

No. 1392

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. 1411 No. in Register Book 2537

ROSEBANK

EX  
S.S. "CANADIAN OBSERVER"

Makers of Engines COLLINGWOOD S.B. CO. LD.

Works No. 81

Makers of Main Boilers COLLINGWOOD S.B. CO. LD.

Works No. 189-190.

Makers of Donkey Boiler -

Works No. -

MACHINERY.



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002320-002329-0124



No.

THE BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. .... No. in Register Book .....

Received at Head Office

27<sup>th</sup> December 1920

Surveyor's Report on the New Engines, Boilers, and Auxiliary  
Machinery of the Steel Screw Steamer

"Canadian Observer"

Port of Registry

Montreal

Registered Owners

His Majesty King George V

represented by The Hon. the Minister of Marine Ottawa.

Surveyor's District

Ontario

Date of Completion of Engines

6. 20

" " " Main Boilers

6. 20

" " " Donkey "

Trial Run at

Georgian Bay

Date

10. 6. 20

First Visit

Last Visit

14. 6. 20

Total Number of Visits



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## ENGINES.

Made by

Bollingwood S. B. & Co. Ltd  
Bollingwood

" at

Works No. 81

Description

No. of Cylinders, each Engine

Diars.

Stroke

Cub. feet in each L.P. Cylr.

Revolts. per Min.

I.H.P.

Pressure in I.P. Receiver at full Power

2nd I.P.

L.P.

Thickness of Metal in H.P. Cylr.

I.P.

"

"

" " " " Liner

"

"

"

" " " " Valve Chest

"

"

"

Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr.?

" " " " each Receiver?

Number of Bolts in H.P. Cylr. Cover

I.P.

2nd I.P.

L.P.

Eff. Diar. " " "

"

"

"

Pitch " " "

"

"

"

Type of H.P. Valves (Piston or Slide)

"

"

"

" Valve Gear

Diameter of Piston Rods (plain part)

At Bottom of Thread

Makers

"

Material

Diameter of Connecting Rods (smallest part)

Material

Makers

"

Diar. of Crosshead Gudgeons

Length of Bearing

Material

No. of Top End Bolts (each Rod)

Effective Diar.

Material

" Bot. " "

"

"

" Main Bearings

Lengths

" Bolts in each

Effective Diar.

Material

No. of Holding Down Bolts, each Engine

No. of Metal Checks

Eff. Diar. " " "

Average Pitch

Are the Engines bolted directly to the Tank Top?

Are the Bolts tapped through the Tank Top and fitted with Nuts inside

Date of Test of Tank by Water Pressure with Holding Down Bolts in place

## SKETCHES.

These engines are similar to those  
of the S.S. "Canadian Farmer"  
No 80 by same firm.

All forgings made by the  
Dominion Foundries & Steel Co Hamilton.



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## SKETCHES.

## SHAFTING.

Are Crank Shafts Built?	No. of Lengths in each	Angle of Cranks
Diar. of Crank Shafts by Rule	Actual	Diar. in Way of Webs
Makers of		Material
Diar. of Crank Pins	Diar. in Way of Web	
Makers of		Material
Width across Crank Webs at Centre of Shaft	Thickness	
" " " " Crank Pins		
" " " " Narrowest part		
Makers of Crank Webs		Material
Diar. or Breadth of Keys in Crank Webs	Length	
" of Dowel Pins in Crank Pins	Length	Screwed or Plain
No. of Bolts in each Coupling	Diar. at Mid Length	Diar. of Pitch Circle
Material of Coupling Bolts		
Crank Shafts Finished by		
Greatest Distance from edge of Main Bearing to Crank Web		
Description of Thrust Blocks		
Number " " Rings		
Diar. of Thrust Shafts by Rule	Actual (at bot. of Collars)	Over Collars
" " at Forward Coupling		After Coupling
No. of Thrust Collars	Thickness	Distance apart
Thrust Shafts Forged by		Material
" Finished by		
Diar. of Intermediate Shafting by Rule	Actual	
No. of Lengths, each Engine		No. of Tunnel Bearings
Diar. of Bearings	Length	Distance apart



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These engines are similar to those of the 22.5 inch bore  
No 80 of same firm  
All fittings made by the  
Company. ordered to handle



No. of Bolts, each Coupling      Diar. at Mid Length      Diar. of Pitch Circle

Intermediate Shafts Forged by      Material

" " Finished by

Diar. of Propeller Shafts by Rule      Actual      At Couplings

Are Propeller Shafts fitted with Continuous Brass Liners?

Diar. over Liners      Length of After Bearings

Of what Material are the After Bearings composed?

Distance from After Bearing in Stern Tube to nearest Tunnel Bearing

Are the After Bearings lubricated with Oil or Sea Water?

What means are adopted to prevent Sea Water entering the Stern Tubes?

Propeller Shafts Forged by      Material

" " Finished by

No. of Propellers      Diar.      Pitch

" Blades, each Propeller      Fitted or Solid

Material of Blades      Boss

Surface, each Propeller      Diar. of Propeller

Rule Diar. of Crank Shaft=

Coefficient of Displacement of Vessel at  $\frac{1}{2}$  Moulded Depth

# SKETCHES.



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## TURBINE ENGINES.

Type

No. of H.P. Turbines

No. of L.P. Turbines

No. of Astern

How arranged

Revs. per Min.

Horse Power

Diar. of H.P. Turbine Drums

MATERIAL

THICKNESS OF METAL

Material of H.P. Turbine Casings

" "

Lengths of Blades in H.P. Turbines

No. of Rows of Blades of each Length

Pitch of " " "

Diar. of L.P. Turbine Drums

MATERIAL

THICKNESS OF METAL.

Material of L.P. Turbine Casings

" "

Lengths of Blades in L.P. Turbines

No. of Rows of Blades of each Length

Pitch of " " "

Diar. of Astern Turbine Drums

MATERIAL

THICKNESS OF METAL

Material of Astern Turbine Casings

" "

Lengths of Blades in Astern Turbines

No. of Rows of Blades of each Length

Pitch of " " "

Diar. of Turbine Spindles

Length of Bearing

No. of Thrust Collars on each Spindle

Thickness

Distance apart

Diar. of Spindles at Bottom of Collars

Diar. over Collars

Spindles Forged by

Material

" Finished by

## SKETCHES.



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## SKETCHES.

## SKETCHES.

No. of Air Pumps  
Type of  
How are Air Pumps Worked?  
No. of Circulating Pumps  
Backpressure  
Type of Circulating Pump  
How are Circulating Pumps Worked?

No. of Circulating Pump Section from Sea  
How each Circulating Pump a little section with No return Valve?

No. of Feed Pumps & each Injection  
Where do they pump from?  
Discharge to?

Are Spring loaded Relief Valves fitted to each Pump?  
Can one Pump be overhauled while the others are at work?

No. of High Pumps on each Engine  
Where do they pump from?  
Discharge to?

Can one Pump be overhauled while the others are at work?

No. of High Pumps connected to Condensers

Are the High Pumps and Pipes so arranged as to prevent simultaneous connection between Sea and



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## PUMPS, ETC.

No. of Air Pumps                      Diar.                      Stroke

Type of "

Diar. of Air Pump Rod                      Material

How are Air Pumps Worked?

No. of Centrifugal Circulating Pumps                      Maker

" Reciprocating " "                      Diar.                      Stroke

Diar. of Circulating Pump Rods                      Material

How are Circulating Pumps Worked?

Diar. of Circulating Pump Suction from Sea

Has each Circulating Pump a Bilge Suction with Non-return Valve?                      Diar.

No. of Feed Pumps on each Engine                      Diar.                      Stroke

Where do they pump from?

" " discharge to?

Are Spring-loaded Relief Valves fitted to each Pump?

Can one Pump be overhauled while the others are at work?

No. of Bilge Pumps on each Engine                      Diar.                      Stroke

Where do they pump from?

" " discharge to?

Can one Pump be overhauled while the others are at work?

No. of Bilge Injections connected to Condensers                      Diar.

Are all Bilge Suctions fitted with Roses?

Are the Valves, Cocks, and Pipes so arranged as to prevent unintentional connection between Sea and

Bilges?

Are all Sea Connections made with Valves or Cocks fitted direct to the Hull Plating?

Are they placed so as to be easily seen and accessible?

Are the Discharge Chests placed above the Deep Load Line?

Are they fitted direct to the Hull Plating and easily accessible?

Are all Blow-off Cocks or Valves fitted with Spigots through the Hull Plating and Covering Plates or Planges on the outside?



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## BOILERS.

Boilers made by

Bollingwood S. Bros Ltd  
Bollingwood

at

Works No.

189-90.

Date when Plan approved

9-10-18

Boiler Plates, Iron or Steel

Steel

Makers of Shell Plates

United States Steel Products Co

" Internal Plates

do

" Furnaces

Lloyds tests

" Stay Bars

United States Steel Products Co

" Rivets

Steel Co. of Canada

Material tested by (B.C., B.T., etc.)

A.B. for B.C.

No. of Boilers

Single or Double-ended

No. of Furnaces, each Boiler

Type of Furnaces

Approved Working Pressure

Hydraulic Test Pressure

Date of Hydraulic Test

11-2-20

17-3-20

" when Safety Valves set

10-6-20

Pressure on Valves

185 lbs.

Date of Steam Accumulation Test

Max. Pressure under Accumulation Test

System of Draught

Can Boilers be worked separately?

Greatest inside Diam. of Boilers

" Length "

Square Feet of Heating Surface, each Boiler

" Grate "

These boilers are similar to those  
of the "Canadian Farmer"  
nos 187-8 by same firm.



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No. of Safety Valves, each Boiler

Diar. " " "

Area " " "

Are the Valves fitted with Easing Gear?

No. of Pressure Gauges, each Boiler

" Water " "

" Test Cocks, " "

" Salinometer Cocks, " "

Are Water Gauge Pillars attached by Pipes to Steam and Water Spaces?

Are these Pipes connected to Boilers by Cocks or Valves?

Are Blow-off Cocks or Valves fitted on Boiler Shells?

No. of Strakes of Shell Plating in each Boiler

" Plates in each Strake

Thickness of Shell Plates by Rule

" " Approved

" " in Boilers

Are the Rivet Holes Punched or Drilled?

Are Rivets Iron or Steel?

Are the Longitudinal Seams Butt or Lap Joints?

Are the Double Butt Straps of equal width?

Thickness of outside Butt Straps

" inside "

Are Longitudinal Seams Hand or Machine Riveted?

Are they Single, Double, or Treble Riveted?

Diar. of Rivet Holes

Pitch "

Width of Overlap

Percentage of Strength in Longitudinal Seams



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No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes

Pitch „

Width of Overlap

No. of Rows of Rivets in End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes

Pitch „

Width of Overlap

Size of Manholes in Shell

Dimensions of Compensating Rings

Thickness of End Plates in Steam Space by Rule

„ „ „ „ „ Approved

„ „ „ „ „ in Boilers

Pitch of Steam Space Stays

Eff. Diar. „ „ „ by Rule

„ „ „ „ „ Approved

„ „ „ „ „ in Boilers

Material of „ „ „

How are Stays Secured?

Diar. and Thickness of Loose Washers on End Plates

„ „ Riveted „ „ „

Width „ „ Doubling Strips „ „

Thickness of Middle Back End Plate by Rule

„ „ „ „ „ Approved

„ „ „ „ „ in Boilers



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Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at .. .. .

Eff. Diar. of Stays by Rule

" " " " Approved

" " " " in Boilers

Material .. .. .

Are Stays fitted with Nuts outside ?

Thick. of Back End Plates

Thickness of Back End Plates at Bottom by Rule

" " " " " Approved

" " " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

Thickness of Doublings in .. .. .

Thick. of Front End Plates

Thickness of Front End Plates at Bottom by Rule

" " " " " Approved

" " " " " in Boilers

No. of Long Stays in Spaces between Furnaces

Eff. Diar. of Stays by Rule

" " " " " Approved

" " " " " in Boilers

Material of .. .. .

Thickness of Front Tube Plates by Rule

" " " " " Approved

" " " " " in Boilers

Pitch of Stay Tubes at Spaces between Stacks of Tubes

Thickness of Doublings in .. .. .

" Stay Tubes at .. .. .

Are Stay Tubes fitted with Nuts at Front End ?

Thickness of Back Tube Plates by Rule

Approved .. .. .

in Boilers .. .. .

Pitch of Stay Tubes in Back Tube Plates

" " " " " " " "

Thickness of Stay Tubes

Plates .. .. .

External Disc of Tubes

Material .. .. .

Thickness of Furnace Plates by Rule

Approved .. .. .

in Boilers .. .. .

Smallest outside Diam. of Furnaces

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Thickness of Tube by Rule

Approved .. .. .

in Boilers .. .. .

Pitch of Stayed Stays in the Tubes

Eff. Diar.



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Are Stay Tubes fitted with Nuts at Front End ?

Thickness of Back Tube Plates by Rule

" " " Approved  
" " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

" Plain "

Thickness of Stay Tubes

" Plain "

External Diar. of Tubes

Material " "

Thickness of Furnace Plates by Rule

" " " Approved  
" " " in Boilers

Smallest outside Diar. of Furnaces

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Thickness of " " Tops, by Rule

" " " " Approved  
" " " " in Boilers

Pitch of Screwed Stays in C.C. Tops

Ext. Diar. " " by Rule

" " " Approved  
" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides by Rule



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## Thickness of Combustion Chamber Sides Approved

" " " " in Boilers

## Pitch of Screwed Stays in C.C. Sides

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Material " "

## Thickness of Combustion Chamber Backs by Rule

" " " " Approved

" " " " in Boilers

## Pitch of Screwed Stays in C.C. Backs

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Are all Screwed Stays fitted with Nuts inside C.C.?

## Thickness of Combustion Chamber Bottoms

## No. of Girders over each Wing Chamber

" " " Centre "

## Depth and Thickness of Girders

## Material of Girders

## No. of Stays in each

## No. of Stay Tubes, each Boiler

" " Plain " "

## Size of Lower Manholes

## VERTICAL DOWNY BOILERS

If the Downy Boilers are fitted the following particulars should be stated in addition to those on

previous pages applicable to such boilers:-

Type of boiler

Height of Boiler Crown above Fire Grate

Are Boiler Crown Flat or Ribbed?

Internal Radius of Ribbed Crown

Description of Section in Boiler Crown

Dist. of Rivet Holes

Height of Firebox Crown above Fire Grate

Are Firebox Crown Flat or Ribbed?

Internal Radius of Ribbed Crown

No. of Crown stays

Internal Dist. of Firebox at Top

No. of Water Tubes

Material of Water Tubes

No. of Screwed Stays in Firebox Plate

Are they fitted with Nuts inside?

## SUPERHEATERS

Description of Superheaters

How situated

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### Type of Boilers

Height of Boiler Crown above Fire Grate

### Are Boiler Crowns Flat or Dished?

Internal Radius of Dished Ends

### Thickness of Plates

Description of Seams in Boiler Crowns

Diar. of Rivet Holes

Pitch

Width of Overlap

Height of Firebox Crowns above Fire Grate

### Are Firebox Crowns Flat or Dished?

### External Radius of Dished Crowns

### Thickness of Plates

No. of Crown Stays

Effective Diar.

## Material

External Diar. of Firebox at Top

Bottom

### Thickness of Plates

No. of Water Tubes

Int. Diar.

22 2'

### Material of Water Tubes

No. of Screwed Stays in Firebox Sides

Eff. Diar.

## Material

Are they fitted with Nuts inside?

Outside ?

## SUPERHEATERS

### Description of Superheaters

Where situated

### Which Boilers are connected to Superheaters ?

Can Superheaters be shut off while Boilers are working?

No. of Safety Valves on Superheaters.

Diar.

Area

Are        "        "        fitted with Easing Gear ?

Date of Hydraulic Test

### Test Pressure

Date when Safety Valves set

### Pressure on Valves

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## MAIN STEAM PIPES.

No. of Lengths	2	1
Material	Steel	Steel
Brazed, Welded, or Seamless	Seamless	Seamless
Internal Diam.	6"	7½"
Thickness	⅜"	½"
How are Flanges Secured?	Riveted	Riveted
Date of Hydraulic Test	1-4-70	70-5-70
Test Pressure	540 lbs.	540 lbs.
	Smel.	Tested by Canadian Government Inspector.

## REFRIGERATORS.

No. of Machines Makers

Description

When any part of the Vessel is to be used for the Carriage of Refrigerated Cargo the following particulars should be stated:—

Total Cubic Capacity of Refrigerated Spaces

Nature, Construction, Thickness, &amp;c., of Insulation

Are all Pipes, Air Trunks, &amp;c., well secured and protected from risk of damage?

Are all Bilge, Suction, Sounding, and Air Pipes in Insulated Spaces properly insulated?

Are Thermometer Tubes so arranged that Water cannot enter and freeze in the Tubes?

Are Sluice Valves fitted on any of the Bulkheads of Insulated Spaces?

Are these fitted with Brass Non-return Valves?

Are they always accessible?

Are the Bilges and Bilge Rose Boxes always accessible?

Are the Steam Suctions to Bilges fitted with Non-return Valves?

Is the Machine Room effectively separated from Insulated Spaces?

" " properly Ventilated and Drained?

No. of Steam Cylinders, each Machine

Diams.

" Compressors, " "

Diam. of Crank Shafts

No. of Cranks

Give particulars of Pumps in connection with Refrigerating Plant, and state whether worked by Refrigerating Machines or independently

2 column vibration pipe installed  
vertical mechanism in battery room

Particulars of Snow Chamber

No. of Cylinders	Name of Cylinder	Capacity of Cylinder	Capacity of Plant	Capacity of Refrigerator	Capacity of Cooler	Capacity of Condenser	Capacity of Evaporator	Capacity of Storage Tank	Capacity of Other Parts

Are Brine and other Regulating Valves placed so as to be accessible without entering the Insulated Spaces?

Date of Test under Working Conditions

Fall of Temperature in Insulated Spaces

Time required to obtain this Result

Articles of Spare Gear for Refrigerating Plant carried on board



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SKETCHES.

Electric light installation similar to  
that fitted on "Canadian Farmer"

ELECTRIC LIGHTING.

Installation Fitted by

No. and Description of Dynamos

## Makers of Dynamos

Capacity	Amperes, at	Volts,	Revol. per Min.
----------	-------------	--------	-----------------

Current Alternating or Continuous

### Position of Dynamos

### .. Main Switch Board

No. of Circuits to which Switches are provided on Main Switch Board

Particulars of these Circuits:—

Total No. of Lights

No. of Motors driving Fans, &amp;c.

No. of Heaters

### Current required for Motors and Heaters



Positions of Auxiliary Switch Boards, with No. of Switches on each

Are Cut-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits

On Aux. " " each Auxiliary Circuit

Wherever a Cable is reduced in size

To each Lamp Circuit

To both Flow and Return Wires of all Circuits when the Double-Wire System is adopted

Are the Fuses of Standard Sizes?

Are all Switches and Cut-outs constructed of Non-inflammable Material?

Are they placed so as to be always and easily accessible?

Smallest Single Wire used, No. S.W.G., Largest, No. S.W.G.

How are Conductors in Engine and Boiler Spaces protected?

" " Saloons, State Rooms, &c., " ?

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp

(2) " passing through Bunkers or Cargo Spaces

(3) " " Deck Beams or Bulkheads

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables is unimpaired?

Are all Joints in accessible positions, none being made in Bunkers or Cargo Spaces?

Are all Hull Connections for Single-Wire Systems made with Screws of large Surface?

Are the Dynamos, Motors, Main and Branch Cables, so placed that the Compasses are not injuriously affected by them?

Have Tests been made to prove that this condition has been satisfactorily fulfilled?

Has the Insulation Resistance over the whole system been tested?

What does the Resistance amount to?

Ohms.

Is the Installation supplied with a Voltmeter?

" " " an Ampere Meter?

Date of Trial of complete Installation

14-6-70

Duration of Trial

6 hours



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## EVAPORATORS.

No.	Type	Tons per Day
Makers		
Working Pressure	Test Pressure	Date of Test
Date of Test of Safety Valves under Steam	10-6-70 at 14 lbs.	

## FEED WATER HEATERS.

No.	Type	
Makers		
Working Pressure	Test Pressure	Date of Test
10-2-71		

## DONKEY

No. of Donkeys

Type "

Makers "

Single or Duplex

" Double-Acting

Diar. of Steam Cylinders

" Pumps

Stroke of "

Where do they pump from?

Where do they discharge to?

Capacity, Tons per Hour of Ballast Donkey

Diar. of Pipe required by Rule for

## FEED WATER FILTERS.

No.	Type	Size
Makers		
Working Pressure	Test Pressure	Date of Test

## FORCED DRAUGHT FANS.

No. of Fans.	Diar.	Revs. per min.
How are Fans driven?		

All pumps and auxiliaries  
similar to those on "Canadian Farmer"

## PUMPS.

largest Ballast Tank

Velocity of Water in Pipe



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## SPARE GEAR.

No. of Top End Bolts	No. of Bot. End Bolts
" Main Bearing Bolts	" Coupling Bolts
" Cylr. Cover Bolts Studs	" Valve Chest Cover Bolts Studs
" Feed Pump Valves	" Bilge Pump Valves
" Safety Valve Springs	" Fire Bars
" Piston Rings	" Junk Ring Bolts Studs
" Piston Rods	" Connecting Rods
" Valve Spindles	" Air Pump "
" Air Pump Valves	" " " Buckets
" Crank Pin Bushes	" Crosshead Bushes
" Crank Shafts	" Propeller Shafts
" Propellers	" " Blades
" Boiler Tubes	" Condenser Tubes

OTHER ARTICLES OF SPARE GEAR:—

## GENERAL CONSTRUCTION.

Have all the Requirements under Sections 31 and 32 of the Rules been complied with? *Yes.*

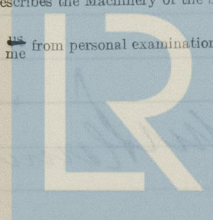
If not, give details of the points of difference, and state when these were sanctioned by the Chief

Surveyor.

Are the Steam Pumping Arrangements in accordance with the approved Plan? *Yes*

If not, state in what respects they differ and when such differences were sanctioned by the Chief

Surveyor

Are the Materials used in the Construction of Engines and Boilers, so far as could be seen, sound and trustworthy? *Yes*Is the Workmanship throughout thoroughly satisfactory? *Yes*The above correctly describes the Machinery of the S.S. *Canadian Observer*as ascertained by *me* from personal examination
*William M. Urquhart*  
 Engineer Surveyor to the British Corporation for the  
 Survey and Registry of Shipping.



Fees—

MAIN BOILERS. Have all the requirements of the Rules been complied with?

H.S. Sq. ft. :

G.S. :

DONKEY BOILERS.

H.S. Sq. ft. :

G.S. :

£ :

ENGINES.

L.P.C. Cub. ft. :

£ :

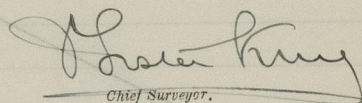
Testing, &amp;c. :

£ :

Expenses :

Total ... £ :

It is submitted that this Report be approved,

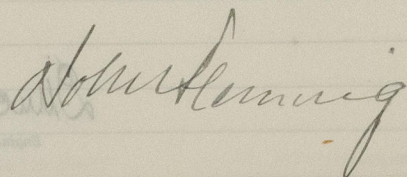


Chief Surveyor.

Approved by the Committee, for the class of M.B.S. on the  
12th January 1921

Fees applied for

Fees paid



Secretary.



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Page No. \_\_\_\_\_ Date \_\_\_\_\_

MEMORANDUM FOR THE RECORD

TO: \_\_\_\_\_

FROM: \_\_\_\_\_

SUBJECT: \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_

17. \_\_\_\_\_

18. \_\_\_\_\_

19. \_\_\_\_\_

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It is recommended that this Report be approved.

*Louisa King*  
Secretary

Approved by the Chairman for the class of 1921 on the  
25 January 1921

Page No. \_\_\_\_\_

Date \_\_\_\_\_

*Louisa King*  
Secretary



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