A	650 mm	none		1.38 x 0.64	305	1.83 M <sup>2</sup>
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	7	6	75 x 65 x 6	550	hatches on top	1.30 x 0.63	610	2.36 M <sup>2</sup>
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).								
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	✓							
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
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:—



The vessel has been examined and particulars taken whilst placed on the slipway

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

Small Hatches on freeboard deck

A to chainlocker 680 x 680 mm coaming 600 mm above deck

hatches 57 mm clear space 400 mm apart 2 tarpaulins

B to afterpeak tank oval 5 1/2 inch channel coaming with steel bulkhead cover.

Displacement inclusive shell plating at 2900 mm draught	-	402.9 M <sup>3</sup>
" " " " " 2950 mm "	-	411.9 M <sup>3</sup>
" per c.m. " " " at 2900 mm "	-	1.79 M <sup>3</sup>
" " " " " 2950 mm "	-	1.8 M <sup>3</sup>

Builder's name and yard number *N.V. Boel's Scheepswerven en Machinefabriek* Yard number *863*

Names of sister ships

Owners *Verenigde Nederlandsche Scheepvaart Maatschappij*

Fee *48.00* will be Received by me *L. Vuur*



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Foundation