

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. 23402
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

No. 25

Poop, Bridge & Forecastle

Port of Survey

Falmouth

(Type of Superstructures.)

Date of Survey

2/2/32. 3/3/32. 5/3/32.

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

SS. "SAN VALERIO" N.N.
KUPHUSBritish
London.

185301.

6433.

1913. 12.

Name of Surveyor

A. Scullant & Co. Hoffmann

Moulded Dimensions: Length

419.5

Breadth

54.29

Depth

32'-8 1/2"

Moulded displacement at moulded draught = 85 per cent. of moulded depth

14,624

tons

Coefficient of fineness for use with Tables

.808

Particulars of Classification

100 A1.

Carrying Petroleum in bulk

Depth for Freeboard (D)				Depth correction		Round of Beam correction	
Moulded depth	...	...	32.71	(a) Where D is greater than Table depth (D - Table depth) R =	✓	Moulded Breadth (B)	54.29
Stringer plate	...	...	.05	(32.76 - 27.96) × 3 =	+ 14.40	Standard Round of Beam = $\frac{B \times 12}{50}$	= 13.03
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	...	...	✓	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	✓	Ship's Round of Beam	= 13 1/2
Depth for Freeboard (D) =	32.76			If restricted by superstructures	-	Difference	.47
						Restricted to	
						Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right)$	= .47 × .8937 = -.07

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	102.0	102.00	7'-6"	-	102.00
" overhang	32.29	.14			.14
R.Q.D. enclosed	✓				
" overhang	✓				
Bridge enclosed	25.25	25.25	7'-6"	-	25.25
" overhang aft	9.25	.56			.56
" overhang forward	48.06	40.06	7'-6"	-	42.44
F'cle enclosed	2.94	2.41			
" overhang	✓				
Trunk aft	✓				
" forward	✓				
Tonnage opening aft	✓				
" " forward	✓				
Total	171.29	170.42			170.42

Standard Height of Superstructure

7.50

R.Q.D.

Deduction for complete superstructure

42

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

40.83%

S₁

L

40.63%

E

L

40.63%

Percentage from Table, Line A.

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. TANKER

31.63%

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = 42 × .31.63 = - 13.28

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	51.95	1		51.95	62.5	62.50	1		62.50
1/4 L from A.P.	23.12	4		92.48	26.46	26.46	4		105.84
2/4 L	5.71	2		11.42	6.61	6.61	2		13.22
Amidships	-	4		-	-	-	4		-
1/4 L from F.P.	11.43	2		22.86	13.23	13.23	2		26.46
1/4 L	46.24	4		184.96	52.93	52.93	4		211.72
F.P.	103.90	1		103.90	120.5	120.50	1		120.50
Total				467.57					540.24

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{72.67}{18} (.75 - .2041) = - 2.20$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 32.76
 Summer freeboard = 6.04
 Moulded draught (d) = 26.72

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.68 = 6 3/4"

Addition for Winter North Atlantic Freeboard (if required = 4.19 = 4 1/4"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ = 14093

Tons per inch immersion at summer load water line

T = 46.9

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

= 7.51 = 7 1/2"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.808 + .68}{1.36} = \frac{1.488}{1.36}$

	+	-
Depth Correction	14.40	-
Deduction for superstructures	-	13.28
Sheer correction	-	2.20
Round of Beam correction	-	.07
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	14.40	15.55

Summer Freeboard = 72.45

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

Tropical Fresh Water Line above Centre of Disc	14 1/4"	Tropical Fresh Water Freeboard	6'-0 1/2"
Fresh Water Line	7 1/2"	Fresh Water	4'-10 1/4"
Tropical Line	6 3/4"	Tropical	5'-5"
Winter Line below	6 3/4"	Winter	5'-5 3/4"
Winter North Atlantic Line	11"	Winter North Atlantic	6'-7 1/4"

18 JAN 1933

1000,231

RECEIVED 28 NOV 1934

17 JAN 1933

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS							
Description of Hatchway	Fore HOLD	12 MAIN TANK	8 MAIN TANK	10 SUMMER TANK	FORD. P ROOM.	FOREDEEP. P ROOM. THE WELL	
Dimensions of Hatchway	9'-0" x 12'-0"	10'-0" x 9'-0"	10'-0" x 8'-0"	6'-0" x 3'-9"	10'-0" x 6'-0"	1'-3" x 1'-3"	SMALL HATCHES ON POOP
COAMINGS { Height above Deck { Thickness { Sides { { Ends Stiffeners Brackets, Stays	30" 36" 36" ✓	12"x4"x4"x-50 [access hatch 6'-0" x 3'-9"	31" 44" 44"	24" 5" 15	18 1/2" .50 .50	1'-3" x 1'-3" 18 1/2" .50 .50	2 @ 3'-6" x 3'-9" 19" COAMING 7/16" THICK ✓ 1/2" STEEL COVER NUTTED BATS & BOLTS ✓ 2 @ 3'-6" x 3'-9" 18" COAMING 7/16" THICK ✓ 2 1/2" WOOD COVERS 2 TARPAULINS ✓
HATCH BEAMS { Number { Spacing { Scantling and Sketch Bearing Surface	4' 6" 7' 3x3 1/2 x 40 18' 5 1/2" x 34 15' 4" x 50 3"				4'-0" x 3'-9" 6' x 3 1/2" x 5"		2 @ 6'-0" x 3'-9" 18" COAMING 5/16" THICK ✓ 2 1/2" WOOD COVERS 2 TARPAULINS ✓ 1 @ 3'-0" x 1'-0" 18" COAMING 5/16" THICK ✓ 2 1/2" WOOD COVERS 2 TARPAULINS ✓
FORE AND AFTERS { Number { Spacing { Unsupported Lengths { Scantling* and Sketch Bearing Surface	✓ ✓ ✓ ✓ ✓					2 1/2"	1 @ 1'-9" x 1'-6" 9" x 2 1/2" BA COAMING ✓ 2 1/2" WOOD COVERS 2 TARPAULINS ✓ ALL CLEATS & BATTENS EFFICIENT ✓ BEARING SURFACES 2 1/2" ✓
HATCH COVERS { Material { Thickness { How fitted { Bearing Surface	Steel Access No with wing Nuts & bolts	MAIN. Steel .50 Kinged bolts & wing nuts	ACCESS. Steel .50 Kinged bolts & nuts	Steel .50 Kinged bolts & wing nuts	Steel .50 bolted access. Steel .50 Kinged bolts wing nuts	Wood 2 1/2"	
Spacing of Cleats							efficient
Number of Taraulins							2.

Particulars of fiddley, funnel and ventilator casings:— stockhold gratings covered with strong steel hinged covers. Fiddley & funnel & ventilators in efficient condition. Engine Room skylight of steel strongly constructed. (Renewed) Pump Rooms, skylights of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways :—

Particulars of Companionways:—									
✓	Strong	Steel doors	PTS To machinery spaces	4'6" x 2'0"	19" sills	manipulated both sides	✓		
✓	"	"	to Storehold pump room	5'0" x 2'6"	9" sills	"	"		
✓	"	"	PTS to galley	4'6" x 2'0"	19" sills	"	"		
✓	"	wood	to accommodation PS	4'6" x 2'0"	19" sills	"	"		✓
2	"	"	to hospital	4'6" x 2'0"	19" sills	"	"		✓
1	"	Steel	to Pump Room after Well	4'6" x 2'6"	19" sills	"	"		✓

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :-						POSITION NO DIA COAMING LED TO COVER.			
POS.	DIA	COAMING HT. IN TH.	LED FROM	COVER.		POS.	DIA	COAMING HT. IN TH.	LED TO COVER.
F.Ck DECK	9"	30 S .25 F PEAR	PLUG CANVAS	"	✓	BRIDGE DK.	5 7"	18 W .25 ACCOM "	PLUG CANVAS
"	9"	30 W .25 F Ck	"	"	✓	"	1 7"	22 W .25 " " "	" " ✓
"	7"	28 " .25 " "	"	"	✓	PUMP ROOM.			
"	19"	30 " .375 F HULL	"	"	✓	after Well.	2 14"	TOP OF CASE 375 F. Room	" " ✓
AFT. WELL	19"	38 S .375 " "	"	"	✓				

all vents are constructed in accordance with the rules

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :-					
POSITION	NO	DIA	HT.	LED FROM	COVER.
F.Ck DECK	2	3½"	10"	F. DEEP	GAUZE WIRE
F.Ck DECK	2	3½"	36"	COFF DAM	"
AFT. WALL	2	3½"	33"	WING.	"
"	2	3½"	38"	COFF DAM	"

BUNKER

Particulars of Gangway Cargo and Coaling Ports:—

None.

SAN. VALERIO

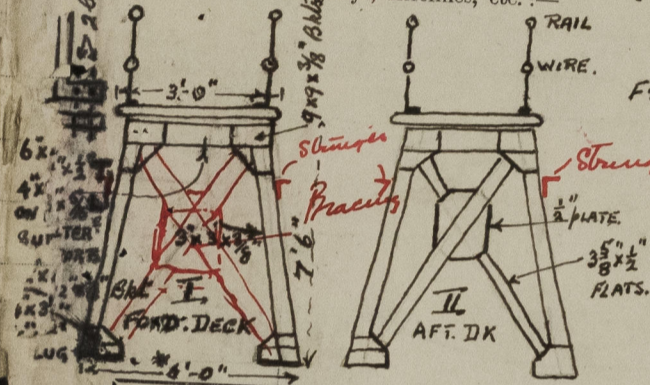
Particulars of Scuppers and Sanitary Discharge Pipes — SCUPPERS: 3 FORD WELL. 5 AFT WELL PTS 4"x3" THROUGH DECK. ✓
 SANITARY PIPES: FORD 1 PTS discharging above freeboard deck WC no storm valves ✓
 2 PTS from Capt. 3" below deck WC no storm valves ✓
 MIDSHIPS 1 PTS from Capt. 7 Officers WCs. "wash places no storm valves ✓
 1 PTS " " " Baths discharging 3'-0" below freeboard deck Single Storm Valves ✓
 ART. 2P " Eng'rs WC & bath 3'-0" " " no valves ✓
 1 PTS " galley 3'-0" " " Single Valves ✓
 Particulars of Side Scuttles: Field 12250 " " " above " no valves ✓

Part of Side Scuttles:	File.	6P755	9" dia	20"	below deck.	hinged	glass	7	dead lights (hinged)	✓
Midships	4P745	16"	18"	"	"	"	"	7	"	✓
Poops	6P755	16"	18"	"	"	"	"	7	"	✓
	1P715	10"	12"	"	"	"	"	7	"	✓

Particulars of Guard Rails:—

	1 st Cl.	2 Rails	with Stanchions	3'-6" high	4'-8" apart	✓
Bridge	3	"	"	3'-6"	5-0	✓
Roofs	3	"	"	3'-6"	4'-8"	✓

Particulars of Gapways, Lifelines, etc. :—



F & A Gangway from bridge to F&C. with 10 supports as per sketch I
average spacing 10'-6"

FrA. Gangway from bridge to poop with 3 " " " I
and 8" supports as per sketch II average spacing 10' 6"
* Where supports are 2' apart

* Where supports are between hatch coamings the base measurement is 2'-8" and side members vertical. Guards, one rail & one wire with stanchions 3'-0" high 4'-6" apart.

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	137.96 $139' 2''$	$3' 8''$	$5 @ 36' \times 19''$ $1 @ 26\frac{1}{2}' \times 13''$ $2 @ 28' \times 16''$	8	135.5 sq. ft.	14 Area
Forward Well	110.25 $111' 6''$	$3' 8''$	$4 @ 36' \times 19''$ $1 @ 28' \times 16''$	5	139.4 sq. ft. 109.6 ft	126.6 ft 101.2 ft

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:— *See sketch attached*

Additional area where sheer is less than standard. *rails 9" apart.*

State position of each freeing port, ...
(F and A. position and height above deck edge)
State whether the freeing ports are fitted with ...

After Well:—
Forward Well:— *See sketch attached*

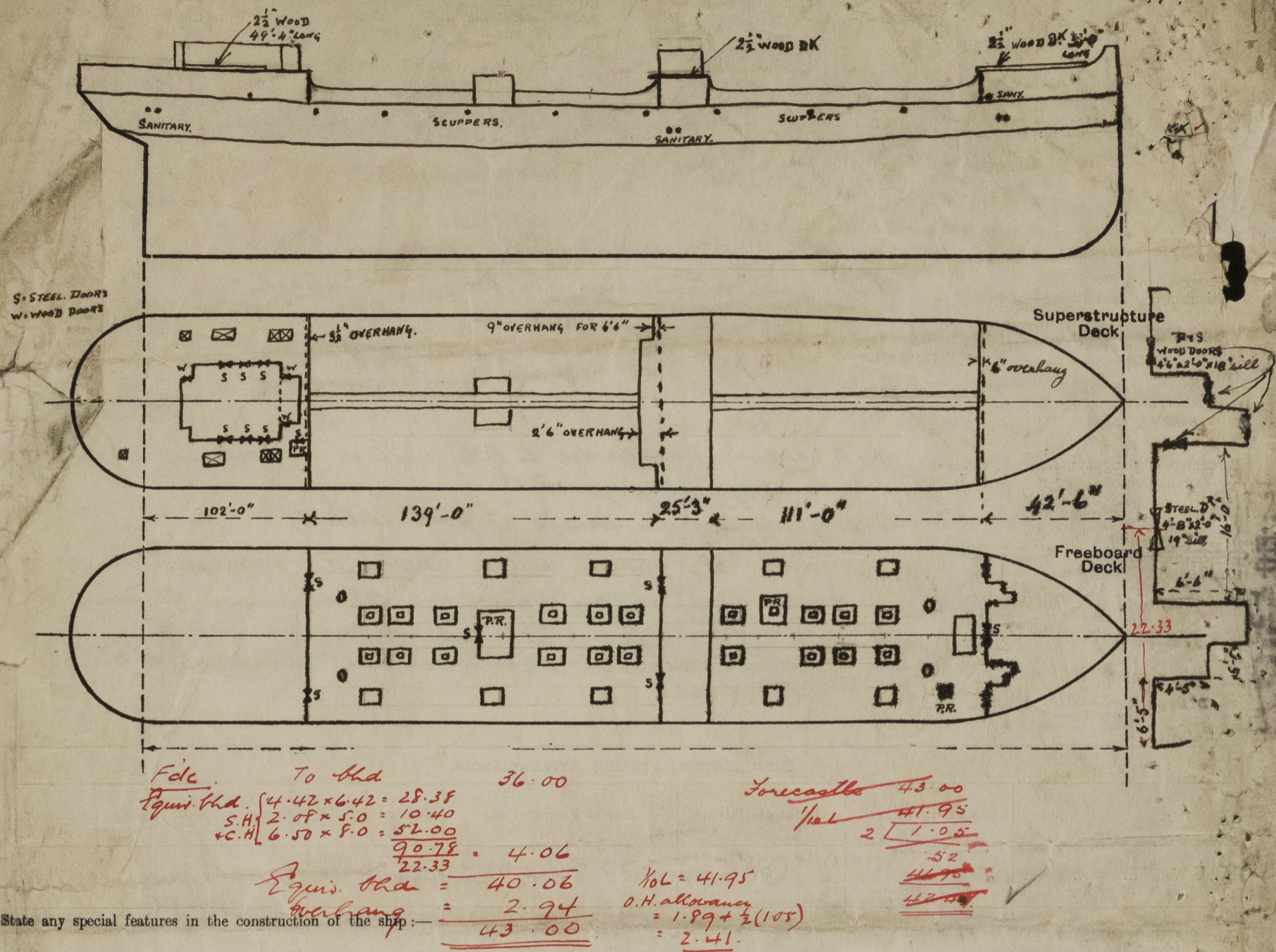
Additional area where sheer is less than standard. ✓ Sails 9" apart

Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Bulkhead	$\frac{1}{2}$ " ✓	$\frac{7}{16}$ " ✓	$9" \times 3\frac{1}{2} \times \frac{1}{2}$ BA	32" ✓	Bkts top & bottom ✓	$5'0" \times 3'0"$ ✓	20" ✓	7'-6"
Exposed Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	$\frac{7}{16}$ " ✓	$\frac{5}{16}$ " ✓	$3\frac{1}{2} \times 3\frac{1}{2} \times \frac{3}{8}$ ✓	28" ✓	Bkts top ✓	$4'10" \times 3'0"$ ✓		
Bridge, Forward Bulkhead	$\frac{3}{8}$ " sides ✓ $\frac{1}{2}$ " center ✓	$\frac{7}{16}$ " ✓	$9" \times 3\frac{1}{2} \times \frac{1}{2}$ BA ✓	33" ✓	Bkts top & bottom ✓	none ✓	20" ✓	7'-6"
Forecastle Bulkhead	✓	$\frac{5}{16}$ " ✓	$3 \times 3 \times \frac{5}{16}$ ✓	32" ✓	Bkts top ✓	$4'8" \times 2'0"$ ✓	✓	7'-6"
Trunk, Aft	✓						19" ✓	7'-6"
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Superstructure Decks	✓	$\frac{3}{8}$ " ✓	Plated plates $\frac{1}{4}$ " ✓	37" ✓				
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	$\frac{1}{2}$ " ✓	see sketch	Vertical Stiffeners $11 \times 4 \times \frac{3}{8}$ spaced 30" ✓ $3 \times 3 \times \frac{3}{8}$ angled ✓		$4'6" \times 2'0"$ ✓ Horizontal stiffeners spaced 30" ✓	19" ✓	7'-0"
Deckhouses on Flush Deck Ships ...	✓				Spaced $9'0"$ Bkt to beam top, bay bottom ✓			

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

Part of Ship	Condition	Remarks
Bulkhead	...	Hinged w. r. Steel doors with wedge handle fastenings manipulated both sides ✓
Quarter Deck Bulkhead	...	✓
ridge, After Bulkhead	...	Hinged w. r. Steel doors with wedge handle fastenings manipulated both sides ✓
Bridge, Forward Bulkhead	...	None ✓
Forecastle Bulkhead	...	Hinged steel door in halves secured slip bolts, manipulated both sides ✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks	...	Hinged steel door in halves secured slip bolts ✓
Exposed Machinery Casings on Superstructure Decks	...	Hinged steel door in halves secured slip bolts, manipulated both sides ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	Hinged steel doors to machy. spaces & galley manipulated both sides (also to stokehold pump room) ✓
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 shown on the following sketches:—



F.W. Allowance

$$\begin{aligned} S.M.D. &= 26.72 \\ K_{ul} &= .19 \\ \Delta @ 27' 0" &= 14144 \\ - \Delta @ 26' 0" &= 13580 \\ \hline &564 \\ Diff. \Delta &= .91 \times 564 = 513 \\ \Delta @ 26.91 &= \begin{array}{r} 13580 \\ 513 \\ \hline 14093 \end{array} \\ T.P.I. &= 46.9 \end{aligned}$$

Builder's name and yard number

Names of sister ships *This report refers to SS "SAN VALERIO"*

Owners *Eagle Oil & Shipping Co Ltd.*

Fee £ *2* Received by me



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