

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

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

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, Warrington & Co. Ld.*
 at *Warrington* Works No. *2315*
 Description *Triple 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*

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 1/8"* " " " " *1"*

Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr.? *Yes*
 " " " each Receiver? *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' 8 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 *Sn*

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

Diars. of Crosshead Gudgeons *8"* Length of Bearing *10 1/2"* Material *Sn*

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

No. of Holding Down Bolts, each Engine *81* No. of Metal Chocks *36*
 Eff. Diar. " " " *75 1/2 1 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.



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SKETCHES.

SKETCHES.

SHAFTING.

Are Crank Shafts Built? *Yes* No. of Lengths in each *6* Angle of Cranks *120°*
Diar. of Crank Shafts by Rule *1308.5* Actual *1325* Diar. in Way of Webs *14"*
Makers of *Bochumer, Bochum* Material *I.S.*
Diar. of Crank Pins *14"* Diar. in Way of Web *14"*
Makers of *Verin* Material *I.S.*
Width across Crank Webs at Centre of Shaft *26"* 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.*
Diar. ~~Width~~ 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* Diar. at Mid Length *3"* Diar. 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 *4"*
Description of Thrust Blocks *Adjustable*
Number " " Rings *7*

Diar. of Thrust Shafts by Rule *1308"* Actual (at bot. of Collars) *14 1/4"* Over Collars *28"*
" " 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.*
Diar. of Intermediate Shafting by Rule *19 1/2"* Actual *19 1/4"*
No. of Lengths, each Engine *7* No. of Tunnel Bearings *7*
Diar. of Bearings *13"* Length *24"* Distance apart *17' 3"*

No. of Bolts, each Coupling 6 Diar. at Mid Length 3" Diar. of Pitch Circle 18 3/4"

Intermediate Shafts Forged by R. W. & Co. Ltd. Material I

" " Finished by R. W. & Co. Ltd.

Diar. of Propeller Shafts by Rule 14 7/8" Actual 15" At Couplings 13 1/2"

Are Propeller Shafts fitted with Continuous Brass Liners? Yes

Diar. over Liners 16 3/8" & 16 1/2" Length of After Bearings 5'-0"

Of what Material are the After Bearings composed? L.V.

Distance from After Bearing in Stern Tube to nearest Tunnel Bearing 15'-0"

Are the After Bearings lubricated with Oil or Sea Water? L.W.

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

Propeller Shafts Forged by R. W. & Co. Ltd. Material I

" " Finished by R. W. & Co. Ltd.

No. of Propellers One Diar. 17'-6" Pitch 17'-3"

" Blades, each Propeller 4 Fitted or Solid Spine

Material of Blades Boss

Surface, each Propeller 932 sq. ft. Diar. of Propeller

Coefficient of Displacement of Vessel at 2' Moulded Depth 6778 Rule Diar. of Crank Shaft =

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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PUMPS, ETC.

No. of Air Pumps

One

Diar.

23"

Stroke

27"

Type of "

Edwards

Diar. of Air Pump Rod

3/4"

Material

St. St.

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

St. St.

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 1/4"

Stroke

27"

Where do they pump from?

Hotwell, Heater

" " discharge to?

Boiler

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 1/4"

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 *Richardsons, Worsgarth & Co. Ltd.*
 at *W. Haverhill*
 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 & Hunsinghutte*
 " 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 *Corrugated*
 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 Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diap. of Rivet Holes

Pitch "

Width of Overlap

No. of Rows of Rivets in End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diap. of Rivet Holes

Pitch "

Width of Overlap

Size of Manholes in Shell

Dimensions of Compensating Rings

No. of Straps in Shell Plating in each Zone

Thickness of End Plates in Steam Space by Rule

" " " " Approved
" " " " Approved
" " " " in Boilers

Pitch of Steam Space Stays

Eff. Diap. " " " by Rule

" " " " Approved

" " " " in Boilers

Material of " " "

How are Stays Secured?

Diap. and Thickness of Loose Washers on End Plates

" " Riveted " " "

Width " " Doubling Strips " "

Diap. of Rivet Holes

Thickness of Middle Back End Plate by Rule

" " " " Approved

" " " " in Boilers

Thickness of Doubling in White Space between Flanges

" " " " "

Eff. Diap. of Stays by Rule

Approved " " "

" " " " in Boilers

Material " " "

Are Stays fitted with this outside

Thickness of Back End Plates at Bottom by Rule

Approved " " "

" " " " in Boilers

Eff. Diap. of Stays at White Space between Flanges

Thickness of Doubling in " " "

Thickness of Front End Plates at Bottom by Rule

Approved " " "

" " " " in Boilers

No. of Long Stays in Space between Flanges

Eff. Diap. of Stays by Rule

Approved " " "

" " " " in Boilers

Material of " " "

How are Stays Secured?

Diap. and Thickness of Loose Washers on End Plates

" " Riveted " " "

Width " " Doubling Strips " "

Diap. of Rivet Holes

Thickness of Middle Back End Plate by Rule

" " " " Approved

" " " " in Boilers

*Came as L. S. American Transport
Rivets R. Riv. Co. 1971 C.*



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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 L. L. American Transport.

R. W. & Co. 1271 C.

1/2" stay tubes fitted with Nuts at Front End

Thickness of Front Tube Plates by Rule

" " " Approved

" " " in Boilers

Pitch of stay tubes in back Tube Plates

" " " Plain

Thickness of stay tubes

" " " Plain

Eff. Diar. of Tubes

" " " Material

Thickness of Furnace Plates by Rule

" " " Approved

" " " in Boilers

Smooth outside part of Furnaces

Length between Tube Plates

Width of combustion chamber (front to back)

Thickness of " " " Top by Rule

" " " Approved

" " " in Boilers

Pitch of furnace stays in the tubes

Eff. Diar. " " " of 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 Boilers

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

Thickness of Combustion Chamber Sides by Rule

" " " " in Boilers

Pitch of screw 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 screw stays in C.C. Sides

Eff. Diam. " " " 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 W.C. Chamber

" " " " Centre

Depth and Thickness of Girders

Material of Girders

No. of stays in each



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*Came as L.L. American Export.
R. H. Co. 1271 C*

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 L.L. American Standard.

R. W. Co's. 1271 C.

VERTICAL DONKEY BOILERS

1. The Donkey Boilers are Vertical the following particulars should be stated in addition to those on

previous pages applicable to each boiler.

Type of boiler

Height of boiler (from above the grate)

Are boiler covers fitted or dislodged?

Internal radius of dished ends

Description of seams in boiler crown

Diam. of rivet holes

Height of firebox (from above the grate)

Are firebox covers fitted or dislodged?

External radius of dished crown

No. of crown stays

External diam. of firebox at top

No. of water tubes

Material of water tubes

No. of screw stays in firebox sides

Are they fitted with nuts inside?

SUPERHEATERS

Description of superheater

How situated

Which boiler are connected to?

One superheater in each of two boilers?

No. of safety valves on superheater

Date of last test

Date of next test

Date of next test

Date of next test



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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

SKETCHES.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| No. of Machine Room | 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 |
|---------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

REFRIGERATORS

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| No. of Machine Room | 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 |
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Material

Brazed, Welded, or Seamless

Internal Diar.

Thickness

How are Flanges Secured ?

Date of Hydraulic Test _____

Test Pressure

The Two
 An An
 Key held
 7 $\frac{5}{8}$ " 4 $\frac{5}{8}$ "
 5 $\frac{1}{16}$ " 5 $\frac{1}{16}$ "
 Perused
 21-1-15
 600 COT

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

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?

“ ” properly Ventilated and Drained ?

No. of Steam Cylinders, each Machine

Diary.

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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SKETCHES.

ELECTRIC LIGHTING.

Installation Fitted by

No. and Description of Dynamos

Makers of Dynamos

| Capacity | " | Amperes, at | Volts, | Revs. per Min. |
|----------|---|-------------|--------|----------------|
|----------|---|-------------|--------|----------------|

Current Alternating or Continuous

Position of Dynamos

Main Switch Board

7 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, &c.

No. of Heaters

Current required for Motors and Heaters

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

| No. of Circuits | Name of Circuit | Number of Lamps | Power (Watts) | Current Required (Amperes) | Size of Conductor | Location of Switch | Construction of Switch | Construction of Box | Insulation on Wires |
|--------------------|-----------------------|-----------------------|------------------|----------------------------------|-------------------------|--------------------------|------------------------------|---------------------------|---------------------------|
|--------------------|-----------------------|-----------------------|------------------|----------------------------------|-------------------------|--------------------------|------------------------------|---------------------------|---------------------------|

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?

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. *the* Type *Horison* Tons per Day *25*
 Makers *R. W. & Co. Ltd.*
 Working Pressure *10 lbs.* Test Pressure *Body 50 lbs. Ends 400 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 *the*
 Type *Horizontal*
 Makers *Lange*
 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? *Blks., Overboard, On deck*

Capacity, Tons per Hour of Ballast Donkey

150

Diar. of Pipe required by Rule for

FEED WATER FILTERS.

No. *the* 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 <i>let</i> |
| " Cylr. Cover Inter Studs | 6 | " Valve Chest Cover Inter Studs | 6 |
| " Feed Pump Valves | 1 <i>let</i> | " Bilge Pump Valves | 1 <i>let</i> |
| " Safety Valve Springs | 1 | " Fire Bars | 3/4 <i>let</i> |
| " Piston Rings | | " Junk Ring Bolts | 6 |
| " Piston Rods | | " Connecting Rods | |
| " Valve Spindles | | " Air Pump " | |
| " Air Pump Valves | 1/2 <i>let</i> | " " " 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 *let* Cir. Pump Valves
 1 Main Check Valve
 6 L.P. Pistn 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*

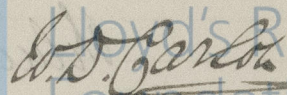
If not, state in what respects they differ and when such differences were sanctioned by the Chief Surveyor

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. *Derwent River*

as ascertained by me from personal examination


 Engineer Surveyor to the British Corporation for the
 Survey and Registry of Shipping.

Fees--

MAIN BOARD

6/80

21

0

0

6/80

DAILY BOARD

B.F.

04/80

C.F.

21 0 0

TOTAL

100-78

21

0

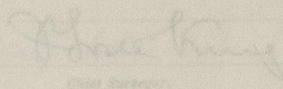
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Balance

Total

42 0 0

It is submitted that this Report be approved.

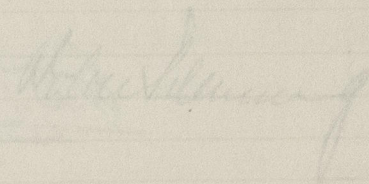


John King

Approved by the Committee

Fees applied for

Fees paid



Secretary



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