

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD. 22 SEP 1955

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Not Recd - Vol
26/9/55

Ship's Name TARAPACA	Official Number	Nationality and Port of Registry CHILE VALPARAISO	Gross Tonnage 1385	Date of Build 1955- 11 MO	Port of Survey BREMERHAVEN
Moulded Dimensions: Length 75.72 m Breadth 12.2 m Depth 4.5 m (6.9 m)					Date of Survey SEPT & OCT., 1955
Moulded displacement at moulded draught = 85 per cent. of moulded depth 2390 m³ / FREEBOARD					Surveyor's Signature A. J. B. C.
Coefficient of fineness for use with Tables .68 (ACTUAL 676)					Particulars of Classification * 100 A1

DEPTH FOR FREEBOARD (D).

Moulded depth ... **4.500**
 Stringer plate ... **8**
 Sheathing on exposed deck **1**
 $T \left(\frac{L-S}{L} \right) =$
 Depth for Freeboard (D) = **4.508**

DEPTH CORRECTION.

(a) Where D is greater than Table depth
(D-Table depth) R =
 (b) Where D is less than Table depth (if allowed)
(Table depth-D) R =
833(5.048-4.508) mm = -86 mm.
 If restricted by superstructures

ROUND OF BEAM CORRECTION.

Moulded Breadth (B) **12.20**
 Standard Round of Beam = $\frac{B \times 12}{50} = 244$
 Ship's Round of Beam = **NIL, 240 mm**
 Difference **244**
 Restricted to **244 x .0088**
 Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S}{L} \right) = +1 \text{ mm.}$

DEDUCTION FOR SUPERSTRUCTURES.

SEE OVERLEAF SKETCH
POOP, BRIDGE & FORECASTLE
UNDER SHELTER DECK.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poep enclosed	6.300	6.300	2.400	✓	6.300
" overhang					
R.Q.D. enclosed					
" overhang	68.180				
Bridge enclosed	63.940	63.180	"	✓	68.180
" overhang aft					
" overhang forward					
Fore enclosed	4.440				
" overhang					
Trunk aft					
" forward		.4590 m			
Tonnage opening aft	1.240	0.569	"	✓	.569
" forward					
Total	75.720	75.049			75.049

Standard Height of Superstructure **1830 mm**R.Q.D. **784 mm**Deduction for complete superstructure **784 mm**Percentage covered $\frac{S}{L} = 100$ $\frac{S_i}{L} = 99.12$ $\frac{E}{L} = 99.12$ Percentage from Table, Line A.23 **98.91**

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **98.91**

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = **.9891 x 784 = 775 mm**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	885	1	885	791	1361	1	1361
1/2 L from A.P.	393	4	1572	387	606	4	2424
1/2 L "	98	2	196	92	150	2	300
Amidships	0	4	0	0	0	4	0
1/2 L from F.P.	197	2	394	192	234	2	468
1/2 L "	786	4	3144	756	948	4	3792
F.P.	1769	1	1769	1560	2130	1	2130
Total			7960	+570			10475

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{2313}{18} \times .25 = -35 \text{ mm.}$
 If limited on account of midship superstructure.

Mean actual sheer aft = **EXCESS**Mean actual sheer forward = **EXCESS**

Length of enclosed superstructure forward of amidships = **784 mm**
 " " aft of " = **784 mm**
 } **EXCESS TO**

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.
 Depth to Freeboard Deck = **4508**
 Summer freeboard = **51**
 Moulded draught (d) = **4457**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **93**Addition for Winter North Atlantic Freeboard (if required) = **93 + 51 = 144**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$

Tons per inch immersion at summer load water line

T = **19.7 TONS.**Deduction = $\frac{\Delta}{40 \text{ T}}$ inches**94 mm**

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient **NIL**Depth Correction ... **86**Deduction for superstructures ... **775**Sheer correction ... **35**Round of Beam correction ... **1**Correction for Thickness of Deck amidships ... **-**Other corrections, scantlings, etc. ... **-**

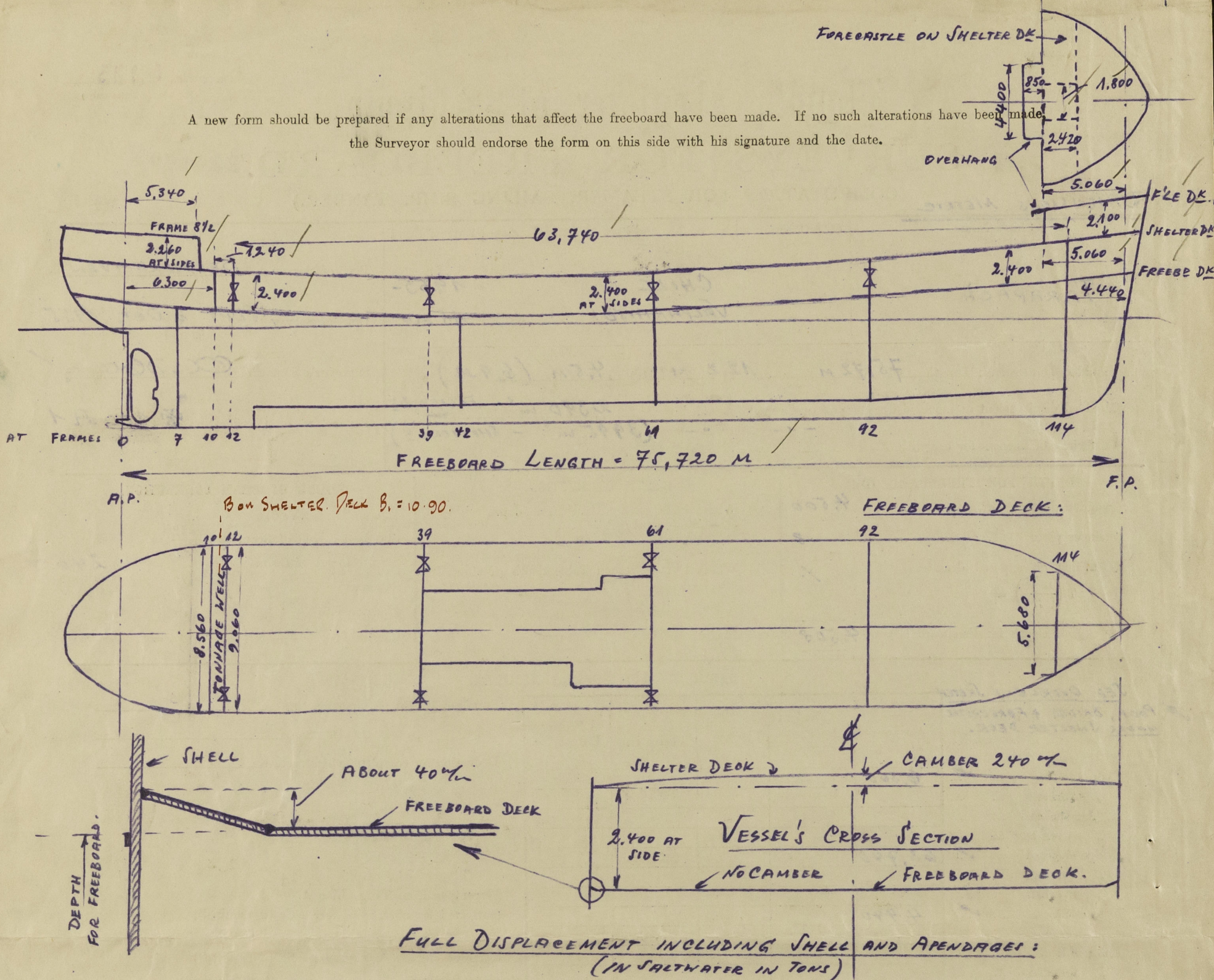
+	-
	86
	775
	35
1	
-	-
-	-
1896	895

Summer Freeboard = **-83**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :- **Continued to side 51 mm (LIMITED)**

Tropical Fresh Water Line above Centre of Disc	94
Fresh Water Line	94
Tropical Line	NIL
Winter Line below	93
Winter North Atlantic Line	144

Tropical Fresh Water Freeboard	MINUS 43
Fresh Water	MINUS 43
Tropical	51 (LIMITED)
Winter	144
Winter North Atlantic	195

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.



FULL DISPLACEMENT INCLUDING SHELL AND APENDAGES:
(IN SALTWATER IN TONS)

	DRAUGHT (TO TOP OF KEEL)	DISPLACEMENT (IN TONS)	TONS PER INCH IMMERSION
	4.50 M.	2.942	19.8
	4.35 M.	2.825	
	4.20 M.	2.709	19.6
	4.05 M.	2.594	

$$\frac{B_1 - b}{B_1} = \frac{10.9 - 5.9}{10.9}$$

$$= \frac{5}{10.9}$$

$$= .459$$

Trade of ship UNRESTRICTED ATLANTIC TRADE

Names of sister ships "ANTOFAGASTA" (MESSRS. RICKMERS' YARD NO 271)

Builder's name and yard number RICKMERS WERFT BREMERHAVEN, YARD NO 272

Owners CORPORACION DE FOMENTO DE LA PRODUCCION SANTIAGO DE CHILE.

Fee £ 32 10 0
Exp. NIL

Bremen, the 15th September 1955
A. J. J. J.
Lloyd's Register
Foundation