

No. 795

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. 758 No. in Register Book 1293

BASINGCREEK  
S.S. SASKATOON

Makers of Engines N. E. MARINE ENG. CO. LD.

Works No. 1936

Makers of Main Boilers N. E. MARINE ENG. CO. LD.

Works No. 1936.

Makers of Donkey Boiler ✓

Works No. ✓

MACHINERY.



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No.

THE BRITISH CORPORATION FOR THE SURVEY  
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Report No. \_\_\_\_\_ No. in Register Book \_\_\_\_\_

Received at Head Office

6<sup>th</sup> May 1910

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

Saskatoon

Port of Registry

Sunderland

Registered Owners

The Colonial Transportation  
Company Limited

Surveyor's District

Wear and Tees

Date of Completion of Engines

4-10

" " "

Main Boilers

4-10

" " "

Donkey

✓

Trial Run at

North Sea

Date

19-4-10

First Visit

1-11-10

Last Visit

19-4-10

Total Number of Visits

37

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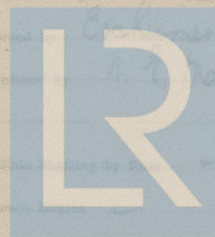


## ENGINES.

Made by *North Eastern marine Eng. Co. Ltd*  
 at *Sunderland*  
 Description *Triple expansion S.E. 3 cranks*  
 Works No. *1936*  
 No. of Cylinders, each Engine *3* Diars. *17"-28"-46"* Stroke *33"*  
 Cub. feet in each L.P. Cylr. *31.73* Revols. per Min. L.H.P.  
 Pressure in I.P. Receiver at full Power 2nd I.P. L.P.  
 Thickness of Metal in H. P. Cylr. *1 1/8"* I.P. *1 1/8"* " *1 1/8"*  
 " " " " Liner " " " " *1"* " *7/8"* " *7/8"*  
 " " " " Valve Chest " " " " *7/8"*  
 Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr. *yes*  
 " " " " each Receiver? *yes*  
 Number of ~~Boots~~ Studs in H.P. Cylr. Cover *14* I.P. *18* 2nd I.P. *-* L.P. *22*  
 Eff. Diar. " " " *18"* " *18"* " *-* " *18"*  
 Pitch " " " *4 1/2"* " *5 3/8"* " *-* " *7"*  
 Type of H.P. Valves (Piston or Slide) *Piston* *Slide* " *-* " *Slide*  
 " Valve Gear *Stephenson's link motion*  
 Diameter of Piston Rods (plain part) *4 1/4"* At Bottom of Thread *3.287"*  
 Makers " *Northumberland Forge* Material *Iron*  
 Diameter of Connecting Rods (smallest part) *4 3/8"* Material *Iron*  
 Makers " *Northumberland Forge*  
 Diar. of Crosshead Gudgeons *5"* Length of Bearing *7 1/4"* Material *Steel*  
 No. of Top End Bolts (each Rod) *2* Effective Diar. *2 1/4"* Material *Iron*  
 " Bot. " *2* " *2 1/4"* " *Iron*  
 " Main Bearings *6* Lengths *9"*  
 " Bolts in each *2* Effective Diar. *2"* Material *Iron*

No. of Holding Down Bolts, each Engine *34* No. of Metal Chocks *6*  
 Eff. Diar. " " " *1 1/2"* Average Pitch *21"*  
 Are the Engines bolted directly to the Tank Top? *yes*  
 Are the Bolts tapped through the Tank Top and fitted with Nuts inside? *Fitted bolts*  
 Date of Test of Tank by Water Pressure with Holding Down Bolts in place *19-4-10.*

## SKETCHES.



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# SKETCHES.

## SKETCHES

# SHAFTING.

Are Crank Shafts Built? *Yes* No. of Lengths in each *3* Angle of Cranks *120°*

Diar. of Crank Shafts by Rule *8.99"* Actual *9½"* Diar. in Way of Webs *10"*

Makers of *Bochumer Verein* Material *Steel*

Diar. of Crank Pins *9½"* Diar. in Way of Web *9½"*

Makers of *Bochumer Verein* Material *Steel*

Width across Crank Webs at Centre of Shaft *19½"* Thickness *18"*

" " " " Crank Pins *12"*

" " " " Narrowest part *12"*

Makers of Crank Webs *Spencer, Newburn* Material *Steel*

Diar. or Breadth of Keys in Crank Webs *1¾"* Length *5"*

" of Dowel Pins in Crank Pins *1"* Length *3"* Screwed or Plain *Screwed*

No. of Bolts in each Coupling *6* Diar. at Mid Length *24"* Diar. of Pitch Circle *14"*

Material of Coupling Bolts *Steel*

Crank Shafts Finished by *N. & Marine Eng. Co. Ltd. Sunderland.*

Greatest Distance from edge of Main Bearing to Crank Web *Clearance*

Description of Thrust Blocks *Adjustable with Muntz metal Screw*

Number " " Rings *5*

Diar. of Thrust Shafts by Rule *8.99"* Actual (at bot. of Collars) *9½"* Over Collars *15½"*

" " at Forward Coupling *9½"* After Coupling *9"*

No. of Thrust Collars *5* Thickness *2½"* Distance apart *3"*

Thrust Shafts Forged by *Bochumer Verein* Material *I. S.*

" Finished by *N. & Marine Eng. Co. Sunderland*

Diar. of Intermediate Shafting by Rule *✓* Actual *✓*

No. of Lengths, each Engine *✓* No. of Tunnel Bearings *✓*

Diar. of Bearings *✓* Length *✓* Distance apart *✓*



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 10.14 Actual 10 1/4" At Couplings 9 1/2"  
Are Propeller Shafts fitted with Continuous Brass Liners? Yes  
Diar. over Liners 11 3/8" Length of After Bearings 3'-6"  
Of what Material are the After Bearings composed? Brass Lignum. vitae  
Distance from After Bearing in Stern Tube to nearest Tunnel Bearing  
Are the After Bearings lubricated with Oil or Sea Water? Sea Water  
What means are adopted to prevent Sea Water entering the Stern Tubes? ✓  
Propeller Shafts Forged by Northumberland Forge Co. Material Iron  
" " Finished by N. E. Marine Eng. Co.  
No. of Propellers one Diar. 12'-0" Pitch 12'-6"  
" Blades, each Propeller 4 Fitted or Solid Filled  
Material of Blades cast iron Boss cast Steel  
Surface, each Propeller 56 # Diar. of Propeller Rule Diar. of Crank Shaft = 16 0 1  
Coefficient of Displacement of Vessel at 1/2 Moulded Depth 6795

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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



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## PUMPS, ETC

No. of Air Pumps *One*      *Edwards*      *15"*      *16 1/2"*  
Diar.      Stroke

Type of "

Diar. of Air Pump Rod *2 1/4"*

Material

*Muntz Metal*

How are Air Pumps Worked?

*Levers*

No. of Centrifugal Circulating Pumps

*One*      *Watsons*

Maker

" Reciprocating "

Diar.

Stroke

Diar. of Circulating Pump Rods

Material

*Engine direct*

How are Circulating Pumps Worked?

Diar. of Circulating Pump Suction from Sea

*7"*

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

*Yes*

Diar. *5"*

No. of Feed Pumps on each Engine

*2*

Diar.

*1 3/4"*

Stroke

*16 1/2"*

Where do they pump from?

*Holwell*

" " discharge to?

*Boilers, thro heater*  
*Yes*  
*Yes*

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

*2*

Diar.

*3"*

Stroke

*16 1/2"*

Where do they pump from?

*Tanks + bilges*  
*Overboard*

" " discharge to?

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

*Yes*

No. of Bilge Injections connected to Condensers

*✓*

Diar.

Are all Bilge Suctions fitted with Roses?

*Yes*

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

Bilges?

*Yes*

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

*Yes*

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

*Yes*

Are the Discharge Chests placed above the Deep Load Line?

*Yes*

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

*Yes*

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

Flanges on the outside?

*Yes*



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## BOILERS.

Boilers made by *N. E. Marine Eng Co Ltd*  
 at *Sunderland*  
 Works No. *1936*  
 Date when Plan approved *3-11-09*  
 Boiler Plates, Iron or Steel *Steel*  
 Makers of Shell Plates *Spence, Newburn*  
 do *Brighton*  
 Furnaces *Spence, Newburn*  
 Stay Bars *Miller*  
 Rivets *B. 6 B.O.T.*  
 Material tested by (B.C., B.T., etc.)  
 No. of Boilers *2*  
 Single or Double-ended *Single*  
 No. of Furnaces, each Boiler *2*  
 Type of Furnaces *Brighton*  
 Approved Working Pressure *185 lbs*  
 Hydraulic Test Pressure *370 lbs*  
 Date of Hydraulic Test *13-2-10*  
 when Safety Valves set *9-3-10*  
 Pressure on Valves *190 lbs*  
 Date of Steam Accumulation Test *9-3-10*  
 Max. Pressure under Accumulation Test *197 lbs*  
 System of Draught *Natural*  
 Can Boilers be worked separately? *Yes*  
 Greatest inside Diam. of Boilers *11'-9 1/16"*  
 Length *10'-9 1/4"*  
 Square Feet of Heating Surface, each Boiler *1375 sq ft*  
 Grate *33.4 sq ft*

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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

2  
24"  
7.95 sq ft  
Yes  
one  
one  
2  
one

no

Yes

two  
2

$\frac{3}{32}$ "  
 $\frac{3}{32}$ "  
 $\frac{3}{32}$ "

Drilled

Steel

Butt

Yes

1"

1"

Machine

Treble

15/32"

8"

8 1/2"

83 9%



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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 2

Are these Seams Hand or Machine Riveted? Back, machine - Front, hand.

Diar. of Rivet Holes  $1\frac{5}{8}"$ Pitch "  $3\frac{1}{2}"$ Width of Overlap  $5\frac{3}{8}"$ Size of Manholes in ~~shell~~ and,  $16" \times 12"$ 

Dimensions of Compensating Rings Plate flanged

Thickness of End Plates in Steam Space by Rule

" " " " " Approved  $1\frac{1}{2}"$ " " " " " in Boilers  $1\frac{1}{2}"$ Pitch of Steam Space Stays  $1'-5\frac{1}{8}" \times 1'-3\frac{5}{8}"$ 

Eff. Diar. " " " by Rule

" " " " " Approved  $2'-787"$ " " " " " in Boilers  $2'-787"$ 

Material of, " " " Steel

How are Stays Secured? Double nuts washers

Diar. and Thickness of Loose Washers on End Plates  $9" \times \frac{1}{4}"$ 

" " Riveted " " " ✓

Width " " Doubling Strips " " " ✓

Thickness of Middle Back End Plate by Rule

" " " " " Approved  $\frac{7}{8}"$ " " " " " in Boilers  $\frac{7}{8}"$ 

Thickness of Doubling in White Spaces between Rivets

Thick of Stays at

Thick of Stays at

Approved

in Boilers

Material

Are Stays fitted with Nuts outside?

Thickness of Back End Plates at Bottom by Rule

Approved

in Boilers

Pitch of Stays at White Spaces between Rivets

Thickness of Doubling in

Thickness of Front End Plates at Bottom by Rule

Approved

in Boilers

No. of long Stays in Spaces between Rivets

Eff. Diar. of Stays by Rule

Approved

in Boilers

Material of

Thickness of Front End Plates at Bottom by Rule

Approved

in Boilers

Thickness of Doubling in

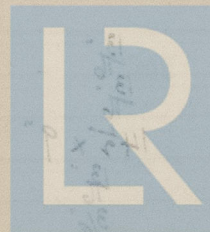
Approved

in Boilers

Thickness of Doubling in

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?

Thickness of Back End Plates at Bottom by Rule

" " " " " Approved

" " " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

Thickness of Doublings in " "

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 " " "

 $14\frac{1}{8} \times 9\frac{3}{8}$ 

1.8835

1.8835

Steel

Yes

 $2\frac{7}{8}$  $1\frac{13}{16}$   
 $1\frac{13}{16}$   
3

1.787

1.787

Steel

 $1\frac{13}{16}$   
 $1\frac{13}{16}$   
 $1\frac{13}{16}$  $14\frac{1}{2} \times 9$  $1\frac{13}{16}$   
 $3\frac{3}{8}$ 

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

Plate " "

Minimum Dist. of Tubes

Material " "

Thickness of Furnace Plates by Rule

Approved " "

in Boiler " "

Smallest outside Dist. of Furnaces

Length between Tube Plates

Width of Combustion Chamber (Front to Back)

Thickness of " " " " " by Rule

Approved " "

in Boilers " "

Dist. of Successive Stays in C.C. Tops

Eff. Diar. " " " " " by Rule

Approved " "

in Boilers " "

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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 Diam. of Tubes

Material " "

Thickness of Furnace Plates by Rule

" " " Approved

" " " in Boiler

Smallest outside Diam. 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

Eff. Diam. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides by Rule

Where necessary.

$\frac{3}{4}$ "  
 $\frac{3}{4}$ "  
 $4\frac{1}{2} \times 4\frac{1}{2}$ "  
 $13\frac{1}{2} \times 9 \times 9$ "  
 $\frac{5}{16}$ "  
 8 W.G.  
 $\frac{3}{4}$ "  
 Iron

$\frac{17}{32}$ "  
 $\frac{17}{32}$ "  
 $3 \times 4\frac{3}{16}$ "  
 7'-6" over.

2'-7 $\frac{1}{2}$ " over

$\frac{3}{4}$ "  
 $\frac{13}{16}$ "  
 $9\frac{1}{2} \times 8\frac{3}{4}$ "

1.5085"  
 1.5085"  
 Steel

Thickness of Combustion Chamber Sides Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Eff. Diam. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides by Rule

" " " Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Eff. Diam. " " by Rule

" " " Approved

" " " in Boilers

Material " "

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

Thickness of Combustion Chamber Bottoms

No. of Stays over each Water Chamber

Centre " "

Length and Thickness of Stays

Thickness of Stays

No. of Stays in each



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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

$$\frac{3}{4}"$$

$$\frac{13}{16}"$$

$$10\frac{1}{4} \times 9\frac{1}{2}"$$

$$1.6335"$$

$$1.6335"$$

$$\text{Steel}$$

$$\frac{13}{16}"$$

$$\frac{13}{16}"$$

$$11\frac{7}{8} \times 9\frac{3}{8}"$$

$$1.7585"$$

$$1.7585"$$

$$\text{Steel}$$

$$\frac{13}{16}"$$

5

$$8' \times 2 @ \frac{3}{4}"$$

$$\text{Steel}$$

$$2$$

50

170

16" x 12"

## VERTICAL DONKEY BOILERS

If the Donkey boilers are vertical the following particulars should be stated in addition to those on

previous pages applicable to such boilers—

Type of boiler

Height of boiler above the grate

Are boiler crowns flat or dished?

Internal radius of dished heads

Description of seams in boiler crowns

Dist. of brick holes

Height of firebox crowns above the grate

Are firebox crowns flat or dished?

External radius of dished crowns

No. of crown stays

Internal diam. of firebox at top

No. of water tubes

Material of water tubes

No. of screwed stays in firebox sides

Are they fitted with nuts inside?

## SUPERHEATERS

Description of superheaters

Where situated

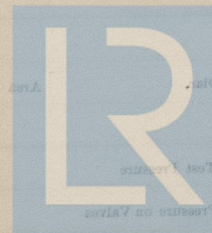
Which boilers are connected to superheaters?

Can superheaters be shut off while boiler is working?

No. of safety valves on superheaters

Are they fitted with locking flaps?

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## VERTICAL DONKEY BOILERS.

If the Donkey Boilers are Vertical the following particulars should be stated in addition to those on

previous Pages applicable to such Boilers:—

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.

" "

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

## MACHINE SKETCHES.

No. of Boilers  
Material  
Boiler, Water, or Steam  
Internal Diam.  
Thickness of Plates  
How are Flanges secured?  
Date of Hydraulic Test  
Test Pressure

## REFRIGERATORS.

No. of Machines  
Description  
When required of the Vaporizer to be used for the purpose of Refrigeration, state the following particulars:  
Amount to be stated:  
Total cubic Capacity of Refrigeration space.  
Nature, construction, Thickness, &c. of insulation.  
Means of securing the insulation from the outside.  
Means of securing the insulation from the inside.

Are all Pipes Air Tights &c. well secured and protected from risk of damage?  
Are all High Pressure Pumps, and Air Pipes in insulated spaces properly insulated?  
Are Thermometer Tubes so arranged that Water cannot enter and freeze in the Tubes?  
Are Safety Valves fitted on all of the insulated spaces?

Are Pipes fitted with those Non-return Valves?  
Are the Pipes and Boxes always accessible?  
Are the Pipes and Boxes fitted with non-return Valves?

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## MAIN STEAM PIPES.

No. of Lengths

Material

Brazed, Welded, or Seamless

Internal Diam.

Thickness

How are Flanges Secured?

Date of Hydraulic Test

Test Pressure

1	2
Copper	Copper
Seamless	Seamless
4 3/4"	3 1/2"
5 N.G.	8 N.G.
Brazed	Brazed
2-3-10	2-3-10
400 lbs.	400 lbs.

## 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?

Is the Machine Room properly Ventilated and Drained?

No. of Steam Cylinders, each Machine

Diars.

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

No. of Circuits to which switches are attached on Main Switch Board

Particulars of these Circuits

No. of Circuit	Name of Circuit	Machine	Capacity	Pressure	Temp.	Capacity	Temp.
1	Refrigerator	12	16	6.1	7/100	1050	92% efficiency
2	Refrigerator	11	16	5.5		950	

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

9	Refrigerator	12	16	6.1	7/100	1050	92% efficiency
10	Spare						



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## SKETCHES.

No. of Lamps: 35  
 Material: Copper  
 Brand, Weight or Dimensions: 35  
 Internal Dia: 35  
 Give particulars of Lamps in connection with Refrigerating Plant, and state whether working in  
 How are Motors Connected: 35  
 Date of Receipt: 35  
 Test Results: 35

## REFRIGERATORS

No. of Machines: 35  
 Description: 35  
 Date of Test under Working Conditions: 35  
 Tell of Temperature in insulated space: 35  
 Time required to obtain this Result: 35  
 Articles of Space then for Refrigerating Plant carried on board: 35

## ELECTRIC LIGHTING.

Installation: Fitted by Sunderland Forge & Eng. Co. Ltd.  
 No. and Description of Dynamos: 1 Multipolar, compound wound  
 Makers of Dynamos: Sunderland Forge & Eng. Co. Ltd.  
 Capacity: 73 Amperes, at 110 Volts, 575 Revs. per Min.  
 Current Alternating or Continuous: Continuous  
 Position of Dynamos: Tween deck in engine room  
 Main Switch Board: Close to dynamo  
 No. of Circuits to which Switches are provided on Main Switch Board

## Particulars of these Circuits:—

No. of Circuit.	Name of Circuit.	Number of Lights.	Candle Power.	Current Required, Amps.	Size of Conductor.	Current Density.	Conductivity of Conductor.	Insulation Resistance per Mile.
1	Owner	12	16	6.1	7/20½	1050	99%	boonag
2	Captain	11	16	5.5	"	950	"	"
3	Crew	11	16	5.5	"	950	"	"
4	Gas light	11	16	5.5	"	950	"	"
5	Salon	11	16	5.5	"	950	"	"
6	Pantry	12	16	6.1	"	1050	"	"
7	Engineers	10	16	5.1	"	850	"	"
8	Upper E.R.	10	16	5.1	"	850	"	"
9	Lower E.R.	10	16	5.1	"	850	"	"
10	Deck	12	16	6.1	"	1050	"	"
	Hold							
	Shore							

Total No. of Lights 99 No. of Motors driving Fans, &c. 1 No. of Heaters 1

Current required for Motors and Heaters 1



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

one in wheel house.  
Switches for sidelights, masthead,  
Binnacle & Telegraphs.

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. 18 S.W.G., Largest, No. 26 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 Bulkhead

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?

Is the Installation supplied with a Voltmeter?

“ “ “ an Ampere Meter?

Date of Trial of complete Installation

Duration of Trial

6 hours

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## EVAPORATORS.

No. \_\_\_\_\_ Type \_\_\_\_\_ Tons per Da \_\_\_\_\_  
 Makers \_\_\_\_\_  
 Working Pressure \_\_\_\_\_ Test Pressure \_\_\_\_\_ Date of Test \_\_\_\_\_  
 Date of Test of Safety Valves under Steam \_\_\_\_\_

## FEED WATER HEATERS.

No. *one* Type *Vertical*  
 Makers *N. S. Marine Eng. Co. Ltd.*  
 Working Pressure *185 lbs* Test Pressure *400 lbs* Date of Test *✓*

## DONKEY

No. of Donkeys \_\_\_\_\_  
 Type " \_\_\_\_\_  
 Makers " \_\_\_\_\_  
 Single or Duplex \_\_\_\_\_  
 " Double-Acting \_\_\_\_\_  
 Diam. of Steam Cylinders \_\_\_\_\_  
 " Pumps \_\_\_\_\_  
 Stroke of " \_\_\_\_\_  
 Where do they pump from? \_\_\_\_\_  
 Where do they discharge to? \_\_\_\_\_

*one Feed*  
*Horizontal*  
*Worthington*  
*Duplex*  
*Double*  
*9"*  
*8 1/4"*  
*10"*  
*Sea, Hotwell,*  
*Coolers, Tanks.*  
*Bolers, Deck,*  
*ash ejector.*

Capacity, Tons per Hour of Ballast Donkey

80

Diam. 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 \_\_\_\_\_ Diam. \_\_\_\_\_ Revols. per min. \_\_\_\_\_  
 How are Fans driven? \_\_\_\_\_

## PUMPS.

*one Ballast.*  
*Horizontal*  
*N. S. Marine*  
*Duplex*  
*Double*  
*6"*  
*7"*  
*9"*  
*Tanks, Bilges,*  
*Sea.*

*Condenser,*  
*overboard.*

largest Ballast Tank

4"

*one Sanitary.*  
*Horizontal*  
*Worthington*  
*Duplex*  
*Double*  
*4 1/2"*  
*7 3/4"*  
*4"*  
*Sea*  
*Tanks*

*Sanitary and*  
*Fresh Water Tanks*

Velocity of Water in Pipe

535 ft per min.



## SPARE GEAR.

No. of Top End Bolts	2	No. of Bot. End Bolts	2
" Main Bearing Bolts	2	" Coupling Bolts	1 set
" Cylr. Cover Bolts Studs	12	" Valve Chest Cover Bolts Studs	
" Feed Pump Valves	2	" Bilge Pump Valves	2
" Safety Valve Springs	2	" Fire Bars	4 set
" 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	2	" " Blades	✓
" Boiler Tubes	✓	" Condenser Tubes	6

## OTHER ARTICLES OF SPARE GEAR:-

10 assorted bolts & nuts  
50 condenser ferrules  
1/2 cwt. cast iron plates  
1/2 inch iron bars.

## 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. *Laskatoon*

as ascertained by *me* from personal examination.

*Oliver A. Carter*  
Engineer Surveyor to the British Corporation for the  
Survey and Registry of Shipping.



Fees--

## MAIN BOILERS.

H.S. Sq. ft. 13 0 0

G.S. :

## DONKEY BOILERS.

H.S. Sq. ft. :

G.S. :

£ 13 : 0 : 0

## ENGINES.

L.P.C. Cub. ft. 10 : 0 : 0

Testing, &amp;c. :

£ :

Expenses ... :

Total ... £ 23 : 0 : 0

It is submitted that this Report be approved,

11-5-10

Chief Surveyor.

Approved by the Committee, for the Class of M.B.S.\*  
 on the 11th May 1910.

Fees applied for 15-4-10

Fees paid 15-4-10

Secretary.



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THIS DAY

1914 12 0 0

U.S.

U.S. Treasury Notes

U.S.

U.S.

1914 12 0 0

Totals

1914 10 0 0

Totals of the above are as follows: 1914 10 0 0

Received of

1914 23 0 0

It is submitted that this Report is approved.

1914 12 0 0

*Wm. H. King*  
 Chief Clerk

Approved by the Commission for the Class of M.B.S.  
 on the 11th May 1914

Paid to the 1914-14-10

Paid to the 1914-14-10

*Wm. H. King*  
 Secretary



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