

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. **29847**  
(For London Office only.)

17 JUN 1932

No. 100582

W129

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~  
having Prop, Bridge and ForecastlePort of Survey Liverpool (Birkenhead)Date of Survey 15th June 1932Name of Surveyor E. H. Dean.Particulars of Classification H 100 A.1.

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"SAN LEON."	British London	145225	<del>6350</del> 6115	1921 3

Moulded Dimensions: Length 395.3' Breadth 55.0' Depth 34.11'  
Moulded displacement at moulded draught = 85 per cent. of moulded depth  
Coefficient of fineness for use with Tables .792

Shelter deck with foreboard  
Carrying platform in bulk  
Solid for oil fuel 5.25 cu

Depth for Freeboard (D) 34.92  
Moulded depth ... 34.11  
Stringer plate ... .69 ... .06  
Sheathing on exposed deck  
 $T \left( \frac{L-S}{L} \right) =$   
Depth for Freeboard (D) = 34.98

Depth correction  
(a) Where D is greater than Table depth  
(D-Table depth) R =  $(34.98 - 25.35) \times 3 = +25.89$   
(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) 55.0'  
Standard Round of Beam =  $\frac{B \times 12}{50} = 13.20$   
Ship's Round of Beam = 10.98  
Difference 2.22  
Restricted to  
Correction =  $\frac{\text{Diff}^2}{4} \times (1 - \frac{S_1}{L}) = \frac{2.22^2}{4} \times (.4976) = +.2$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>37.9</u> <u>108.70</u>	<u>108.70</u>	<u>8.0</u>	<u>8.0</u>	<u>108.70</u>
" overhang ...	-	-	-	-	-
R.Q.D. enclosed ...	-	-	-	-	-
" overhang ...	-	-	-	-	-
Bridge enclosed...	<u>52.0</u> <u>52.07</u>	<u>52.07</u>	<u>8.0</u>	<u>8.0</u>	<u>52.07</u>
" overhang aft ...	-	-	-	-	-
" overhang forward	-	-	-	-	-
F'cle enclosed ...	<u>37.9</u> <u>37.82</u>	<u>37.82</u>	<u>8.0</u>	<u>8.0</u>	<u>37.82</u>
" overhang ...	-	-	-	-	-
Trunk aft ...	-	-	-	-	-
" forward ...	-	-	-	-	-
Tonnage opening aft ...	-	-	-	-	-
" " forward	-	-	-	-	-
Total ...	<u>198.59</u>	<u>198.59</u>	-	-	<u>198.59</u>

Standard Height of Superstructure 7.453  
" " R.Q.D. 41.69  
Deduction for complete superstructure 41.69  
Percentage covered  $\frac{S}{L} = 50.24$   
" "  $\frac{S_1}{L} = 50.24$   
" "  $\frac{E}{L} = 50.24$   
Percentage from Table, Line A. 41.26  
(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) 41.26  
Deduction = -17.20

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>49.53</u>	1		<u>49.53</u>	<u>40.0</u>	<u>38.00</u>	1		<u>38.00</u>
$\frac{1}{4}L$ from A.P. ...	<u>22.04</u>	4		<u>88.16</u>	<u>13.0</u>	<u>8.00</u>	4		<u>32.00</u>
$\frac{2}{4}L$ " ...	<u>5.45</u>	2		<u>10.90</u>	<u>8.0</u>	<u>0.00</u>	2		<u>0.00</u>
Amidships ...		4				<u>0.00</u>	4		<u>0.00</u>
$\frac{3}{4}L$ from F.P. ...	<u>10.90</u>	2		<u>21.80</u>	<u>7.8</u>	<u>0.00</u>	2		<u>0.00</u>
$\frac{1}{4}L$ " ...	<u>44.08</u>	4		<u>176.32</u>	<u>22.0</u>	<u>17.50</u>	4		<u>70.00</u>
F.P. ...	<u>99.06</u>	1		<u>99.06</u>	<u>87.0</u>	<u>89.63</u>	1		<u>89.63</u>
Total ...				<u>445.77</u>					<u>229.63</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{216.14}{18} \left( .75 - \frac{.2512}{.4988} \right) = +5.99$

If limited on account of midship superstructure.

Length of enclosed superstructure forward of amidships =  
" " aft of " =

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.

Depth to Freeboard Deck = 34.98  
Summer freeboard = 6.79  
Moulded draught (d) = 28.19

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = 7.05Addition for Winter North Atlantic Freeboard (if required) = 3.95 = 4"

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$  13862  
Tons per inch immersion at summer load water line

T = 45.4Deduction =  $\frac{\Delta}{40T}$  inches = 7.647 $\frac{3}{4}$ 

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	<u>25.89</u>	
Deduction for superstructures ...		<u>17.20</u>
Sheer correction ...	<u>5.99</u>	
Round of Beam correction ...	<u>28</u>	
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. ...		
	<u>32.16</u>	<u>17.20</u>

Summer Freeboard = 81.44SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ... 14 $\frac{3}{4}$   
Fresh Water Line " " ... 7 $\frac{3}{4}$   
Tropical Line " " ... 7  
Winter Line below " " ... 7  
Winter North Atlantic Line " " ... 11

Tropical Fresh Water Freeboard ... 6.9 $\frac{1}{2}$   
Fresh Water " " ... 6.2 $\frac{3}{4}$   
Tropical " " ... 6.2 $\frac{1}{2}$   
Winter " " ... 7.4 $\frac{1}{2}$   
Winter North Atlantic " " ... 7.8 $\frac{1}{2}$

MARKING FORM

24 AUG 1933

RECEIVED

24 JUN 1932



San. Leon

1912

Particulars of fiddle, funnel and ventilator coverings - THE FIDLEY GRATINGS ARE COVERED BY STEEL HINGED COVERS. THE FIDLEY & ENGINE ROOM VENTS ARE GOOD. THE FUNNEL IS GOOD - THE ENGINE ROOM SKYLIGHT IS OF STEEL & IS IN GOOD CONDITION. ✓

NONE. ✓

1- FROM POOP DECK TO ACCOMMODATION FREEBOARD DECK - STEEL HINGED DOOR 5'-0" X 2'-3" - 17" SILL.  
MANIPULATED BOTH SIDES.

1- VENTON FOLLE HEAD - 33" HIGH - 10" DIA. TO CREW SPACE.				
6	- VENTS "	"	33"	" - 6"
2	- " "	FORE WHEEL DE	11'0"	" - 20" " " FORE HOLD, SUITABLY STAYED.
2	- " "	"	5'4"	" - 24" " " PUMP ROOM <i>Suitably stayed</i>
4	- " "	POOP DE	7'4"	" - 24" " " STROKEHOLD
21	- " "	"	3'4"	" - 8" " " CREW SPACE ACCOMMN
2	- " "	"	3'4"	" - 10" " "

CLOSED BY WOOD PLUGS & CANVAS COVERS.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

1-	C.I. AIR PIPE ON FORE DECK	6" HIGH - 6" DIA.	- TO FINE PEAK TANK.	ALL AIR PIPES ARE THUS:
24-	" " PIPES	8" 36" -	- 6" DIA. - TO OIL FUEL BUNKERS.	
24-	" " " " " "	8" 36" -	- 6" - TO FORE O.B. TANK.	
1-	" " " " " AFT.	8" 36" -	- 6" - TO AFT COFFERDAM.	

BRASS SCREENED CAP AT TOP.

ALL OPENINGS ARE CLOSED BY CANVAS COVERS & GAUZE.

NONE.

ALL SANITARY DISCHARGE PIPES ARE FITTED WITH STORM VALVES AT SHIPS SIDES.

SIDE SCUTTLES TO CREW SPACES FORWARD AND AFT ARE OF SUBSTANTIAL CONSTRUCTION AND ARE FITTED WITH C.I. DEADLIGHTS.

ROUND FORECASTLE DECK 3'-4" HIGH - 5'-3" APART - 2 RAILS.  
ROUND POOP " 3'-4" " - 4'-0" " - 2 RAILS.

Top Plate Platform  
 35" RIGGED PLATE  
 BOUNDARY ANGLE ROUND  
 Top. 3" x 3" x 35"  
 Top BAR 6" x 4" x 140"  
 15" x 40" BKTS  
 4' 0"  
 STANCHIONS - 2' 11" HIGH - SPACED 5' 3" - 1 RAIL  
 6" x 4" x 140"  
 6 x 3 1/2" x 40"  
 UPRIGHTS 6 x 3 1/2" x 40" SPACED 9' 0" TO 9' 6"  
 6" x 4" x 140" BOTTOM CONNECTIONS TO DECK.  
 2' 6"

NOTE: SIDE SUPPORTS ARE  
 AT ALT. UPRIGHTS ONLY

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 ... ..	94'-6"	4'-0"	$2 \cdot 0 \times 1 \cdot 5$ $3 \cdot 0 \times 1 \cdot 5$ $3 \cdot 0 \times 1 \cdot 5$ $1 @ 1 \cdot 5 \times 1 \cdot 6$ $1 \cdot 8 \times 1 \cdot 6$	$2 \frac{1}{2}$ $13 \frac{1}{4}$ <del>10</del>	$106 \cdot 55$ <del>90</del>	94.5
Forward Well ... ..	102'-0"	4'-0"	$2 @ 1 \cdot 5 \times 1 \cdot 6$ $1 @ 3 \cdot 0 \times 1 \cdot 6$ $1 @ 3 \cdot 0 \times 1 \cdot 6$ $1 @ 3 \cdot 5 \times 1 \cdot 5$ $5 \cdot 46 \times 1 \cdot 5$ $5 \cdot 50 \times 3 \cdot 25$	<del>73</del> $1 \frac{1}{4}$ $10 \frac{1}{4}$ $1 \frac{1}{4}$	$105 \cdot 98$ $122 \cdot 00$ <del>22</del>	102.0

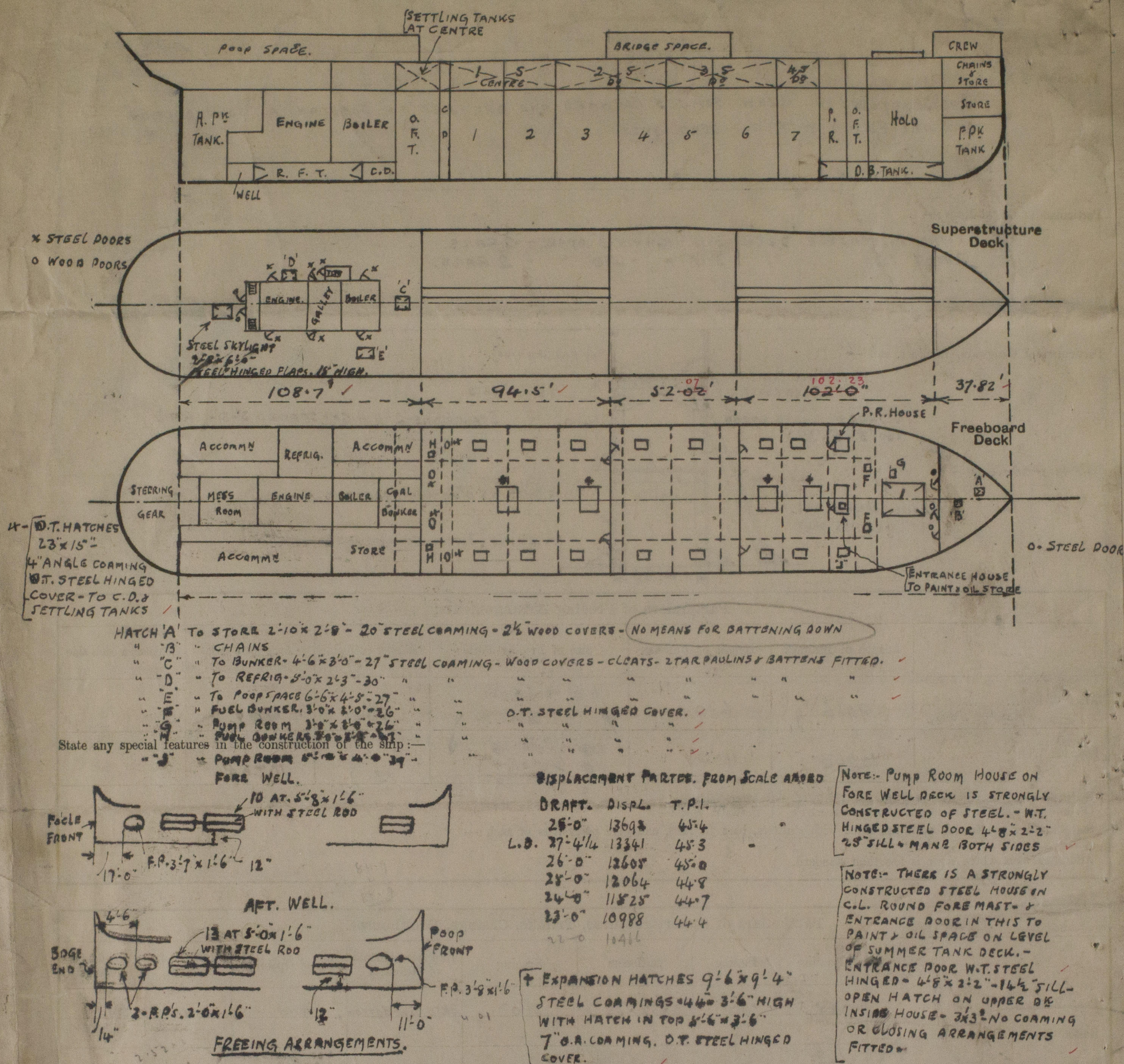
\* State position of each freeing port ... .. { After Well :—  
 (F. and A. position and height above deck edge) { Forward Well :—  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :—  
 Additional area where sheer is less than standard.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	"48"	"40"	10 x 3½ x 3½ J	3'0"	BKTS. TOP & BOTTOM	NONE	NONE	8'-0"
Raised Quarter Decks Bulkhead ...	-	-	-	-	-	-	-	-
Bridge, After Bulkhead ... ..	"38"	"32"	6 x 3½ O.A.	3'0"	BKTS. TOP.	1- WOOD HINGED DOOR 4'0" x 3'0" 1- DO. 4'0" x 3'0"	24"	8'-0"
Bridge, Forward Bulkhead ... ..	"50"	"42"	10 x 3½ x 3½ J	3'0"	BKTS. TOP & BOTTOM	5'6" x 4'0"	12"	8'-0"
Forecastle Bulkhead ... ..	"36"	"30"	4 x 3 O.A.	2'0"	BKTS. TOP.	S-6'2"x2" 2- STEEL HINGED DOORS	19"	8'-0"
Trunk, Aft ... ..	-	-	-	-	-	-	-	-
Trunk, Forward ... ..	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Superstructure Decks ... ..	"40"	"30"	8 x 3½	3'	BKTS. TOP.	6-3 STEEL DOORS 5'4½" x 4'2" 2- WOOD "4'10" x 2'2"	16" 18"	7'-2"
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 ... ..	NONE
Raised Quarter Deck Bulkhead ...	-
Bridge, After Bulkhead ... ..	WOOD HINGED DOORS. 1 3/4" THICK - MANIPULATED FROM BOTH SIDES.
Bridge, Forward Bulkhead ... ..	STEEL <sup>WT</sup> - MANIPULATED FROM OUTSIDE ONLY
Forecastle Bulkhead ... ..	" " - MANIPULATED FROM BOTH SIDES.
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 ... ..	STEEL & WOOD <sup>1 3/4" THICK</sup> HINGED DOORS. MANIPULATED FROM BOTH SIDES.
Deckhouses on Flush Deck Ships ...	-



Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangways, 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:—



Builder's name and yard number George A. Fuller Co - Wilmington - North Carolina - No. 55.

Names of sister ships S.S. "SAN LAMBERTO"

Owners Eagle Air & Shipping Co. Ltd.

Fee £ 14 : 9 : 0 , Received by me.