

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

D160

 Computation of Freeboard for Steamer, Sailing Ship, Tanker
 having Ironclad, Bridge and Prop
Port of Survey Halifax, N.S.

RAPIDO 4

(Type of Superstructures.)

Date of Survey May 12, 15, 16
 Ship's Name
ZEPHYROS ex CANADIAN
PIONEER

Nationality and Port of Official Number

Registry

Gross Tonnage

Date of Build

British
Montreal, Quebec
44058

5758

1919-5

Name of Surveyor W. H. H.
 Moulded Dimensions: Length 400 399.8 Breadth 52 Depth 31.05
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 12200 tons
 Coefficient of fineness for use with Tables .778
Particulars of Classification #100 A1
 Depth for Freeboard (D)
 Moulded depth ... 31.05
 Stringer plate04
 Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
 Depth for Freeboard (D) = 31.09

 Depth correction
 (a) Where D is greater than Table depth
 (D - Table depth) R =
 $(31.09 - 26.66) \times 3 = +13.29$
 (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) 52.0
 Standard Round of Beam = $\frac{B \times 12}{50} = 12.48$
 Ship's Round of Beam = 13
 Difference .52
 Restricted to ☒
 Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.52}{4} \times \frac{49.81}{L} = -.06$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
• Poop enclosed ...	49.25	49.25	8'	✓	49.25
• " overhang ...					
R.Q.D. enclosed ...					
• " overhang ...					
Bridge enclosed ...	112.67	112.67	8'	✓	112.67
• " overhang aft ...					
• " overhang forward ...					
F'cle enclosed <u>4 ft</u> ...	38.75	38.75	8'	✓	38.75
• " overhang ...					
• Trunk aft ...					
• " forward ...					
Tonnage opening aft ...					
• " forward ...					
Total ...	200.67	200.67			200.67

 Standard Height of Superstructure 7.498
 " " R.Q.D. ☒
 Deduction for complete superstructure 41.99
 Percentage covered $\frac{S}{L} = 50.19$
 " " $\frac{S_1}{L} = 50.19$
 " " $\frac{E}{L} = 50.19$
 Percentage from Table, Line A.
 (corrected for absence of forecastle (if required))
 Percentage from Table, Line B. 36.19
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required)
 Deduction = $41.99 \times .3619 = -15.19$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	49.98	1	49.98	65.375	65.375	1	65.37
$\frac{1}{6}$ L from A.P. ...	22.24	4	88.96	25.50	24.98	4	99.92
$\frac{2}{6}$ L " ...	5.50	2	11.00	5.50	6.24	2	12.48
Amidships ...	-	4	-	-	-	4	-
$\frac{3}{6}$ L from F.P. ...	11.00	2	22.00	13.625	14.02	2	28.04
$\frac{4}{6}$ L " ...	44.48	4	177.92	56.00	56.08	4	224.32
F.P. ...	99.96	1	99.96	125.50	125.5	1	125.50
Total ...			449.82				555.63

 Mean actual sheer aft = Sum.
 Mean standard sheer aft = Sum.

 Mean actual sheer forward = Sum.
 Mean standard sheer forward = Sum.

 Length of enclosed superstructure forward of amidships = > .1L
 " " aft of " = > .1L

 Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{105.81}{18} \left(.75 - \frac{.2509}{L} \right) = -2.93$
If limited on account of midship superstructure. ☒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 = 31.09
 Summer freeboard = 5.98
 Moulded draught (d) = 25.11

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.28Addition for Winter North Atlantic Freeboard (if required) ☒

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 11640$

Tons per inch immersion at summer load water line

T = 42.5Deduction = $\frac{\Delta}{40T}$ inches= 6.85= 6.34

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.778 + .68}{1.36} = \frac{1.458}{1.36} = 1.07$ Depth Correction ... 13.29Deduction for superstructures ... 15.19Sheer correction ... 2.93Round of Beam correction ... 0.06

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

13.29 18.18 - 4.89

Summer Freeboard = 71.69SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Steel, Deck: 5'-11 3/4" = 1822Tropical Fresh Water Line above Centre of Disc 13" = 330Fresh Water Line " " 6 3/4" = 171Tropical Line " " 6 3/4" = 159Winter Line below " " 6 3/4" = 159Winter North Atlantic Line " " ✓Tropical Fresh Water Freeboard ... 4'-10 3/4" = 1492Fresh Water " " 5'-5" = 1651Tropical " " 5'-5 1/2" = 1663Winter " " 6'-6" = 1981Winter North Atlantic " " ✓

28 AUG 1934

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	No 1	No 2	No 4	No 5	No 3	Inaccessible	Side tanks		
Dimensions of Hatchway	30' x 21'	32'6" x 21'	34'6" x 21'	30' x 21'	10'10" x 18'	24' x 2'6"	1'8" x 2'	8' x 4'	
COAMINGS	Height above Deck	30"	As No 1	As No 1	30"	24"	24"	18"	
	Thickness	7/16	As No 1	As No 1	7/16	3/8	3/8	7/16	
	Stiffeners	8 x 3 BA	As No 1	As No 1	8 x 3 BA	As No 1	As No 1	As No 1	
	Brackets, Stays	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	
HATCH BEAMS	Number	5	6	6	5	As No 1	As No 1	As No 1	
	Spacing	5'	4'8"	4'11"	5'	As No 1	As No 1	As No 1	
	Scantling and Sketch	14'6" x 22' x 5"	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	
	Bearing Surface	3 1/2"	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	
FORE AND AFTERS	Number	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	
	Spacing	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	
	Unsupp'd Lengths	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	
	Scantling and Sketch	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	
HATCH COVERS	Material	Wood	As No 1	As No 1	Wood	Wood	Wood	Wood	
	Thickness	2 1/2"	As No 1	As No 1	2 1/2"	2 1/2"	2 1/2"	2 1/2"	
	How fitted	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	
	Bearing Surface	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	As No 1	
Spacing of Cleats	24"	As No 1	As No 1	As No 1	24"	As No 1	As No 1	As No 1	
Number of Tarpaulins	3	As No 1	As No 1	As No 1	3	As No 1	As No 1	As No 1	

Particulars of fiddley, funnel and ventilator coamings:—
 Funnel coaming 24"
 Stanchion ventilators, coamings 9", dia. 30"
 ER ventilators, coamings 7", dia. 20"
 Fiddley openings fitted with secured down lipped steel covers

Particulars of Flush Bunker Scuttles:—
 None

Particulars of Companionways:—
 On Poop deck to cross entrance, plating 1/4", sill 10", and fitted with steel doors in bulkheads, with sliding locks, manipulated both sides

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
 2 m. Fiddley, coamings 4 1/2", dia. 18", fitted with covers
 1 m. Fiddley, " 40", dia. 10", " " " "
 8 m. Upper deck, " 36", dia. 18", " " " "
 4 m. Bridge deck, " 40", dia. 18", " " " "
 4 m. Bridge deck, " 40", dia. 12", " " " "
 2 m. Poop deck, " 32", dia. 18", " " " "
 4 m. Poop deck, " 36", dia. 12", " " " "

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
 On upper deck 36" high and fitted with canvas covers
 On Bridge deck 12" high and fitted with canvas covers
 On Inaccessible deck 12" high and fitted with canvas covers

Particulars of Gangway Cargo and Coaling Ports:—
 None

Particulars of Scuppers and Sanitary Discharge Pipes —

Open scuppers
 Sanitary discharge pipes close forward deck

Particulars of Side Scuttles:

Inaccessible 8 scuttles 9" dia., and fitted with deadlights
 Poop 16 " " " " " "

Particulars of Guard Rails:—

Inaccessible 42" high, stanchions 60" apart, 2 rails 17" apart
 Bridge deck, aft 42" high, stanchions 60" apart, 3 rails 12" apart
 Poop deck, 42" high, stanchions 60" apart, 3 rails 12" apart

Particulars of Gangways, Lifelines, etc.:—

Wire rope in fore and aft well decks attached to eye-bolts at each bulkhead, and attached to scupper post stays in middle of fore and aft decks.

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	99.67'	42"	4.25' x 1.33'	4	22.6'	20'
Forward Well	99.67'	42"	4.25' x 1.33'	4	22.6'	20'

State position of each freeing port (F. and A. position and height above deck edge) } After Well: From Poop No 1-14', No 2-36', No 3-54', No 4-82'
 Forward Well: From Bridge No 1-14', No 2-36', No 3-54', No 4-82'
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Double bars on each port
 Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	7/16	3/8	6 x 3 1/2 x 1/2 L	30	✓	59 1/2" x 24"	18"	8"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	3/8	3/8	4 x 3 x 1/16 L	30	✓	2 - 60" x 40" 1 - 60" x 30"	18"	8"
Bridge, Forward Bulkhead	7/16	3/8	4 x 3 1/2 x 1/2 BA	30	Brackets top & bottom 18" x 7/16"	60" x 42"	18"	8"
Forecastle Bulkhead	Open							8"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	7/16	1/4	3 x 2 1/2 x 7/16	24	Brackets top only 12" x 3/8"	60" x 24"	18"	7'6"
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).

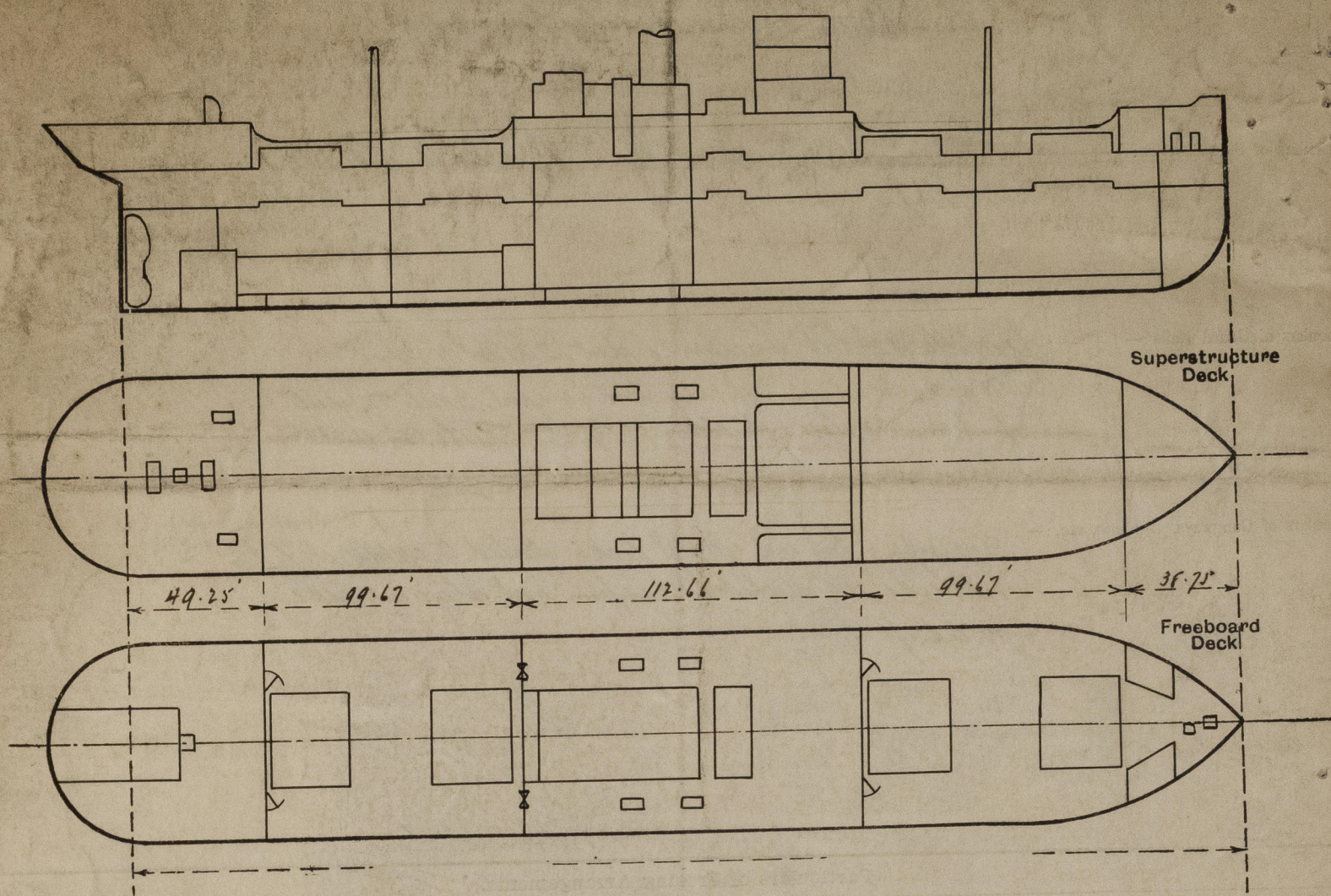
Poop Bulkhead	2 hinged steel plates 14" T doors, bolted outside only, bolts spaced 24" apart
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	2 portable steel plate doors, with hook bolts spaced 12" apart, 1 hinged steel door, manipulated both sides
Bridge, Forward Bulkhead	2 hinged steel plates 14" T doors, bolted outside only, bolts spaced 24" apart
Forecastle Bulkhead	Open
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	Hinged steel doors to stanchion and ER entrances, manipulated from both sides
Deckhouses on Flush Deck Ships	

© 2021

Lloyd's Register

W1312-0155 R2

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 shewn on the following sketches:—



State any special features in the construction of the ship:—

The survey of this vessel was held at Halifax, N.S., the vessel lying in the Greening Dock and affloat. The vessel is to be transferred to Norwegian Nationality with Hagerund as Port of Registry, but the transfer is not yet completed.

Builder's name and yard number *Canadian Vickers, Ltd., Montreal P.Q.*

Names of sister ships

Owners

Waldemar Skogland

Fee £

\$ 80⁰⁰

Received by me



© 2021

Lloyd's Register
Foundation