

No. 2136

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. *1957* No. in Register Book *3286*

"  
S.S. *CITY OF TORONTO*"

Makers of Engines *Richardsons Westgarth & Co. Ltd.*

Works No. *2652*

Makers of Main Boilers *Richardsons Westgarth & Co. Ltd.*

Works No. *2652*

Makers of Donkey Boiler

Works No.

MACHINERY.



© 2020

Lloyd's Register  
Foundation

002798-002807-0091



No.

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

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

Received at Head Office .....

Surveyor's Report on the New Engines, Boilers, and Auxiliary  
Machinery of the ~~Single Triple~~ ~~Twin Quadruple~~ Steamer .....

"City of Toronto"

Official No. ....

Port of Registry .....

Registered Owners .....

Clawson & Co. Montreal.

Engines Built by .....

Richardson Westgait & Co. Ltd.

at .....

Montreal.

Main Boilers Built by .....

Richardson Westgait & Co. Ltd.

at .....

Montreal.

Donkey " " .....

at .....

Date of Completion .....

13-4-16

First Visit .....

15-5-25

Last Visit .....

13-4-16

Total Visits .....

40

Lloyd's Register  
Foundation



## RECIPROCATING ENGINES

Works No.

2652

No. of Sets

1

Description

Triple expansion  
S.E. 3 cyles.

No. of Cylinders each Engine

3

No. of Cranks

3

Diars. of Cylinders

18" - 30" - 50"

Stroke

36"

Cubic feet in each L.P. Cylinder

40.9.

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

yes.

"

"

each Receiver?

yes.

Type of H.P. Valves,

Piston.  
slide.

1st I.P. "

2nd I.P. "

L.P. "

Valve Gear

slide.  
Stephenson Link.

Condenser

Surface

Cooling Surface

1300

sq. ft.

Diameter of Piston Rods (plain part)

4 1/4"

Screw part (bottom of thread)

3.53"

Material

"

I.P.

Diar. of Connecting Rods (smallest part)

5 1/4"

Material

I.P.

Crosshead Gudgeons

5 1/2"

Length of Bearing

8"

Material

I.P.

No. of Crosshead Bolts (each)

2

Diar. over Thrd

2 3/4"

Thrds. per inch

6

Material

steel.

Crank Pin

2

Diar.

2 3/4"

Thrds. per inch

6

Material

"

Main Bearings

6

Lengths

10 1/2"

Bolts in each

2

Diar. over Thread

3 1/4"

Threads per inch

6

Material

steel.

Holding Down Bolts, each Engine

8 1/2"

Diar.

1 1/4"

No. of Metal Chocks

8 1/2"

Are the Engines bolted to the Tank Top or to a Built Seat?

Tank top.

Are the Bolts tapped through the Tank Top and fitted with Nuts Inside?

yes.

If not, how are they fitted?

✓

Connecting Rods, Forged by

Darlington Forge Co.

Piston

"

Crossheads,

Connecting Rods, Finished by

R.W. Ho. Whool

Piston

"

Crossheads,

Date of Harbour Trial

Trial Trip

13-4-26  
Quebec

Trials run at

Were the Engines tested to full power under Sea-going conditions?

yes. light  
Revs. per min. 100

If so, what was the I.H.P.?

no cards

Pressure in 1st I.P. Receiver,

40

lbs., 2nd I.P.,

lbs., L.P.,

5

lbs., Vacuum,

25

Speed on Trial

about 12 miles per hour.

If the Conditions on Trial were such that full power records were not obtained give the following estimated

data:—

Builders' estimated I.H.P.

Revs. per min.

Estimated Speed



© 2020

Lloyd's Register  
Foundation







## TURBO-ELECTRIC PROPELLING MACHINERY.

No. of Turbo-Generating Sets Capacity of each

Type of Turbines employed

Description of Generators

No. of Motors driving Propeller Shafting

Are the Propeller Shafts driven direct by the Motors or through Gearing?

Is Single or Double Reduction Gear employed?

Description of Motors

Diar. of 1st Reduction Pinion

" 1st " Wheel

Width

Pitch of Teeth

Estimated Pressure per lineal inch

Diar. of 2nd Reduction Pinion

" 2nd " Wheel

Width

Pitch of Teeth

Estimated Pressure per lineal inch

Revs. per min. of Generators at Full Power

" Motors "

" 1st Reduction Shaft

" 2nd "

" Propellers at Full Power

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

Speed on Trial

Knots. Propeller Revs. per min.

S.H.P.

Makers of Turbines

" Generators

" Motors

" Reduction Gear

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

## DESCRIPTION OF INSTALLATION.

No. of Journals

Actual

Diar. of Intermediate Shafting by Rule

Diar. of Pitch Circle

Diar. at Mid Length

No. of Bolts each Coupling

At Couplings

Actual

Diar. of Propeller Shafts by Rule

Are Propeller Shafts fitted with Reducing Gear Motors?

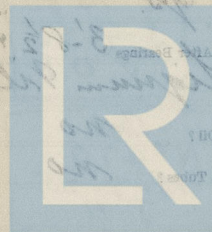
Diar. over Journals

Of what Material are the After Bearings composed?

Are Bearings provided for inducing the After Bearings with Oil?

To prevent Gas Water entering the Stern Tubes?

If so, what Type of Packing?





## SHAFTING.

Are the Crank Shafts Built or Solid?

*built.*

No. of Lengths in each

*6*

Angle of Cranks

*120°*

Diar. by Rule

*9.64"*

Actual

*10"*

In Way of Webs

*10 1/2"*

" of Crank Pins

*10 1/2"*

Length between Webs

*9 13/16"*

Greatest Width of Crank Webs

*1-8"*

Thickness

*6 3/4"*

Least

" "

*1-4"*

" "

*6 3/4"*

Diar. of Keys in Crank Webs

*2 1/4"*

Length

*5-1/2"*

" Dowels in Crank Pins

Length

Screwed or Plain

No. of Bolts each Coupling

*6*

Diar. at Mid Length

*2 1/2"*

Diar. of Pitch Circle

*14 1/2"*

Greatest Distance from Edge of Main Bearing to Crank Web

*1/4"*

Type of Thrust Blocks

*Korseshae.*

No.

" Rings

*5*

Diar. of Thrust Shafts at bottom of Collars

*10 7/8"*

No. of Collars

*5*

" "

Forward Coupling

*10"*

At Aft Coupling

*10"*

Diar. of Intermediate Shafting by Rule

Actual

No. of Lengths

No. of Bolts, each Coupling

Diar. at Mid Length

Diar. of Pitch Circle

Diar. of Propeller Shafts by Rule

*10.9*

Actual

*11"*

At Couplings

*10"*

Are Propeller Shafts fitted with Continuous Brass Liners?

*yes.*

Diar. over Liners

*12 3/8"*

Length of After Bearings

*3'-8 1/2" + 1'-0 1/2"*

Of what Material are the After Bearings composed?

*Lignum Vitae.*

Are Means provided for lubricating the After Bearings with Oil?

*no*

" "

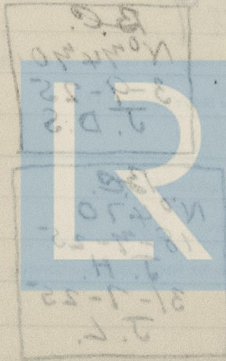
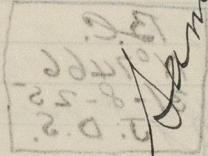
to prevent Sea Water entering the Stern Tubes?

*no*

If so, what Type is adopted?

*✓*

## SKETCH OF CRANK SHAFT.



© 2020

Lloyd's Register  
Foundation



No. of Blades each Propeller

Fitted or Solid?

*Fitted*

Material of Blades

*C.S.*

Boas

*C.S.*

Diar. of Propellers

*12'-9"*

Pitch

*12'-3"*

Surface (each

*56*

S. ft.

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

Crank Shafts Forged by

*Darlington Forge Co.*

Material

*2 S.*

Pins

Webs

*D. Calville Sons.*

Thrust Shafts

*Darlington Forge Co.*

Intermed. „

Propeller „

Crank „ Finished by

*R.W. Co. N. Hoos.*

Thrust „

Intermed. „

Propeller „

## STAMP MARKS ON SHAFTS.

Crank Shaft:-

*B.C.*  
*N<sup>o</sup> 7466*  
*31-8-25*  
*J. D. S.*

Thrust Shaft:-

*B.C.*  
*N<sup>o</sup> 4470*  
*3-9-25*  
*J. D. S.*

Tail Shaft.

*B.C.*  
*N<sup>o</sup> 470*  
*18-7-25*  
*J. H.*  
*31-7-25*  
*J. L.*

## SKETCH OF PROPELLER SHAFT.

*Sketch of Propeller Shaft*

*12'-9"*  
*12'-3"*  
*56*  
*2 S.*  
*Darlington*  
*D. Calville Sons.*  
*Darlington Forge Co.*  
*R.W. Co. N. Hoos.*

*Same as*

*© 2020*

*Lloyd's Register Foundation*



No. of Circulating Pumps	Diar.	Stroke
--------------------------	-------	--------

Type of " *continuous at*

Diar. of	"	Suction from Sea	8
----------	---	------------------	---

Has each Pump a Bilge Suction with Non-return Valve? *Y/S.* Diar. *7*

What other Pumps can circulate through Condenser? *Ballast pump.*

No. of Feed Pumps on Main Engine	Diar.	Stroke
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

Are Spring-loaded Relief Valves fitted to each Pump?

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

No. of Independent Feed Pumps *1 pair.* Diar. *5"* Stroke *12"*

What other Pumps can feed the Boilers? *Aux. Feed Pump.*

No. of Bilge Pumps on Main Engine 2      Diam.  $3\frac{1}{2}$ "      Stroke 20"

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

No. of Independent Bilge Pumps

What other Pumps can draw from the Bilges? *1 Ballast pump.*

Are all Bilge Suctions fitted with Roses?

Are the Valves, etc., so arranged as to prevent unintentional connection between Sea and Bilges? *Yes*

Are all Sea Connections made with Valves or Cocks next the Ship's sides? 49

Are they placed so as to be easily accessible?

Are the Discharge Chests placed above or below 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 Flanges  
on the Outside? YES

[illegible]



## BOILERS.

Works No. 2652.  
 No. of Boilers 2 Type Cylindrical multitubular.  
 Single or Double-ended single.  
 No. of Furnaces in each 3  
 Type of Furnaces Slighton.  
 Date when Plan approved 25-4-25.  
 Approved Working Pressure 185 lbs.  
 Hydraulic Test Pressure 328  
 Date of Hydraulic Test 25-8-25  
 „ when Safety Valves set 13-4-26  
 Pressure at which Valves were set 185 lbs.  
 Date of Accumulation Test  
 Maximum Pressure under Accumulation Test  
 System of Draught Natural.  
 Can Boilers be worked separately?  
 Makers of Plates D. Colville Lons.  
 „ Stay Bars Steel Coy. of Scotland.  
 „ Rivets R. B. Whitby.  
 „ Furnaces Leeds Forge Coy.  
 Greatest Internal Diam. of Boilers 13'-3 7/16"  
 „ „ Length 10'-10 5/16"  
 Square Feet of Heating Surface each Boiler 1730 5/8  
 „ „ Grate 57.5 5/8  
 No. of Safety Valves each Boiler 2 Rule Diam. 2 1/2" Actual 2 3/4"  
 Are the Safety Valves fitted with Easing Gear? Yes.  
 No. of Pressure Gauges, each Boiler 2 No. of Water Gauges 1  
 „ Test Cocks 3 „ Salinometer Cocks 1

Are the Water Gauges fitted direct to the Boiler Shells or mounted on Fittings?  
 Are the Water Gauge Fittings fitted direct to the Boiler Shells or connected by Pipes?  
 Are these Pipes connected to Boilers by Cocks or Valves?  
 Are Blow-off Cocks or Valves fitted on Boiler Shells?  
 No. of Stitches of Shell Plating in each Boiler  
 „ Plates in each Stitch  
 Thickness of Shell Plates Approved  
 „ in Boilers  
 Are the Rivets Iron or Steel?  
 Are the Longitudinal Beams Butt or Lap Joints?  
 Are the Butt Stitches Single or Double?  
 Are the Double Butt Stitches of equal width?  
 Thickness of outside Butt Stitches  
 „ inside  
 Are Longitudinal Beams Hand or Machine Riveted?  
 Are they Single, Double, or Triple Riveted?  
 No. of Rivets in a Pitch  
 Pitch of Rivet Joints  
 No. of Rows of Rivets in Centre of Longitudinal Beams  
 Are these Beams Hand or Machine Riveted?  
 Pitch of Rivet Joints  
 No. of Rows of Rivets in Frame with Circumferential Beams  
 Are these Beams Hand or Machine Riveted?  
 Pitch of Rivet Joints  
 No. of Rows of Rivets in Head and Circumferential Beams  
 Are these Beams Hand or Machine Riveted?  
 Pitch of Rivet Joints  
 No. of Rows of Rivets in Shell  
 Thickness of Circumferential Plates

© 2020  
 Lloyd's Register  
 Foundation



Are the Water Gauges fitted direct to the Boiler Shells or mounted on Pillars?

Are the Water Gauge Pillars fitted direct to the Boiler Shells or connected by Pipes?

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 Approved

in Boilers

Are the Rivets Iron or Steel?

Are the Longitudinal Seams Butt or Lap Joints?

Are the Butt Straps Single or Double?

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?

No. of Rivets in a Pitch

Diam. of Rivet Holes

Pitch

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes

Pitch

No. of Rows of Rivets in Front End Circumferential Seams

Are these Seams Hand or Machine riveted?

Diam. of Rivet Holes

Pitch

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes

Pitch

Size of Manholes in Shell

Dimensions of Compensating Rings

Thickness of End Plates in Steam Space Approved

in Boilers

Thickness of Steam Space Stays

Approved

in Boilers

Material of

How are Stays Secured?

Diam. and Thickness of Loose Washers on End Plates

Riveted

With

Double Stays

Thickness of Middle Back End Plates Approved

in Boilers

Thickness of Double Stays in Wide Spaces between Windows

End of Stays at

Diam. of Stays Approved

in Boilers

Material

Are Stays Bored with Nuts outside?

Thickness of Back End Plates at Bottom Approved

in Boilers

Thickness of Stays at Wide Spaces between Windows

Thickness of Double Stays

Thickness of Front End Plates at Bottom Approved

in Boilers

No. of Longitudinal Stays in Spaces between Windows



© 2020

Lloyd's Register  
Foundation



Thickness of End Plates in Steam Space Approved

" " " " " in Boilers

Pitch of Steam Space Stays

Diar. " " " " Approved Threads per Inch

" " " " " 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 Plates Approved

" " " " " in Boilers

Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at " " " "

Diar. of Stays Approved Threads per Inch

" " " " in Boilers

Material " " "

Are Stays fitted with Nuts outside?

Are these Nuts Hand or Machine?

Thickness of Back End Plates at Bottom Approved

" " " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

Thickness of Doublings in " "

Thickness of Front End Plates at Bottom Approved

" " " " " in Boilers

No. of Longitudinal Stays in Spaces between Furnaces

Dimensions of Compensating Rings

Threads per Inch

Diagrams of Stays Approved

" " " " in Boilers

Material " " "

Thickness of Front Tube Plates Approved

" " " " in Boilers

Pitch of Stay Tubes at Spaces between Heads of Tubes

Thickness of Doublings in " "

Stay Tubes at " "

Are Stay Tubes fitted with Nuts at Front End?

Thickness of Back Tube Plates Approved

" " " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

" " " " " "

Thickness of Stay Tubes

" " " " " "

External Diam. of Tubes

Material " " "

Thickness of Furnace Plates Approved

" " " " in Boilers

Doublings outside Diam. of Furnaces

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Lloyd's Register  
Foundation



© 2020



Diar. of Stays Approved      Threads per Inch

" " in Boilers

Material "

Thickness of Front Tube Plates 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 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 Approved

" " in Boilers

Smallest outside Diar. of Furnace

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Thickness of " " Tops Approved

" " in Boilers

Pitch of Screwed Stays in C.O. Tops

Threads per Inch

Diar. of Screwed Stays Approved

" " in Boilers

Material "

Thickness of Combustion Chamber Plates Approved

" " in Boilers

Pitch of Screwed Stays in C.O. Tops

Diar. " Approved

" " in Boilers

Material "

Thickness of Combustion Chamber Backs Approved

" " in Boilers

Pitch of Screwed Stays in C.O. Tops

Diar. " Approved

" " in Boilers

Material "

Are all screw stays fitted with Nuts at Front End?

Thickness of Combustion Chamber Bottoms

No. of Rivets over each Wing Channel

Center "

© 2020



Lloyd's Register  
Foundation



Diar. of Screwed Stays Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides Approved

" " " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Diar. " " Approved

Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Backs Approved

" " " " in Boilers

Pitch of Screwed Stays in C.C. Backs

Diar. " " Approved

Threads per Inch

" " " 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 Tubes, each Boiler

Size of Lower Manholes

# VERTICAL DONKEY BOILERS.

No. of Boilers

Height

Height of Boiler Crown above Fire Grate

Are Boiler Crowns Flat or Dished?

Internal Radius of Dished Boilers

Description of Stays in Boiler (Form)

Diam. of Rivet Holes

Height of Firebox Crown above Fire Grate

Are Firebox Crowns Flat or Dished?

Internal Radius of Dished Crowns

No. of Crown Stays

External Diam. of Firebox at Top

No. of Water Tubes

Material of Water Tubes

Size of Manhole in Shell

Dimensions of Compensating Ring

Heating surface, each boiler

## SUPERHEATERS

Description of Superheater

Where situated?

Which Boilers are connected to Superheaters?

Can superheaters be used on other Boilers and working?

No. of safety valves on each superheater

Are they fitted with lifting lugs?

Date of Hydrostatic Test

Pressure on Valves



© 2020

Lloyd's Register  
Foundation



## VERTICAL DONKEY BOILERS.

No. of Boilers \_\_\_\_\_ Type \_\_\_\_\_

Greatest Int. Diar. \_\_\_\_\_ Height \_\_\_\_\_

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 \_\_\_\_\_ Diar. \_\_\_\_\_ Material \_\_\_\_\_

External Diar. of Firebox at Top \_\_\_\_\_ Bottom \_\_\_\_\_ Thickness of Plates \_\_\_\_\_

No. of Water Tubes \_\_\_\_\_ Ext. Diar. \_\_\_\_\_ Thickness \_\_\_\_\_

Material of Water Tubes \_\_\_\_\_

Size of Manhole in Shell \_\_\_\_\_

Dimensions of Compensating Ring \_\_\_\_\_

Heating Surface, each Boiler \_\_\_\_\_ Grate Surface \_\_\_\_\_

## 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 each Superheater \_\_\_\_\_ Diar. \_\_\_\_\_

Are \_\_\_\_\_ fitted with Easing Gear? \_\_\_\_\_

Date of Hydraulic Test \_\_\_\_\_ Test Pressure \_\_\_\_\_

Date when Safety Valves set \_\_\_\_\_ Pressure on Valves \_\_\_\_\_

## MAIN STEAM PIPES.

No. of Pipes \_\_\_\_\_

Material \_\_\_\_\_

Internal, Welded or Seamless \_\_\_\_\_

Internal Diar. \_\_\_\_\_

Thickness \_\_\_\_\_

How are Pipes secured? \_\_\_\_\_

Date of Hydraulic Test \_\_\_\_\_

Test Pressure \_\_\_\_\_

No. of Pipes \_\_\_\_\_

Material \_\_\_\_\_

Internal, Welded or Seamless \_\_\_\_\_

Internal Diar. \_\_\_\_\_

Thickness \_\_\_\_\_

How are Pipes secured? \_\_\_\_\_

Date of Hydraulic Test \_\_\_\_\_

Test Pressure \_\_\_\_\_



© 2020

Lloyd's Register  
Foundation



## MAIN STEAM PIPES.

No. of Lengths			
Material	Copper		
Brazed, Welded or Seamless	Seamless		
Internal Diam.	4 1/2		
Thickness	5/16		
How are Flanges secured?	Brazed		
Date of Hydraulic Test	4-19-16		
Test Pressure	300 lbs		by Steamboat Inspector

No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			

## SUPERHEATERS.

No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			

## SPMUTAVATORS.

No.	1		
Type	Ballast Pump		
Working Pressure	9 x 10 x 10		
Date of Test	8-5-18		
Test Pressure	4 x 5 x 5		
Material	Sanitary Pump		
Working Pressure	4 x 5 x 5		
Date of Test	3-8-18		
Test Pressure	4 x 5 x 5		

No.	1		
Type	Feed Water Filter		
Working Pressure	182 lbs		
Date of Test	3-8-18		
Test Pressure	4 x 5 x 5		
Material	Ballast Pump		
Working Pressure	9 x 10 x 10		
Date of Test	8-5-18		
Test Pressure	4 x 5 x 5		



© 2020

Lloyd's Register  
Foundation



## EVAPORATORS.

No.	Type	Makers	Working Pressure	Test Pressure	Date of Test
1	Thin Steady Surface Feed Heater.	R.W. Co. Ltd.	185 lbs.	432 lbs.	3-9-25

## FEED WATER HEATERS.

No.	Type	Makers	Working Pressure	Test Pressure	Date of Test
1	Thin Steady Surface Feed Heater.	R.W. Co. Ltd.	185 lbs.	432 lbs.	3-9-25

## FEED WATER FILTERS.

No.	Type	Makers	Working Pressure	Test Pressure	Date of Test
1	Cascade	R.W. Co. Ltd.			

## LIST OF DONKEY PUMPS.

No.	Type	Makers	Working Pressure	Test Pressure	Date of Test
1	Ballast Pump	9x10x10 Henry Watson			
2	General Service	8-5x8 Thom. Lamont & Co.			
3	Sanitary Pump	4x2 1/4 x 5 Thom. Lamont & Co.			



© 2020

Lloyd's Register  
Foundation



29MU9 YSPARE GEAR 21J

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

OTHER ARTICLES OF SPARE GEAR:—

31

© 2020

Lloyd's Register  
Foundation



## REFRIGERATORS.

No. of Machines	Capacity of each	No. of Cylinder Cases Made
Makers	Make Bearing Balls	Valve Cases
Description	Piston Packing Valves	Ridge Pump Valves
	L.P. Piston Rings	L.P. Piston Rings
	Springs	Springs
No. of Steam Cylinders, each Machine	No. of Compressors	No. of Cranks
Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines or Independently	Air Pump Valves	Air Pump Valves
	Crank Pin Bushes	Crank Pin Bushes
	Propellers	Propeller Shafts
	Condenser Tubes	Condenser Tubes

### System of Refrigeration

## Insulation

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

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

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

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

Date of Test under Working Conditions

## RESULTS OF TRIALS

No. and COMPARTMENT.	Temp. at beginning of Trial.	Temp. at end of Trial.	Time required to obtain this Result.	Rise of Temp. after hours.
Name of Specimen				
Depth	Surface, at	7 fath.		Specimen No.
Current Attending or Counteracting				
Stage or Degree of Wind				
Position of Specimen				
Main Switch Board				
No. of Circuits in which Specimen is placed on Main Switch Board				
Particulars of these Circuits—				
Current	Number of	Circuit	Number of	Number of
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit
Circuit	Circuit	Circuit	Circuit	Circuit

Articles of Spare Gear for Refrigerating Plant carried on board:—

© 2020

Lloyd's Register  
Foundation







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

Particulars of these Circuits—	No. of Circuits to which Switches are provided on Main Switch Board	Position of Dynamo	Single or Double Wire System	Current Alternating or Continuous	Capacity	Ambipolar, or	Volts	Revolts per Min.
Circuit	Number of Lights	Number of Motors	Size of Conductor	Current (Amperes)	Conductivity (Resistance per Mile)	Insulation (Resistance per Mile)		

Are Out-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 Out-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 not impaired? Have the Machinery and Holes been constructed in accordance with the requirements?

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? If not, give details

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 13-4-76 Duration of Trial 6 hours.

Have all the requirements of Section 42 been satisfactorily carried out? JES

Are the Materials used in the Construction of Engines and Holes so far as could be seen sound and

workmanship?

Is the Workmanship throughout thoroughly satisfactory?

" CITY OF TORONTO © 2020

The above correctly describes the Machinery of the Ship and is approved by the Marine Department

Lloyd's Register Foundation

Insurance Corporation of the British Empire for the

Survey and Registry of Shipping.



## GENERAL CONSTRUCTION.

Have the Machinery and Boilers been constructed in accordance with the requirements of the Rules and the

Approved Plans? *Yes*

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

Surveyor, and state when these were sanctioned by the Chief

Surveyor?

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

Has the Installation Resistance over the whole system been tested?

What does the Resistance amount to?

Is the Installation supplied with a Voltmeter?

Are the Motors as

Date of Trial of complete Installation

Have all the requirements of Section 13 been satisfactorily carried out?

Are the following

On Main Switch Board, to Cables of Main Circuit

On Aux. " " with Auxiliary Circuit

Whenever a Cable is removed in the

To each Lamp Circuit

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*

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

Smallest Single Wire used

The above correctly describes the Machinery of the S.S.

**CITY OF TORONTO**

as ascertained by *us* from personal examination

What special protection is provided to the following:

(1) Conductors exposed to Heat or Damp

(2) Conductors passing through Buildings

(3) Conductors in contact with other parts of the Machinery

*James W. Stephenson*  
*J. W. Stephenson*  
 Engineer Surveyor to the British Corporation for the  
 Survey and Registry of Shipping.

## Fees—

## MAIN BOILERS.

		£	s.	d.
H.S.	3460	Sq. ft.	:	:
G.S.	115	"	:	:

installing \$ 32.00

## DONKEY BOILERS.

		£	s.	d.
H.S.	-	Sq. ft.	:	:
G.E.	-	"	:	:

## ENGINES.

		£	s.	d.
L.P.C.	40.9	Cub. ft.	:	:

installing 30.00  
 \$ 62.00

Testing, &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

Fees advised

Fees paid



© 2020

Lloyd's Register  
 Foundation

Secretary.



## GENERAL CONSTRUCTION

1. *3400* H.S. *112*  
 2. *00.00* *00.00* *00.00*  
 3. *00.00* *00.00* *00.00*  
 4. *00.00* *00.00* *00.00*  
 5. *00.00* *00.00* *00.00*  
 6. *00.00* *00.00* *00.00*  
 7. *00.00* *00.00* *00.00*  
 8. *00.00* *00.00* *00.00*  
 9. *00.00* *00.00* *00.00*  
 10. *00.00* *00.00* *00.00*  
 11. *00.00* *00.00* *00.00*  
 12. *00.00* *00.00* *00.00*  
 13. *00.00* *00.00* *00.00*  
 14. *00.00* *00.00* *00.00*  
 15. *00.00* *00.00* *00.00*  
 16. *00.00* *00.00* *00.00*  
 17. *00.00* *00.00* *00.00*  
 18. *00.00* *00.00* *00.00*  
 19. *00.00* *00.00* *00.00*  
 20. *00.00* *00.00* *00.00*  
 21. *00.00* *00.00* *00.00*  
 22. *00.00* *00.00* *00.00*  
 23. *00.00* *00.00* *00.00*  
 24. *00.00* *00.00* *00.00*  
 25. *00.00* *00.00* *00.00*  
 26. *00.00* *00.00* *00.00*  
 27. *00.00* *00.00* *00.00*  
 28. *00.00* *00.00* *00.00*  
 29. *00.00* *00.00* *00.00*  
 30. *00.00* *00.00* *00.00*  
 31. *00.00* *00.00* *00.00*  
 32. *00.00* *00.00* *00.00*  
 33. *00.00* *00.00* *00.00*  
 34. *00.00* *00.00* *00.00*  
 35. *00.00* *00.00* *00.00*  
 36. *00.00* *00.00* *00.00*  
 37. *00.00* *00.00* *00.00*  
 38. *00.00* *00.00* *00.00*  
 39. *00.00* *00.00* *00.00*  
 40. *00.00* *00.00* *00.00*  
 41. *00.00* *00.00* *00.00*  
 42. *00.00* *00.00* *00.00*  
 43. *00.00* *00.00* *00.00*  
 44. *00.00* *00.00* *00.00*  
 45. *00.00* *00.00* *00.00*  
 46. *00.00* *00.00* *00.00*  
 47. *00.00* *00.00* *00.00*  
 48. *00.00* *00.00* *00.00*  
 49. *00.00* *00.00* *00.00*  
 50. *00.00* *00.00* *00.00*  
 51. *00.00* *00.00* *00.00*  
 52. *00.00* *00.00* *00.00*  
 53. *00.00* *00.00* *00.00*  
 54. *00.00* *00.00* *00.00*  
 55. *00.00* *00.00* *00.00*  
 56. *00.00* *00.00* *00.00*  
 57. *00.00* *00.00* *00.00*  
 58. *00.00* *00.00* *00.00*  
 59. *00.00* *00.00* *00.00*  
 60. *00.00* *00.00* *00.00*  
 61. *00.00* *00.00* *00.00*  
 62. *00.00* *00.00* *00.00*  
 63. *00.00* *00.00* *00.00*  
 64. *00.00* *00.00* *00.00*  
 65. *00.00* *00.00* *00.00*  
 66. *00.00* *00.00* *00.00*  
 67. *00.00* *00.00* *00.00*  
 68. *00.00* *00.00* *00.00*  
 69. *00.00* *00.00* *00.00*  
 70. *00.00* *00.00* *00.00*  
 71. *00.00* *00.00* *00.00*  
 72. *00.00* *00.00* *00.00*  
 73. *00.00* *00.00* *00.00*  
 74. *00.00* *00.00* *00.00*  
 75. *00.00* *00.00* *00.00*  
 76. *00.00* *00.00* *00.00*  
 77. *00.00* *00.00* *00.00*  
 78. *00.00* *00.00* *00.00*  
 79. *00.00* *00.00* *00.00*  
 80. *00.00* *00.00* *00.00*  
 81. *00.00* *00.00* *00.00*  
 82. *00.00* *00.00* *00.00*  
 83. *00.00* *00.00* *00.00*  
 84. *00.00* *00.00* *00.00*  
 85. *00.00* *00.00* *00.00*  
 86. *00.00* *00.00* *00.00*  
 87. *00.00* *00.00* *00.00*  
 88. *00.00* *00.00* *00.00*  
 89. *00.00* *00.00* *00.00*  
 90. *00.00* *00.00* *00.00*  
 91. *00.00* *00.00* *00.00*  
 92. *00.00* *00.00* *00.00*  
 93. *00.00* *00.00* *00.00*  
 94. *00.00* *00.00* *00.00*  
 95. *00.00* *00.00* *00.00*  
 96. *00.00* *00.00* *00.00*  
 97. *00.00* *00.00* *00.00*  
 98. *00.00* *00.00* *00.00*  
 99. *00.00* *00.00* *00.00*  
 100. *00.00* *00.00* *00.00*

GENERAL CONSTRUCTION

H.S. *112*H.S. *112*L.E.C. *112*

Twelve, 00

Expenses

Total

It is submitted that this Report be approved.

This Report was prepared by the Committee for the Class of M.B.S. on the

Approved by the Committee for the Class of M.B.S. on the

Approved by the Committee for the Class of M.B.S. on the

CITY OF TORONTO

For advised

For paid

*James M. McKelvey*  
*J. D. Stephenson*



© 2020

Lloyd's Register  
Foundation





© 2020

Lloyd's Register  
Foundation





© 2020

Lloyd's Register  
Foundation





© 2020

Lloyd's Register  
Foundation