

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. _____
(For London Office only.)

New Orleans - Report No. 4089

Computation of Freeboard for Steamer, ~~Sailing Ship, Tug~~
having Full scantling without tonnage opening.
Erections - Poop, Bridge, and forecastle.
(Type of Superstructures.)

Port of Survey New Orleans, La.,
Date of Survey July 1st, 1932
Name of Surveyor T.G. Dodd
Particulars of Classification 4100A1

Ship's Name VESTRIA Nationality and Port of Registry Norwegian, Oslo. Official Number / Gross Tonnage 2412 Date of Build 1931 10

Moulded Dimensions: Length 289'-6" Breadth 45'-6" Depth 20'-6"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 5044 tons
Coefficient of fineness for use with Tables .769 * On deep load line.

Depth for Freeboard (D) 20.50
Moulded depth ... 20'-6"
Stringer plate ... 11'-06"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓
Depth for Freeboard (D) = 20.56

Depth correction
(a) Where D is greater than Table depth (D-Table depth) R = $(20.56 - 19.30) 2.227 = 2.81$
(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) 45'-6"
Standard Round of Beam = $\frac{B \times 12}{50} = 10.92$
Ship's Round of Beam = $\frac{113}{8} = 11.37$
Difference .45
Restricted to
Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.45}{4} \times .4873 = .054$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>28'-0"</u>	28.00	<u>7'-6"</u>	✓	28.00
" overhang ...	<u>1'-0"</u>	.50			.50
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed...	<u>84'-0"</u>	84.00	<u>7'-6"</u>	✓	84.00
" overhang aft ...	<u>4'-0"</u>	3.00			3.00
" overhang forward	<u>2'-0"</u>	1.00			1.00
Fore enclosed <u>Sides 4'-0" + 29'-4"</u>	<u>30.52</u>	30.52	<u>7'-6"</u>	✓	30.52
" overhang ...	<u>4'-0"</u>	1.40			1.40
Trunk aft ...	<u>2.81</u>				
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	<u>152.33</u>	<u>148.42</u>			<u>148.42</u>

Standard Height of Superstructure 6.395
" " R.Q.D. ✓
Deduction for complete superstructure 34.63
Percentage covered $\frac{S}{L} = 52.62\%$
 $\frac{S_1}{L} = 51.27\%$
 $\frac{E}{L} = 51.27\%$
Percentage from Table, Line A. ✓
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. 37.27%
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required) ✓
Deduction = $34.63 \times .3727 = 12.91$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>38.95</u>	1		<u>38.95</u>	<u>4'-4"</u>	<u>51.50</u>	1		<u>51.50</u>
1/4 L from A.P. ...	<u>17.33</u>	4		<u>69.32</u>	<u>1'-7"</u>	<u>19.16</u>	4		<u>76.64</u>
1/2 L " ...	<u>4.78</u>	2		<u>8.56</u>	<u>-4 1/2"</u>	<u>4.79</u>	2		<u>9.58</u>
Amidships ...	✓	4		✓	✓	✓	4		✓
3/4 L from F.P. ...	<u>8.57</u>	2		<u>17.14</u>	<u>-9"</u>	<u>9.33</u>	2		<u>18.66</u>
1/4 L " ...	<u>34.66</u>	4		<u>138.64</u>	<u>3'-1"</u>	<u>37.33</u>	4		<u>149.32</u>
F.P. ...	<u>77.90</u>	1		<u>77.90</u>	<u>7'-6"</u>	<u>90.50</u>	1		<u>90.50</u>
Total ...				<u>350.51</u>					<u>396.20</u>

Mean actual sheer aft = Excess
Mean standard sheer aft =
Mean actual sheer forward = Excess
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships = .13
" " aft of " = .14

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{45.69}{18} \times (.75 - .2631) = 1.24$
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 = 20.56
Summer freeboard = 2.68
Moulded draught (d) = 17.88

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{17.88}{4} = 4.47 = 114$
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.
Displacement in salt water at summer load water line
 $\Delta =$
Tons per inch immersion at summer load water line
 $T =$
Deduction = $\frac{\Delta}{40T}$ inches =

TABULAR FREEBOARD corrected for Fresh Deck (if required)
Correction for coefficient $\frac{.769 + .68}{1.36} = \frac{1.449}{1.36}$

	+	-
Depth Correction ...	<u>2.81</u>	✓
Deduction for superstructures ...	<u>12.91</u>	✓
Sheer correction ...	<u>1.24</u>	✓
Round of Beam correction ...	<u>.05</u>	✓
Correction for Thickness of Deck amidships ...	✓	✓
Other corrections, scantlings, etc. ...	✓	✓
	<u>2.81</u>	<u>14.20</u>
Summer Freeboard =	<u>32.16</u>	<u>11.39</u>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck: 32.16" = 817 mm

Tropical Fresh Water Line above Centre of Disc ...		Tropical Fresh Water Freeboard ...	
Fresh Water Line " " ...		Fresh Water " " ...	
Tropical Line " " ...		Tropical " " ...	
Winter Line below " " ...		Winter " " ...	
Winter North Atlantic Line " " ...		Winter North Atlantic " " ...	

MARKING FORM
RECEIVED

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		No.1	No.2	No.3	No.4				
Dimensions of Hatchway		32'x20'	34'x20'	34'x20'	32'x20'				
COAMINGS	Height above Deck	42"							
	Thickness	7/16"	ditto	ditto	ditto.				
	Stiffeners	9" x 3 1/2" B.A.	31" Above deck	on sides with 8 brackets.					
	Brackets, Stays	2 Brackets at ends.							
HATCH BEAMS	Number	36	36	36	36				
	Spacing	9'-10"	10'-0"	10'-0"	10'-0"				
	Scantling and Sketch	4" x 11"	3/8" web plate	4" x 2 1/2" L x 44	12" deep at center 9" at ends.				
	Bearing Surface	3 1/2"	18"						
FORE AND AFTERS	Number	None.	None.	None.	None.				
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
HATCH COVERS	Material	Wood	Wood	Wood	Wood				
	Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"				
	How fitted	Fanda	Fanda	Fanda	Fanda				
	Bearing Surface	3"	3"	3"	3"				
Spacing of Cleats		24"	24"	24"	24"				
Number of Tarpaulins		2	2	2	2				
*Are wood fore and afters steel shod at all bearing surfaces? None.									
Are battens and wedges efficient and in good condition? Yes.									
Are tarpaulins in good condition and in accordance with rule requirements? Yes.									
Are lashings provided in accordance with rule requirements? Yes.									

Particulars of fiddle, funnel and ventilator coamings:—
No fiddle openings.
Funnel and ventilator coamings to machinery space.
7'-6" Above bridge deck.
Engine room skylights all of steel with covers permanently attached.

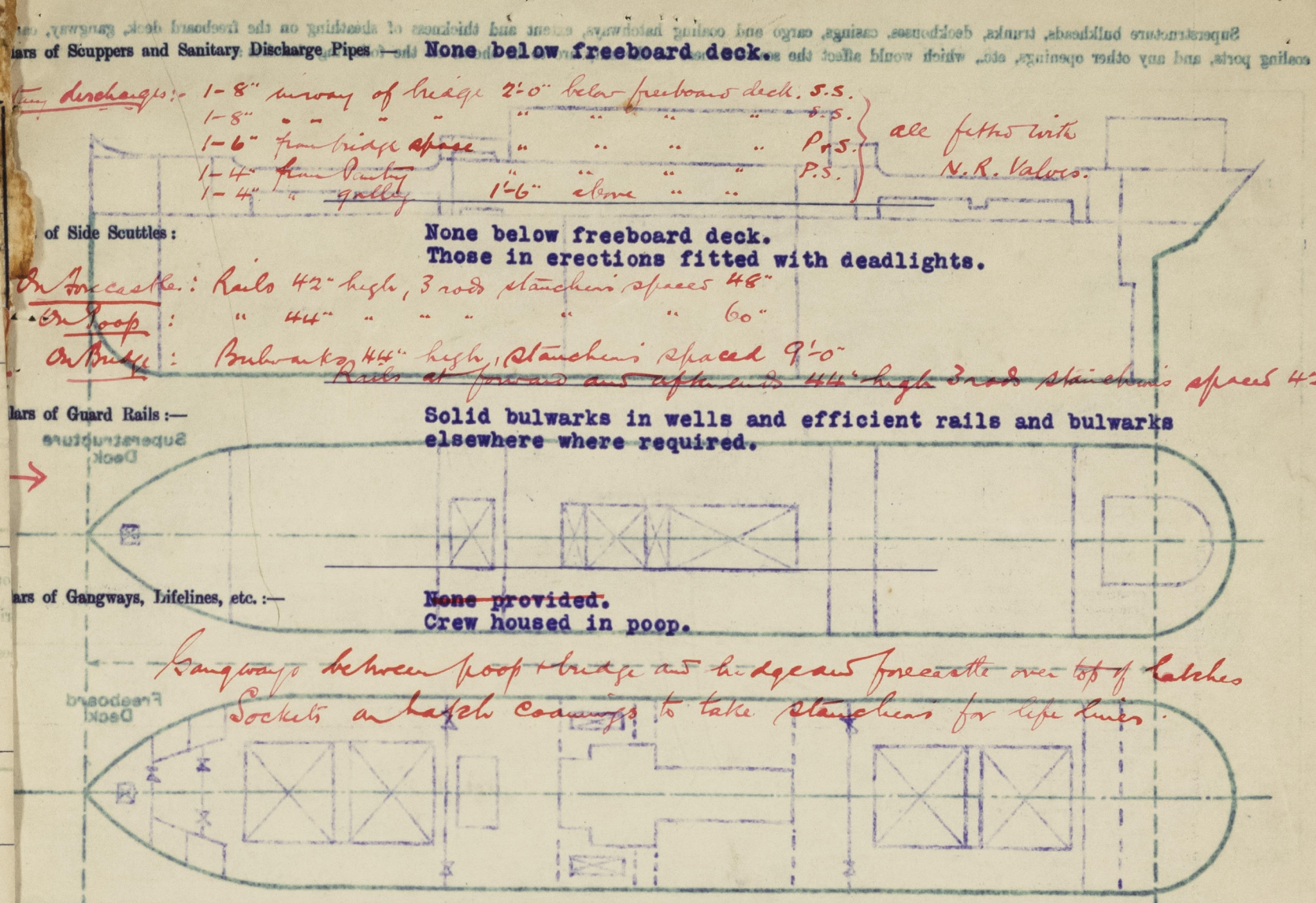
Particulars of Flush Bunker Scuttles:—
None.

Particulars of Companionways:—
None.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
None on freeboard deck. Those on superstructure deck are of steel substantially constructed coamings rivetted to deck and deck stiffened.
All in excess of Rule height and are properly stayed and supported. (12'-0" x 50' to hold in)

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
All of substantial construction.
6'-2" high in wells stayed to bulwarks and 2'-2" high on erections.
No means provided for closing same.

Particulars of Gangway Cargo and Coaling Ports:—
None.



Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Well ...	74'-0"	7'-0"	26" x 33"	4	23.76 sq.ft.	15 sq.ft.
Well ...	74'-0"	7'-0"	26" x 33"	4	23.76 sq.ft.	14 sq.ft.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Bulkhead ...	7/16"	7/16"	6" x 3" BA	30"	Bracket.	None.		7'-6"
Quarter Deck Bulkhead ...								
After Bulkhead ...	3/8"	3/8"	5" x 3" BA	30"	None.	36" x 48"	24"	7'-6"
Forward Bulkhead ...	1/2"	1/2"	8" x 3" BA	30"	Bracket.	36" x 63"	15"	7'-6"
Le Bulkhead ...	1/2"	1/2"	4" x 2" BA	24"	None.	36" x 48"	24"	7'-6"
Aft ...								
Forward ...								
Machinery Casings on Free or Raised Quarter Decks ...								
Machinery Casings on Superstructure Decks ...	1/2"	1/2"	3 1/2" x 2 1/2" L	24"	Bracket. Top.	30" x 63"	15"	7'-6"
Casings within Superstructure fitted with Class I Closing ...	3/16"	5/16"	3 1/2" x 2 1/2" L	24"	None.	None.		7'-6"
on Flush Deck Ships ...								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Bulkhead ...	None.
Quarter Deck Bulkhead ...	
After Bulkhead ...	Wood boards fitted in channels 3 1/2" thick and steel plates secured by hook bolts.
Forward Bulkhead ...	2 Heavy steel doors can be opened or closed from either side.
Bulkhead ...	Openings closed by wood boards fitted in channels 3 1/2" thick and steel plates secured by hook bolts.
Machinery Casings on Free or Raised Quarter Decks ...	
Machinery Casings on Superstructure Decks ...	Steel doors permanently attached and open or close from either side.
Casings within Superstructure fitted with Class I Closing ...	No openings.
on Flush Deck Ships ...	

Hatch on Bow castle: 31"x31" Coaming 6"x $\frac{1}{4}$ " b.t. steel hinges cover $\frac{1}{4}$ " thick
2 Coal hatches inside bridge 2'-3"x13'-6" Coaming 9 $\frac{1}{4}$ "x.50 wood hatches 2 $\frac{1}{2}$ " stht., cleats 24", bearing surface 2 $\frac{1}{2}$ ", 2
2 Access hatches to after hold in bridge 27"x30", Coaming 9 $\frac{1}{4}$ "x.50, wood hatches 2 $\frac{1}{2}$ " " " " " " "
2 Core sheet hatches on boat deck 4'-0"x13'-0" " 3'-0"x.44 " " " " " " " "

Loaded	Deadweight
Draft.	Salt water

Freeboard measured from the deck line at the level of the surface of the steel deck on main deck.

20'-0"	4125
19'-0"	3800
18'-0"	3475
17'-0"	3150
16'-0"	2825
15'-0"	2500
14'-0"	2175
13'-0"	1850

Freeboard in Fresh Water (Summer)	2'-5"
Freeboard in Tropical Waters (Fine season)	2'-6"
Summer Freeboard (Centre of circle)	2'-9"
Winter Freeboard	3'-0"
Freeboard North Atlantic (Winter)	3'-2"
Summer Freeboard corresponding to B of T.S.	2'-10"

Wood cargo freeboard measured from the deck line at the surface of the steel deck on main deck.	7'10"	1'-6"
Wood cargo freeboard in Fresh water (Summer)	7'10"	2'-2"
Wood cargo Summer freeboard	7'10"	2'-5"
Wood cargo Winter freeboard	7'10"	2'-7"
Wood cargo Freeboard North Atlantic (Winter)	7'10"	

Notes in red as per New Orleans Surveyors

"B-17	"4S	"84 x	"Vessel examined afloat none of the requirements" of a Special Periodical Survey complied with.
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Builder's name and yard number The International Shipbuilding & Engineering Co., Ltd. No. 65

Names of sister ships "NORDVANGEN" "VESTVANGEN" "AUSTVANGEN" "LINDVANGEN" "SORVANGEN"

Skibsaktieselskapet Karaibien (Gorrissen & Co. A/S Managers)

Fee \$ 50 : : Received by me

Expenses: \$ 4.00

Plates secured by back bolts.
Openings closed by wood boards fitted in channels with steel bolts and washers.

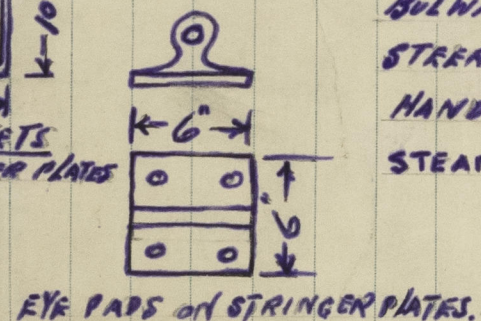
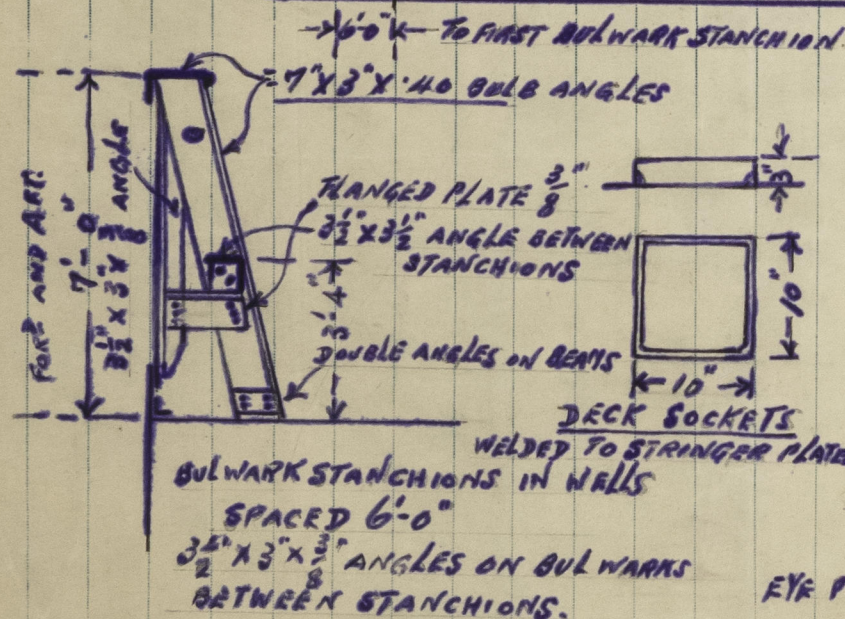
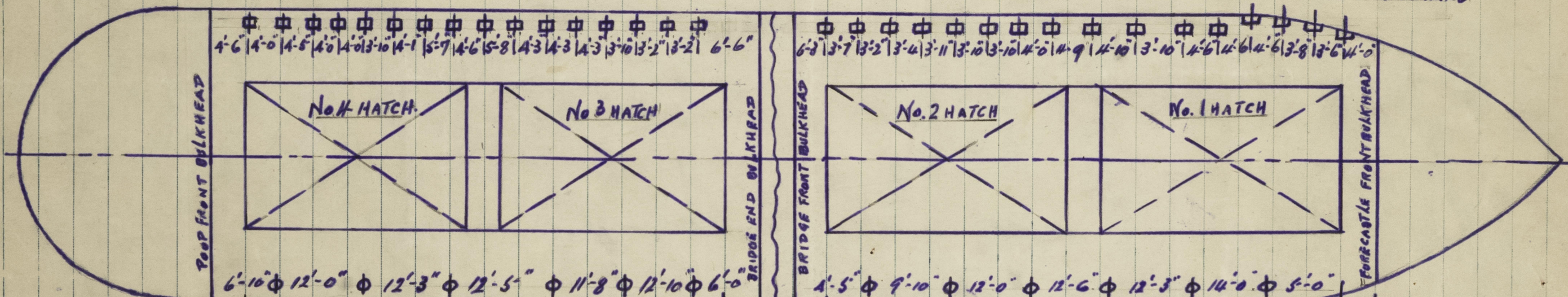
Steel doors permanently attached and open or close from either side.

S.S. "DALVANGEN"

ARRANGEMENTS OF PADS AND SOCKETS FOR DECK CARGO

⊕ DENOTES DECK SOCKETS TO TAKE UPRIGHTS PORT & STARBOARD
 ⊕ DENOTES EYE PADS ON STRINGER PLATES PORT & STARBOARD.

4 SOCKETS FITTED TO BULWARKS



TWO HOLES IN BULWARK RAIL IN WAY OF EACH SOCKET TO TAKE CLAMPS NOW ON BOARD.
 IT IS STATED THAT NOS. 2, 3, 4 AND 5 ~~DOUBLE~~ BOTTOM TANKS ARE TRIMMING TANKS.
 BULWARK STANCHIONS DRILLED IN LIEU OF EYE PLATES SEE SKETCH.
 STEERING GEAR IN POOP TELE MOTOR OPERATED, PIPES UNDER DECK.
 HAND STEERING GEAR FITTED AFT.
 STEAM & EXHAUST PIPES FOR STEERING ENGINE LED ALONGSIDE HATCHES AND PROTECTED.



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