

REVISED : FOR DISPLACEMENT: CAMBER :

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(For London Office only.)

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

ANTONIO DE

AREVALO
 ex MV. "ARONLAND"
 Deutsche Werft AG. N°635

Official Number
 Nationality and Port of Registry
 GROSS TONNAGE
 Date of Build

Port of Survey

Date of Survey 10.4.52

Surveyor's Signature

Particulars of Classification +100/81

Carrying Petroleum - Bulk

Moulded Dimensions: Length 511.0 ✓ Breadth 68.0 ✓ Depth 39.0 ✓

Moulded displacement at moulded draught = 85 per cent. of moulded depth 24,856 ✓ tons
(excluding bossing)

Coefficient of fineness for use with Tables 76 ✓

DEPTH FOR FREEBOARD (D).

Moulded depth ... 39.00

Stringer plate 21 in. ... 0

Sheathing on exposed deck

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

Depth for Freeboard (D) = 39.07 ✓

DEPTH CORRECTION.

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

$$(39.07 - 39.00) \times 3 = +15.00''$$

(b) Where D is less than Table depth (if allowed)
(Table depth-D) R =

If restricted by superstructures ✓

ROUND OF BEAM CORRECTION.

Moulded Breadth (B) 68.00 ✓

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 16.32''$$

$$\text{Ship's Round of Beam} = 16.38''$$

Difference + 0.06''

Restricted to

$$\text{Correction} = \frac{\text{Diff}^c}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{0.06 \times 1523}{4} = -0.01''$$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	116.26	116.26	8.0	-	116.26
" overhang	42	21	"	-	21
R.Q.D. enclosed					
" overhang					
Bridge enclosed	36.44	36.44	8.0	-	36.44
" overhang aft					
" overhang forward					
F'cle enclosed	55.33	55.33	7.5	-	55.33
" overhang					
Trunk aft		35.48	8.0	-	35.48
" forward					
Tonnage opening aft					
" " forward					
Total	208.45	243.72			243.72

Standard Height of Superstructure 7.50 ✓

" " R.Q.D. - ✓

Deduction for complete superstructure 42.00 ✓

$$\text{Percentage covered } \frac{S}{L} = 40.80 \%$$

$$\frac{S_1}{L} = 47.70 \%$$

$$\frac{E}{L} = 38.70 \%$$

Percentage from Table, Line A. Tanker (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)

$$\text{Deduction} = 42.00 \times 38.70 = -16.25''$$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	61.10	1	61.10	44.88	44.88	1	44.88
1/4 L from A.P.	27.19	4	108.76	3.00	3.00	4	12.00
1/2 L	6.72	2	13.44	-	0	2	0
Amidships	-	4	-	-	-	4	-
3/4 L from F.P.	13.44	2	26.88	-	0	2	0
1/4 L	54.38	4	217.52	12.00	12.00	4	48.00
F.P.	122.20	1	122.20	93.75	93.75	1	93.75
Total			529.90				198.63

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{351.27}{18} \left(.75 - \frac{204.5}{243.72} \right) = +10.65''$$

If limited on account of midship superstructure.

Mean actual sheer aft

Mean standard sheer aft

Mean actual sheer forward

Mean standard sheer forward

Length of enclosed superstructure

L

forward of amidships

aft of

aft of

aft of

aft of

aft of

aft of

aft of

aft of

aft of

aft of

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Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.

Depth to Freeboard Deck = 39.07

Summer freeboard = 8.79

Moulded draught (d) = 30.28

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for

Winter freeboard = 4 inches = 7.57

Addition for Winter North Atlantic Freeboard (if

required) = 7.57 + 5.11 = 12.68 = 320.4

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 22460$$

Tons per inch immersion at summer load water line

$$T = 69.75$$

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

$$= \frac{22460}{40 \times 69.75} = 8.05''$$

$$= 205 \text{ mm.}$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{76+68}{1.36} = \frac{144}{1.36}$

Depth Correction ... 15.00

Deduction for superstructures ... 16.25

Sheer correction ... 10.65

Round of Beam correction ... 0.01

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. to correspond

to summer moulded draught of 30.28 ft.

Summer Freeboard = 105.50

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

Tropical Fresh Water Line above Centre of Disc

Fresh Water Line " "

Tropical Line " "

Winter Line below " "

Winter North Atlantic Line " "

Tropical Fresh Water Freeboard

Fresh Water " "

Tropical " "

Winter " "

Winter North Atlantic " "