

No. 756

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. 733 No. in Register Book 1264

S.S. "MINISTER DELBEKE"

Makers of Engines *Richardsons, Newgait & Co. L.*

Works No. 1263

Makers of Main Boilers *Richardsons, Newgait & Co. L.*

Works No. 1263

Makers of Donkey Boiler ✓

Works No. ✓

MACHINERY.



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002711-002716-0184



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 *Steel Screw Steamer*  
"MINISTER DELBEKE"

Port of Registry

*Antwerpen*

Registered Owners

*Compagnie Belge Scandinave  
de Navigation à vapeur Societe Anonyme*

Surveyor's District

*Chunderland*

Date of Completion of Engines

*12. 1909*

" " "

Main Boilers

*12. 1909*

" " "

Donkey "

*12. 1909*

*ho* Trial Run at

Date

First Visit

*1. 7. 09*

Last Visit

*8. 12. 09*

Total Number of Visits

*28*

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## ENGINES.

Made by *Richardsons, Wheelgarth & Co. Ltd.*  
 " at *Hartlepool* Works No. *1263.*  
 Description *Triple Expansion, Surface Con. 3 Cyls.*  
 No. of Cylinders, each Engine *3* Diars. *20½" 33" 54"* Stroke *36"*  
 Cub. feet in each L.P. Cylr. *47.7* 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. I.P. *1¼"* " " *1¼"*  
 " " " " Liner *1¼"* " " " " *1¼"*  
 " " " " Valve Chest *1⅛"* *1⅛"* " " *1¼"*  
 Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr.? *yes*  
 " " " " each Receiver? *yes*  
 Number of ~~Studs~~ in H.P. Cylr. Cover *16* I.P. *22* 2nd I.P. *-* L.P. *28*  
 Eff. Diar. " " " *1¼"* " *1⅛"* " *-* " *1"*  
 Pitch " " " *5½"* " *5½"* " *-* " *6"*  
 Type of H.P. Valves (Piston or Slide) *Piston Slide* " *Slide*  
 " Valve Gear *Stephenson's Link motion*  
 Diameter of Piston Rods (plain part) *4½"* At Bottom of Thread *3¾"*  
 Makers " *R.W. & Co.* Material *Iron*  
 Diameter of Connecting Rods (smallest part) *5"* Material *Iron*  
 Makers " *R.W. & Co.*  
 Diar. of Crosshead Gudgeons *6"* Length of Bearing *8¾"* Material  
 No. of Top End Bolts (each Rod) *2* Effective Diar. *2½"* Material *S.*  
 " Bot. " " *2* " *2½"* " *S.*  
 " Main Bearings *6* Lengths  
 " Bolts in each *2* Effective Diar. *2½"* Material *S.*

No. of Holding Down Bolts, each Engine *72* No. of Metal Checks *36*  
 Eff. Diar. " " " *66½" 1¼" 66½"* Average Pitch *18" 120"*  
 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 *8.12.09*

## SKETCHES.

*Sketches of various parts of the engine, including details of the cylinder, valve gear, and connecting rods. The sketches are labeled with dimensions and part names, such as 'Cylinder', 'Valve Chest', 'Connecting Rod', and 'Crosshead'. Some sketches are signed 'Spencer & Sons'.*

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## SKETCHES.

SKETCHES

## SHAFTING.

Are Crank Shafts Built?  $\frac{1}{2}$  No. of Lengths in each 6 Angle of Cranks  $120^\circ$

Diar. of Crank Shafts by Rule  $10\frac{3}{4}"$  Actual  $10\frac{1}{2}"$  Diar. in Way of Webs  $11"$

Makers of " *Hunschell & Co.* Material *S. S.*

Diar. of Crank Pins  $11"$  Diar. in Way of Web  $11"$

Makers of " *Hunschell & Co.* Material *S. S.*

Width across Crank Webs at Centre of Shaft  $20\frac{1}{2}"$  Thickness  $6\frac{1}{2}"$

" " " " Crank Pins  $20\frac{1}{2}"$   $6\frac{1}{2}"$

" " " " Narrowest part  $20\frac{1}{2}"$   $6\frac{1}{2}"$

Makers of Crank Webs *Spencer & Sons* Material *S. S.*

Diar. ~~or~~ Breadth of Keys in Crank Webs  $2\frac{1}{2}"$  Length  $5\frac{1}{2}"$

" of Dowel Pins in Crank Pins  $2"$  Length  $5\frac{1}{2}"$  Screwed or Plain *Plain*

No. of Bolts in each Coupling 6 Diar. at Mid Length  $2\frac{3}{8}"$  Diar. of Pitch Circle  $15"$

Material of Coupling Bolts

Crank Shafts Finished by *Richardsons, Wedgark & Co. Ld.*

Greatest Distance from edge of Main Bearing to Crank Web  $7\frac{1}{4}"$

Description of Thrust Blocks *Adjustable*

Number " " Rings 6

Diar. of Thrust Shafts by Rule  $10\frac{3}{4}"$  Actual (at bot. of Collars)  $10\frac{1}{2}"$  Over Collars  $15\frac{3}{8}"$

" " at Forward Coupling  $10"$  After Coupling  $10"$

No. of Thrust Collars 6 Thickness  $2"$  Distance apart  $3\frac{1}{2}"$

Thrust Shafts Forged by *Hunschell & Co.* Material *S. S.*

" Finished by *Richardsons, Wedgark & Co. Ld.*

Diar. of Intermediate Shafting by Rule  $9\frac{1}{2}"$  Actual  $10"$

No. of Lengths, each Engine 5 No. of Tunnel Bearings

Diar. of Bearings  $10\frac{3}{4}"$  Length  $19\frac{1}{4}"$  Distance apart  $17'-7"$



No. of Bolts, each Coupling 6      Diar. at Mid Length 23/8"      Diar. of Pitch Circle 15"

Intermediate Shafts Forged by Hunsell & Co.      Material L.S.

" " Finished by Richardson, Westgarth & Co. Ld.

Diar. of Propeller Shafts by Rule 11' 7 1/2"      Actual 12"      At Couplings 10 1/2"

Are Propeller Shafts fitted with Continuous Brass Liners? Yes

Diar. over Liners 13 1/4" & 13 3/8"      Length of After Bearings 4' - 0"      L.V.

Of what Material are the After Bearings composed?

Distance from After Bearing in Stern Tube to nearest Tunnel Bearing 10' - 6"      L.V.

Are the After Bearings lubricated with Oil or Sea Water?

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

Propeller Shafts Forged by R. W. & Co. Ld.      Material Iron

" " Finished by Richardson, Westgarth & Co. Ld.

No. of Propellers 1      Diar. 14' - 9"      Pitch 15' - 3"

" Blades, each Propeller 4      Fitted or Solid Solid

Material of Blades C.S.      Boss C.S.

Surface, each Propeller

Diar. of Propeller Rule Diar. of Crank Shaft = 17' 1/2"

Coefficient of Displacement of Vessel at 3/4 Moulded Depth 785

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## TURBINE ENGINES.

Type *Horizontal* *15"*  
 No. of H.P. Turbines *2* No. of L.P. Turbines *2*  
 No. of Astern " How arranged  
 Revs. per Min. *1725* Horse Power *105*

Diam. 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 " " "

Diam. 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 " " "

Diam. 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 " " "

Diam. of Turbine Spindles Length of Bearing

No. of Thrust Collars on each Spindle Thickness Distance apart

Diam. of Spindles at Bottom of Collars Diam. over Collars

Spindles Forged by Material

" Finished by

## SKETCHES.



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## T. SKETCHES.

1. No. of Air Pumps  
2. Type of Air Pump  
3. Diameter of Air Pump  
4. How Air Pumps Worked?  
5. Location of Air Pumps  
6. How Air Pumps Worked?  
7. Location of Air Pumps  
8. How Air Pumps Worked?  
9. Location of Air Pumps  
10. How Air Pumps Worked?  
11. Location of Air Pumps  
12. How Air Pumps Worked?  
13. Location of Air Pumps  
14. How Air Pumps Worked?  
15. Location of Air Pumps  
16. How Air Pumps Worked?  
17. Location of Air Pumps  
18. How Air Pumps Worked?  
19. Location of Air Pumps  
20. How Air Pumps Worked?  
21. Location of Air Pumps  
22. How Air Pumps Worked?  
23. Location of Air Pumps  
24. How Air Pumps Worked?  
25. Location of Air Pumps  
26. How Air Pumps Worked?  
27. Location of Air Pumps  
28. How Air Pumps Worked?  
29. Location of Air Pumps  
30. How Air Pumps Worked?  
31. Location of Air Pumps  
32. How Air Pumps Worked?  
33. Location of Air Pumps  
34. How Air Pumps Worked?  
35. Location of Air Pumps  
36. How Air Pumps Worked?  
37. Location of Air Pumps  
38. How Air Pumps Worked?  
39. Location of Air Pumps  
40. How Air Pumps Worked?

## SKETCHES.

1. No. of Air Pumps  
2. Type of Air Pump  
3. Diameter of Air Pump  
4. How Air Pumps Worked?  
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27. Location of Air Pumps  
28. How Air Pumps Worked?  
29. Location of Air Pumps  
30. How Air Pumps Worked?  
31. Location of Air Pumps  
32. How Air Pumps Worked?  
33. Location of Air Pumps  
34. How Air Pumps Worked?  
35. Location of Air Pumps  
36. How Air Pumps Worked?  
37. Location of Air Pumps  
38. How Air Pumps Worked?  
39. Location of Air Pumps  
40. How Air Pumps Worked?



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## PUMPS, ETC

No. of Air Pumps 1 Diar. 17" Stroke 21"

Type of "

Edward's

Diar. of Air Pump Rod

2 3/4"

Material

Is. Is.

How are Air Pumps Worked?

By levers from L.P. Engine

No. of Centrifugal Circulating Pumps

1

Maker

" Reciprocating "

1

Diar.

10"

Stroke

21"

Diar. of Circulating Pump Rods

2"

Material

Is. Is.

How are Circulating Pumps Worked?

By levers from L.P. Engine

Diar. of Circulating Pump Suction from Sea

6"

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

Yes

Diar.

4"

No. of Feed Pumps on each Engine

2

Diar.

2"

Stroke

21"

Where do they pump from?

Hotwell

" " discharge to?

Boilers

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

2

Diar.

2"

Stroke

21"

Where do they pump from?

All bilges, Sea  
Overboard, on deck

" " discharge to?

Yes

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

No. of Bilge Injections connected to Condensers

-

Diar.

Are all Bilge Suctions fitted with Roses?

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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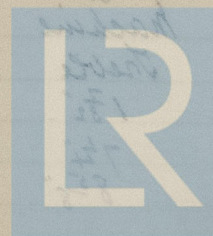
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## BOILERS.

Boilers made by *Richardsons, Westgarth & Co. Ltd.*  
 at *Hartlepool*  
 Works No. *1263*  
 Date when Plan approved  
 Boiler Plates, Iron or Steel *Steel*  
 Makers of Shell Plates *Spencer & Sons*  
 „ Internal Plates *do.*  
 „ Furnaces *Leeds Forge*  
 „ Stay Bars *Spencer & Sons*  
 „ Rivets  
 Material tested by (B.C., B.T., etc.) *B.C.*  
 No. of Boilers *2*  
 Single or Double-ended *S. E.*  
 No. of Furnaces, each Boiler *2*  
 Type of Furnaces *Corrugated*  
 Approved Working Pressure *180 lbs.*  
 Hydraulic Test Pressure *360 lbs.*  
 Date of Hydraulic Test *29. 9. 09*  
 „ when Safety Valves set *22. 10. 09.*  
 Pressure on Valves *185 lbs.*  
 Date of Steam Accumulation Test *22. 10. 09*  
 Max. Pressure under Accumulation Test *190 lbs.*  
 System of Draught *Natural*  
 Can Boilers be worked separately? *Yes*  
 Greatest inside Diam. of Boilers *13'- 0"*  
 „ „ Length „ *10'- 6"*  
 Square Feet of Heating Surface, each Boiler *1568*  
 „ „ Grate „ „ *35' 2*

*No donkey boiler*



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No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes

Pitch

Width of Overlap

No. of Rows of Rivets in End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes

Pitch

Width of Overlap

Size of Manholes in Shell

Dimensions of Compensating Rings

Thickness of End Plates in Steam Space by Rule

" " " " " Approved Back 176" Front 132"

" " " " " in Boilers Back 176" Front 132"

Pitch of Steam Space Stays

Eff. Diar. " " " by Rule

" " " " " Approved

" " " " " in Boilers

Material of " " "

How are Stays Secured?

Diar. and Thickness of Loose Washers on End Plates

" " Riveted " " "

Width " " Doubling Strips " " "

Thickness of Middle Back End Plate by Rule

" " " " " Approved

" " " " " in Boilers

2  
Machine

1 1/8"

3 1/2"

5 1/4"

2

Machine

1 7/32"

3 1/2"

7 1/4" Front 4 3/4" Back

13" x 16 1/2"

2'-7" x 2'-4 1/2" x 1 3/2"

Back 176" Front 132"

Back 176" Front 132"

18'-8" x 17"

2 5/8" x 2 1/2"

2 5/8" x 2 1/2"

Steel

nuts inside &amp; outside

8" x 3/4"

Machine

Rule

132"

Thickness of Doublings in Wide Spaces between Rivetboxes

Pitch of Stays at

Eff. Diar. of Stays by Rule

Approved

in Boilers

Material of

Are Stays Bored with Nuts outside?

Thickness of Back End Plates at Bottom by Rule

Approved

in Boilers

Pitch of Stays at Wide Spaces between Rivetboxes

Thickness of Doublings in

Thickness of Front End Plates at Bottom by Rule

Approved

in Boilers

No. of Long Stays in Spaces between Rivetboxes

Eff. Diar. of Stays by Rule

Approved

in Boilers

Material of

Are Stays Bored with Nuts outside?

Thickness of Back End Plates at Bottom by Rule

Approved

in Boilers

Pitch of Stays at Wide Spaces between Rivetboxes

Thickness of Doublings in

Thickness of Front End Plates at Bottom by Rule

Approved

in Boilers



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$7/16"$  &  $3/8"$



Are Stay Tubes fitted with Nuts at Front End? *Where shown or Appro. Plan*

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

Thickness of Combustion Chamber Sides by Rule

" " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Thickness of Combustion Chamber Sides by Rule

" " " Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Are all screw stays fitted with Nuts inside C.C.

Thickness of Combustion Chamber Bottoms

No. of Girders over each Wing Chamber

" " " " " "

Depth and Thickness of Girders

Material of Girders

No. of stays in each

No. of Stay Tubes, each side

Size of lower Manholes



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Thickness of Combustion Chamber Sides Approved

 $\frac{19}{32}$ "

" " " " in Boilers

 $\frac{19}{32}$ "

Pitch of Screwed Stays in C.C. Sides

 $8\frac{1}{16}" \times 8\frac{1}{8}"$ 

Eff. Diar. " " by Rule

 $1\frac{3}{8}"$ 

" " " Approved

 $1\frac{3}{8}"$ 

" " " in Boilers

Material " "

Steel

Thickness of Combustion Chamber Backs by Rule

 $\frac{19}{32}$ "

" " " " Approved

 $\frac{19}{32}$ "

" " " " in Boilers

Pitch of Screwed Stays in C.C. Backs

 $8\frac{1}{8}" \times 8"$ 

Eff. Diar. " " by Rule

 $1\frac{3}{8}"$ 

" " " Approved

 $1\frac{3}{8}"$ 

" " " in Boilers

Material " "

Steel

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

 $\frac{1}{16}$ "

Thickness of Combustion Chamber Bottoms

 $\frac{13}{16}"$ 

No. of Girders over each Wing Chamber

6

" " " Centre "

Depth and Thickness of Girders

 $7\frac{1}{4}" \times 2 \text{ Plates } 7\frac{1}{8}"$ 

Steel

Material of Girders

No. of Stays in each

2

No. of Stay Tubes, each Boiler

60

" " Plain " " "

146

Size of lower Manholes

 $12" \times 16"$ 

## VERTICAL DONKEY BOILERS

If 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 Crown above Fire Grate

Are Boiler Crowns Flat or Dished?

Internal Radius of Dished Heads

Description of Seams in Boiler Crowns

Pitch of Rivet Holes

Height of Firebox Crown above Fire Grate

Are Firebox Crowns Flat or Dished?

External Radius of Dished Crowns

No. of Crown Stays

External 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 Boilers are working?

No. of Safety Valves on Superheaters

Date of Hydrostatic Test

Date when safety Valves set



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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.

No. of Boilers	1	2
Material	Steel	Steel
Boiler, Welded, or Riveted	Welded	Welded
Internal Plate	3/16"	3/16"
Thickness	3/16"	3/16"
How are Flanges Secured?	Flanges	Flanges
Date of Hydraulic Test	10.10.00	10.10.00
Test Pressure	100 lbs	100 lbs

## REFRIGERATORS.

No. of Machines	1
Description	Refrigerator
When any part of the Vessel is to be used for the Storage of Refrigerated Goods the following particulars should be stated:—	
Total cubic Capacity of Refrigerated Space	
Nature, Construction, Thickness, &c., of Insulation	
Means provided to obtain the Cold	
When no notice is required for such goods to be stored	
Air-tight Pipes, Air-Tanks, &c., well secured and protected from risk of damage?	
Are all large Junctions, Sounding, 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 and on the Insulated Space?	
Are these fitted with Brass Non-return Valves?	
Are the Valves fitted with Non-return Valves?	



## MAIN STEAM PIPES.

No. of Lengths	One	One	
Material	Iron	Iron	
Brazed, Welded, or Seamless	Lap welded	Lap welded	
Internal Diam.	3 7/8"	4 1/8"	
Thickness	5/16"	5/16"	
How are Flanges Secured?	Screwed	Screwed	
Date of Hydraulic Test	20.10.09	20.10.09	
Test Pressure	600 lbs.	600 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

## SUPERHEATERS.

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

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

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

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

Are these fitted with Brass Non-return Valves?

Are they always accessible?

Are the Bilges and Bilge Rose Boxes always accessible?

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

Is the Machine Room effectively separated from Insulated Spaces?

" " properly Ventilated and Drained?

No. of Steam Cylinders, each Machine 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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(2) "passing through Bunkers or Cargo Spaces

(3) " " Deck Beams or Bulkheads



## EVAPORATORS.

No. 1 Type *Horizontal* Tons per Day *10*  
 Makers *Richardson, Wedgwick & Co. Ltd.*  
 Working Pressure *10 lbs.* Test Pressure *20 & 50 lbs.* Date of Test *11.10.09*  
*with 400 lbs.*  
 Date of Test of Safety Valves under Steam

## FEED WATER HEATERS.

No. Type  
 Makers  
 Working Pressure Test Pressure Date of Test

## DONKEY

*Feed*  
*the*  
*Horizontal*  
*G. C. Nixon*  
*Duplex*  
*S.F.*  
 No. of Donkeys  
 Type "  
 Makers "  
 Single or Duplex  
 " Double-Acting  
 Diar. of Steam Cylinders *5 1/4"*  
 " Pumps *3 1/2"*  
 Stroke of " *5"*  
 Where do they pump from? *Hotwell, Sea, Tanks,*  
*Condenser bottom, Boilers*  
 Where do they discharge to? *Boilers, overboard, or deck*

Capacity, Tons per Hour of Ballast Donkey

*100*

Diar. of Pipe required by Rule for

## FEED WATER FILTERS.

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

## FORCED DRAUGHT FANS.

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

## PUMPS.

*Ballast*  
*the*  
*Vertical*  
*Richardson, Wedgwick & Co. Ltd.*  
*Single*  
*S.F.*  
*9"*  
*8 1/2"*  
*7"*  
*Tanks, Sea, Bilges, Bilge drier*  
*the Condenser, overboard*  
 Largest Ballast Tank *4"* Velocity of Water in Pipe *663 ft. per sec.*



## SPARE GEAR.

No. of Top End Bolts	2	No. of Bot. End Bolts	2
" Main Bearing Bolts	2	" Coupling Bolts	6
" Cylr. Cover Studs	6	" Valve Chest Cover Studs	6
" Feed Pump Valves	1 set	" Bilge Pump Valves	1 set
" Safety Valve Springs	1	" Fire Bars	1/2 set
" Piston Rings		" Junk Ring Bolts Studs	6
" Piston Rods		" Connecting Rods	
" Valve Spindles		" Air Pump "	
" Air Pump Valves		" " " Buckets	
" Crank Pin Bushes		" Crosshead Bushes	
" Crank Shafts		" Propeller Shafts	
" Propellers		" " Blades	
" Boiler Tubes		" Condenser Tubes	

## OTHER ARTICLES OF SPARE GEAR:—

Bolts & Nuts Assorted  
Plate & Bar Iron  
Gauge glasses & Wrenches

## 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?

Is the Workmanship throughout thoroughly satisfactory?

The above correctly describes the Machinery of the S.S. *Minister Delbecke*

as ascertained by me from personal examination.

*Lloyd's Register*  
— *H. S. G. B. S.* —  
Engineer Surveyor to the British Corporation for the  
Survey and Registry of Shipping.



Fees—

## MAIN BOILERS.

H.S.

3136

Sq. ft.

15

0

0

G.S.

704

"

:

:

## DONKEY BOILERS.

H.S.

Sq. ft.

:

:

G.S.

"

:

:

£ 15 : 0 : 0

## ENGINES.

L.P.C.

47.7

Cub. ft.

13

0

0

£ :

Testing, &amp;c.

£ :

Expenses ...

:

Total ... £ 28 : 0 : 0

It is submitted that this Report be approved,

Chief Surveyor.

Approved by the Committee,

Fees applied for 15-12-09

Fees paid 20-12-09

Secretary.



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Foundation



1. *MAN BOLDEN*

2. *3136* 15-0-0

3. *704*

4. *JOHN BOLDEN*

5. *15-0-0*

6. *15-0-0*

7. *15-0-0*

8. *15-0-0*

9. *472* 15-0-0

10. *15-0-0*

11. *15-0-0*

12. *15-0-0*

13. *15-0-0*

It is submitted that this Report be approved.

*Phineas King*  
Chairman

Approved by the Committee.

*7-12-09*

For printed by 15-12-09

For printed by 15-12-09



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