

No. 1227

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 1160 No. in Register Book 1767

S.S. "DERWENT RIVER"

Makers of Engines RICHARDSONS, WESTGARTH & CO. LTD.

Works No. 2325

Makers of Main Boilers RICHARDSONS, WESTGARTH & CO. LTD.

Works No. 2325

Makers of Donkey Boiler ✓

Works No. ✓

MACHINERY.



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No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *1160* No. in Register Book *1767*

Received at Head Office *22 DEC 1917*

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

"Detroit River"

Port of Registry *Liverpool*

Registered Owners *British Empire S. Nav. Co. Ltd.*

Surveyor's District *Sunderland*

Date of Completion of Engines *2.15*

" " " Main Boilers *2.15*

" " " Donkey " *✓*

to Trial Run at *Penel Refr.*

Date *13.2.15*

First Visit *12.6.14*

Last Visit *11.2.15*

Total Number of Visits *50*

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ENGINES.

Made by *Richardsons, Walsgarth & Co. Ld.*
 .. at *Wool: Hartlepool* Works No. *2315*
 Description *Triples Expansion, Surface Cond., 3 Cyls.*
 No. of Cylinders, each Engine *3* Diars. *25" . 40" . 68"* Stroke *48"*
 Cub. feet in each L.P. Cylr. *100'86* Revols. per Min. *110* L.H.P. *110*

Pressure in I.P. Receiver at full Power 2nd I.P. L.P.
 Thickness of Metal in H.P. Cylr. *1"* I.P. *1 1/4"* *1 1/4"*
 .. " " " " Liner *1 1/4"* " " " " " *1 1/4"*
 .. " " " " Valve Chest *1 1/4"* " " " " " *1 1/4"*
 Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr.?

.. " " " each Receiver? *Yes*
I.P. & L.P.

Number of Bolts in H.P. Cylr. Cover *18* I.P. *24* 2nd I.P. L.P. *36*
 Eff. Diar. " " " *19 1/8"* " *17 1/2"* " " " *17 1/8"*
 Pitch *Circle* " *2' 5 1/2"* " *8' 9 1/2"* " " " *6' 1"*
 Type of H.P. Valves (Piston or Slide) *Piston* " *Slide* " " *Slide*
 .. Valve Gear *Stephenson Link Motion*

Diameter of Piston Rods (plain part) *6 1/4"* At Bottom of Thread *4 1/4"*
 Makers " *R. W. & Co. Ld.* Material *En*

Diameter of Connecting Rods (smallest part) *6"* Material *En*
 Makers " " *R. W. & Co. Ld.*

Diar. of Crosshead Gudgeons *8"* Length of Bearing *10 1/2"* Material *En*

No. of Top End Bolts (each Rod) *2* Effective Diar. *3 1/4"* Material *A. S.*
 .. Bot. " " *2* " *3 1/4"* " *A. S.*
 .. Main Bearings *6* Lengths *13"*
 .. Bolts in each *2* Effective Diar. *3"* Material *A. S.*

No. of Holding Down Bolts, each Engine *81* No. of Metal Chocks *36*
 Eff. Diar. " " " *75 1/2 1/4"* *62 1"* Average Pitch
 Are the Engines bolted directly to the Tank Top? *Yes*
 Are the Bolts tapped through the Tank Top and fitted with Nuts inside? *Yes*
 Date of Test of Tank by Water Pressure with Holding Down Bolts in place *11.2.15*

SKETCHES.



SKETCHES.

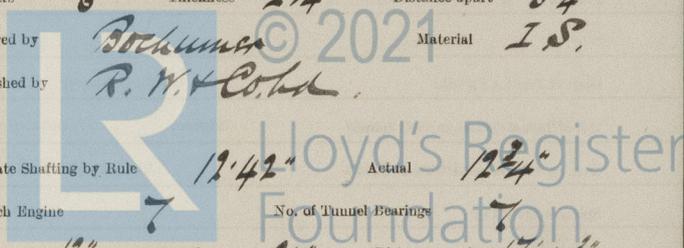
20. of holding these bolts each engine
 The Dia. of Crank Shafts by Rule 13.08 Actual 13.25
 Makers of " Brehmer, Bochum
 Material I.S.
 No. of Thrust Collars 6 Thickness 2 3/4" Distance apart 3 1/4"
 Dia. of Thrust Shafts by Rule 13.08 Actual (at bot. of Collars) 14 1/4" Over Collars 2 1/8"
 at Forward Coupling 13 1/2" After Coupling 12 1/4"
 No. of Thrust Collars 6 Thickness 2 3/4" Distance apart 3 1/4"
 Thrust Shafts Forged by Bochumer Material I.S.
 Finished by R. W. & Co. Ltd.
 Dia. of Intermediate Shafting by Rule 19.42" Actual 19 1/4"
 No. of Lengths, each Engine 7 No. of Tunnel Bearings 7
 Dia. of Bearings 13" Length 24" Distance apart 17 1/2"

SKETCHES.

18. of holding these bolts each engine
 The Dia. of Crank Shafts by Rule 13.08 Actual 13.25
 Makers of " Brehmer, Bochum
 Material I.S.
 No. of Thrust Collars 6 Thickness 2 3/4" Distance apart 3 1/4"
 Dia. of Thrust Shafts by Rule 13.08 Actual (at bot. of Collars) 14 1/4" Over Collars 2 1/8"
 at Forward Coupling 13 1/2" After Coupling 12 1/4"
 No. of Thrust Collars 6 Thickness 2 3/4" Distance apart 3 1/4"
 Thrust Shafts Forged by Bochumer Material I.S.
 Finished by R. W. & Co. Ltd.
 Dia. of Intermediate Shafting by Rule 19.42" Actual 19 1/4"
 No. of Lengths, each Engine 7 No. of Tunnel Bearings 7
 Dia. of Bearings 13" Length 24" Distance apart 17 1/2"

SHAFTING.

Are Crank Shafts Built? Yes No. of Lengths in each 6 Angle of Cranks 120°
 Dia. of Crank Shafts by Rule 13.08 Actual 13.25 Dia. in Way of Webs 14"
 Makers of " Brehmer, Bochum Material I.S.
 Dia. of Crank Pins 14" Dia. in Way of Web 14"
 Makers of " Jernin Material I.S.
 Width across Crank Webs at Centre of Shaft 26 1/2" Thickness 8 1/2"
 " " " " Crank Pins 26" 8 1/2"
 " " " " narrowest part 21" 8 1/2"
 Makers of Crank Webs Glasgow S & I. Co. Material I.S.
 Dia. of Keys in Crank Webs 3" Length 7 1/2"
 " of Dowel Pins in Crank Pins 2" Length 7 1/2" Screwed or Plain Plain
 No. of Bolts in each Coupling 6 Dia. at Mid Length 3" Dia. of Pitch Circle 18 1/4"
 Material of Coupling Bolts H. S.
 Crank Shafts Finished by R. W. & Co. Ltd.
 Greatest Distance from edge of Main Bearing to Crank Web 24"
 Description of Thrust Blocks Adjustable
 Number " " Rings 7
 Dia. of Thrust Shafts by Rule 13.08" Actual (at bot. of Collars) 14 1/4" Over Collars 2 1/8"
 " " at Forward Coupling 13 1/2" After Coupling 12 1/4"
 No. of Thrust Collars 6 Thickness 2 3/4" Distance apart 3 1/4"
 Thrust Shafts Forged by Bochumer Material I.S.
 Finished by R. W. & Co. Ltd.
 Dia. of Intermediate Shafting by Rule 19.42" Actual 19 1/4"
 No. of Lengths, each Engine 7 No. of Tunnel Bearings 7
 Dia. of Bearings 13" Length 24" Distance apart 17 1/2"



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.

1. *[Faint, illegible text]*

2. *[Faint, illegible text]*

3. *[Faint, illegible text]*

4. *[Faint, illegible text]*

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6. *[Faint, illegible text]*

7. *[Faint, illegible text]*

8. *[Faint, illegible text]*

9. *[Faint, illegible text]*

10. *[Faint, illegible text]*

11. *[Faint, illegible text]*

12. *[Faint, illegible text]*

13. *[Faint, illegible text]*

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20. *[Faint, illegible text]*

SKETCHES.

1. *[Faint, illegible text]*

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18. *[Faint, illegible text]*

19. *[Faint, illegible text]*

20. *[Faint, illegible text]*



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PUMPS, ETC.

No. of Air Pumps *One* Diar. *23"* Stroke *27"*
 Type of *Edwards*
 Diar. of Air Pump Rod *3/4"* Material *W. W.*
 How are Air Pumps Worked? *By Cams from Main Engines*

No. of Centrifugal Circulating Pumps *-* Maker *-*
 " Reciprocating " " *One* Diar. *13"* Stroke *27"*
 Diar. of Circulating Pump Rods *2 3/4"* Material *W. W.*
 How are Circulating Pumps Worked? *By Cams from Main Engines*

Diar. of Circulating Pump Suction from Sea *8"*
 Has each Circulating Pump a Bilge Suction with Non-return Valve? *Yes* Diar. *5 1/2"*

No. of Feed Pumps on each Engine *Two* Diar. *3/4"* Stroke *27"*
 Where do they pump from? *Hotwell, Heater*
 " " discharge to? *Bilge*

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

No. of Bilge Pumps on each Engine *Two* Diar. *3 3/4"* Stroke *27"*
 Where do they pump from? *All bilges, Sea*
 " " discharge to? *Overboard, on Deck*

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 *Richardson, Wessgarik & Co. Ltd.*
 at *W. Harlepool*
 Works No. *2325*
 Date when Plan approved
 Boiler Plates, Iron or Steel *Steel*
 Makers of Shell Plates *Fried Krupp*
 " Internal Plates
 " Furnaces *Leeds Forge*
 " Stay Bars *Gulch & Humpshutte*
 " Rivets *Rivet, Bolt & Nut Co.*
 Material tested by (B.C., B.T., etc.) *B.C.*
 No. of Boilers *3*
 Single or Double-ended *Single Ended*
 No. of Furnaces, each Boiler *3*
 Type of Furnaces *Compound*
 Approved Working Pressure *180 lbs.*
 Hydraulic Test Pressure *200 lbs.*
 Date of Hydraulic Test *2. 12. 14*
 " when Safety Valves set *360 lbs.*
 Pressure on Valves *26. 1. 15*
 Date of Steam Accumulation Test *185 lbs.*
 Max. Pressure under Accumulation Test *26. 1. 15*
 System of Draught *190 lbs.*
 Can Boilers be worked separately? *Natural*
 Greatest inside Diam. of Boilers *Yes*
 " " Length " *14 - 6"*
 " " " " *10 - 11 3/32"*
 Square Feet of Heating Surface, each Boiler *2060 sq ft*
 " " " " *51.86 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

Two
3"
14.137 sq"
Yes
One
Two
Two
Yes
Cocks
Valves

Same as T. F. American Transport
R. W. & Co. 1271 C.

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Dist. of Rivet Holes

Dist. of Rivets

Width of Overlap

No. of Rows of Rivets in End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Dist. of Rivet Holes

Dist. of Rivets

Width of Overlap

Dist. of Manholes in Shell

Dimensions of Compressing Rings

Thickness of End Plates in Steam Space by Rule

Approved " " "

" " in Boilers

Dist. of Steam Space Straps

Dist. of Rivets by Rule

Approved " " "

" " in Boilers

Dist. of Rivets

How are Straps Secured?

Dist. and Thickness of Loose Washers on End Plates

Dist. of Rivets

Width of Rivets

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Vertical handwritten notes on page 17

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes

Pitch

Width of Overlap

No. of Rows of Rivets in End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. 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. Diam. by Rule

Approved

in Boilers

Material of

How are Stays Secured?

Diam. and Thickness of Loose Washers on End Plates

Riveted

Width of Doubling Strips

Thickness of Middle Back End Plate by Rule

Approved

in Boilers

*Same as S. S. American Locomotive
Approved R. W. & Co. 1871 C.*

Thickness of Doubling in White space between Fireboxes

Thickness of stays at

Eff. Diam. of stays by Rule

Approved

in Boilers

Material of

Are stays fitted with nuts outside?

Thickness of back end plates at bottom of tube

Approved

in Boilers

Thickness of stays at White space between Fireboxes

Thickness of Doubling in

Thickness of front end plates at bottom of tube

Approved

in Boilers

No. of Long stays in space between Fireboxes

Eff. Diam. of stays by Rule

Approved

in Boilers

Material of

Thickness of Front Tube Plate

Approved

in Boilers

Thickness of Doubling in

1 1/2" 2" 3" 4" 5" 6" 8" 10" 12" 14" 16" 18" 20" 22" 24" 26" 28" 30" 32" 34" 36" 38" 40" 42" 44" 46" 48" 50" 52" 54" 56" 58" 60" 62" 64" 66" 68" 70" 72" 74" 76" 78" 80" 82" 84" 86" 88" 90" 92" 94" 96" 98" 100"



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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 " " "

*Same as S. S. American Transport.
R. W. & Co. 1971 C.*

Are stays fitted with nuts outside?

Thickness of front tube plates by rule

Approved

in Boilers

Pitch of stay tubes in back tube plates

Thickness of stay tubes

Plain

Eff. Diar. of Tubes

Material

Thickness of front plates by rule

Approved

in Boilers

Are they fitted outside front of furnace

Length between tube plates

Width of combustion chamber (front to back)

Thickness of top of tube

Approved

in Boilers

Pitch of forward stays in U.G. tubes

Eff. Diar.

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 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

Eff. Diar. by Rule

Approved
in Boilers

Material

Thickness of Combustion Chamber Sides by Rule

Came as L. S. American Standard.

R. W. Co. 1971 C

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

Thickness of Combustion Chamber Sides by Rule

in Boilers

Pitch of screw 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 screw stays in C.C. Backs

Eff. Diar. by Rule

Approved

in Boilers

Material

Are all screw stays fitted with nuts inside C.C.?

Thickness of Combustion Chamber Bottoms

No. of girders over each Water Chamber

Centre

Depth and Thickness of Girders

Material of Girders

No. of stays in each

Material of Stays

Thickness of Combustion Chamber Sides by Rule

in Boilers

Pitch of screw stays in C.C. Sides

Eff. Diar. 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

*Same as S. L. American Standard.
R. W. Co's. 1271 C.*

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 (measured above the grate)
 Are boiler covers flat or domed?
 Internal radius of domed covers
 Description of seams in boiler covers
 Size of rivet holes
 Height of flange (measured above the grate)
 Are rivets covered flat or domed?
 External radius of domed covers
 No. of cover stays
 Material
 Thickness of plates
 Position of rivets in flange at top
 No. of water tubes
 Material of water tubes
 No. of screw stays in flange space
 Are they fitted with nuts inside?

SUPERHEATERS



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MAIN STEAM PIPES.

No. of Lengths	<i>116</i>	<i>200</i>		
Material	<i>7/8"</i>	<i>4 5/8"</i>		
Brazed, Welded, or Seamless	<i>has welded</i>			
Internal Diam.	<i>7 5/8"</i>	<i>4 5/8"</i>		
Thickness	<i>5/16"</i>	<i>5/16"</i>		
How are Flanges Secured ?	<i>Screwed</i>			
Date of Hydraulic Test	<i>21-1-15</i>			
Test Pressure	<i>600 Lb</i>			

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, &c., of Insulation

SUPERHEATERS

Are all Pipes, Air Trunks, &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

Diars.

" Compressors, "

Diar. of Crank Shafts

No. of Cranks

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

Refrigerating Machines or independently

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

No. of Circuits to which switches are provided on Main Switch Board	Particulars of these Circuits
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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 Surfaces 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



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EVAPORATORS.

No. *218* Type *Horizontal* Tons per Day *25*
 Makers *R. W. & Co. Ltd.*
 Working Pressure *10 lbs.* Test Pressure *Body 50 lbs.
Cyls 40 lbs.* Date of Test *22.6.14*
 Date of Test of Safety Valves under Steam

FEED WATER HEATERS.

No. Type
 Makers
 Working Pressure Test Pressure Date of Test

DONKEY

- Feed -
 No. of Donkeys *218*
 Type *Horizontal*
 Makers *Lugs*
 Single or Duplex *Duplex*
 „ Double-Acting *D.A.*
 Diar. of Steam Cylinders *7 1/2"*
 „ Pumps *5"*
 Stroke of „ *6"*
 Where do they pump from? *Sea, H. Well, Tanks, Bl. Bottoms*

Where do they discharge to? *Bls., Overboard, On deck*

Capacity, Tons per Hour of Ballast Donkey

150

Diar. of Pipe required by Rule for

FEED WATER FILTERS.

No. *218* Type *Cascade Gravity* Size
 Makers *R. W. & Co. Ltd.*
 Working Pressure Test Pressure Date of Test

FORCED DRAUGHT FANS.

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

PUMPS.

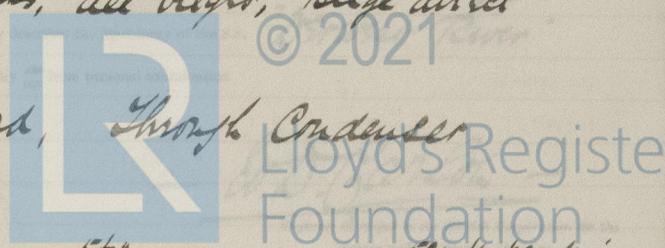
- Ballast -
 the
 Vertical
 Bottom
 Single
 D.A.
 9"
 11"
 10"
 Sea, Tanks, all Bilges, Bilge direct

Overboard, Through Condenser

largest Ballast Tank

5 1/2"

Velocity of Water in Pipe *524 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 ^{lower} Studs	6	" Valve Chest Cover ^{lower} Studs	6
" Feed Pump Valves	1 set	" Bilge Pump Valves	1 set
" Safety Valve Springs	1	" Fire Bars	3/4 set
" Piston Rings		" Junk Ring ^{Bolts}	6
" Piston Rods		" Connecting Rods	
" Valve Spindles		" Air Pump "	
" Air Pump Valves	1/2 set	" " " Buckets	
" Crank Pin Bushes		" Crosshead Bushes	
" Crank Shafts		" Propeller Shafts	1
" Propellers	1	" " Blades	
" Boiler Tubes		" Condenser Tubes	

OTHER ARTICLES OF SPARE GEAR:—

1/2 set Cir. Pump Valves
 1 Main Check Valve
 6 L.P. Piston Valve Junk ring bolts
 1 Dry. Check Valve
 Plate & Bar Iron
 Gauge glasses
 Bolts, Studs & nuts assorted

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

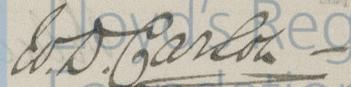
Surveyor

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. *DeWalt River*

as ascertained by *me* from personal examination


 Lloyd's Register
 Engineer Surveyor to the British Corporation for the
 Survey and Registry of Shipping.

Fees-

MAN DORMAN

61.80

155.58

DORSEY DORMAN

B.F.

04.5

U.S.

21.00

MAN DORMAN

100.75

21.00

Expenses

Total 42.00

It is submitted that this Report be approved.

John King

Chief Engineer

Approval by the Committee

Fees applied for

Fees paid

John King

Secretary



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