

No. 1980

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 1853 No. in Register Book 3164

S.S. "Baron Belhaven"

Makers of Engines Messrs. D. Rowan & Co. Ltd.

Works No. 802

Makers of Main Boilers (same.)

Works No. "

Makers of Donkey Boiler —

Works No. —

MACHINERY.



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008515-008523-0077

No.

THE BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. 1853 No. in Register Book 3164

Received at Head Office 15th June 1925

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

"Baron Belhaven"

Official No. 146720 Port of Registry Ardrossan

Registered Owners H. Hogarth & Sons
St. Enoch Square, Glasgow.

Engines Built by Messrs David Rowan & Co. Ltd.
at Elliott St., Glasgow

Main Boilers Built by (same)
at "

Donkey " " (none)
at "

Date of Completion 12/6/25

First Visit 16/4/24 Last Visit 12/6/25 Total Visits 46



RECIPROCATING ENGINES.

Works No. **802** No. of Sets **One** Description **Triple expansion**

No. of Cylinders each Engine **3** No. of Cranks **3**
 Diars of Cylinders **27", 46" and 76"** Stroke **48"**
 Cubic feet in each L.P. Cylinder **126.01**

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

" " " each Receiver?

Type of H.P. Valves,

" **M.P.**

" **L.P.**

" Valve Gear

" Condenser

Diameter of Piston Rods (plain part)

Material

Diar. of Connecting Rods (smallest part)

" Crosshead Gudgeons

No. of Crosshead Bolts (each)

" Crank Pin

" Main Bearings

" Bolts in each

" Holding Down Bolts, each Engine

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

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

If not, how are they fitted?

Yes
Yes.
Piston
Slide.
Slide Balance cylinder.
Stevenson Link Motion.
Surface Cooling Surface **3650** sq. ft.
7½" Screwed part (bottom of thread)
Steel.
7" Material **Steel.**
7½" Length of Bearing **7½"** Material "
4 Diar. over Thrd. **3¼"** Thrds. per inch **3¼** Material **Steel**
2 " **4¼"** " **4** " "
6 Lengths **1-3¼"**
2 Diar. over Thread **3½"** Threads per inch **3¼** Material "
112 Diar. **1½"** No. of Metal Chocks

Tank top.

Yes.

Connecting Rods, Forged by

Piston " "

Crossheads,

Connecting Rods, Finished by

Piston " "

Crossheads,

Date of Harbour Trial

" Trial Trip

Trials run at

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

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

Pressure in **H.P.** Receiver, **201** lbs., **M.P.**, **56** lbs., L.P., **7½** lbs., Vacuum, **28½** ins.

Speed on Trial

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

data:—

Builders' estimated L.H.P.

Estimated Speed

Karl & Co., Düsseldorf
D. Rowan & Co. Ltd.

D. Rowan & Co. Ltd.

5/6/25.

12/6/25

Skelmorlie & Firth of Clyde.

Yes.

2323

Revolvs. per min.

67½

201 lbs., **56** lbs., L.P., **7½** lbs., Vacuum, **28½** ins.

11.69 Knots.

2600

Revolvs. per min.

65

Tested H.P. cyl. at 300 lb/□ hyd. 10/2/25.

"**Contraflex**" patent aux condenser **1880**



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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 } Width Pitch of Teeth
 „ 1st „ Wheel }

Estimated Pressure per lineal inch

Diar. of 2nd Reduction Pinion } Width Pitch of Teeth
 „ 2nd „ Wheel }

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.

Are the Crank Shafts built or bolted?

No. of bearings in each

Diar. of Pins

Length between Webs

Thickness

Length

Diar. of Keys in Crank Webs

Diameters in Crank Pins

Diar. of Holes each Coupling

Type of Pinion Holes

No. of Holes

Diar. of Crank Shafts at bottom of Journals

Forward Coupling

At Air Coupling

No. of Journals

Diar. at Mid Length

Diar. of Propeller Shafts by Keys

Are Propeller Shafts fitted with continuous thrust liners?

Length of thrust liners

Of what Material are the Air or Bearings composed?

Are Means provided for protecting the Air Bearings with Oil?

Is there any Water entering the Steam Pipes?

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Greatest Width of Web
 $\frac{24}{16}$
 $\frac{67}{16}$ 8
 $\frac{15}{28 \frac{1}{2}}$



$t = 438 \times 14.876 = 6.52$
 $t = 438 \times 15 = 6.57$

SHAFTING.

Are the Crank Shafts Built or Solid? **Built**

No. of Lengths in each **3** Angle of Cranks **120°**

Diar. by Rule **14.32"** Actual **14 $\frac{5}{8}$ "** In. Way of Webs **14 $\frac{3}{8}$ "**

" of Crank Pins **15"** Length between Webs **15"**

Greatest Width of Crank Webs **2'-4"** Thickness **9 $\frac{1}{4}$ "**

Least " " **14 $\frac{3}{4}$ "** " " " "

Diar. of Keys in Crank Webs **2 $\frac{1}{2}$ "** Length **6"**

" Dowels in Crank Pins **1 $\frac{1}{4}$ "** Length **4'** Screwed or Plain **Plain**

No. of Bolts each Coupling **6** Diar. at Mid Length **3 $\frac{7}{8}$ "** Diar. of Pitch Circle **20 $\frac{1}{2}$ "**

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

Type of Thrust Blocks **Adjustable Horse-Shoe.**

No. " **Rings**

Diar. of Thrust Shafts at bottom of Collars **14 $\frac{3}{8}$ "** No. of Collars **8**

" " Forward Coupling **14 $\frac{5}{8}$ "** At Aft Coupling **14 $\frac{5}{8}$ "**

Diar. of Intermediate Shafting by Rule **13.6"** Actual **13 $\frac{3}{8}$ "** No. of Lengths **6**

No. of Bolts, each Coupling **6** Diar. at Mid Length **3 $\frac{7}{8}$ "** Diar. of Pitch Circle **20 $\frac{1}{2}$ "**

Diar. of Propeller Shafts by Rule **15.88** Actual **16 $\frac{9}{16}$ "** At Couplings

Are Propeller Shafts fitted with Continuous Brass Liners? **Yes.**

Diar. over Liners **18"** Length of After Bearings **5'-6"**

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? **"**

If so, what Type is adopted? **—**

SKETCH OF CRANK SHAFT.



Rule: - 14.32" Ahead Surface = 1464 □"

FEB 1943
 ONE COMPLETE NEW
 By BARCLAY CURLE & CO
 FORGINGS BY DENNYSTOWN
 STAMP MARKS: -
 COUPLING ENDS & CRANKPIN

L.P. CRANK MADE
 Q/N° S.O. 54
 FORGE.

B.C.
 W.S.S.
 868
 2-2-43

WEBS
 B.C.
 F.W.F.
 869
 29-1-43

(F)
 (F)
 25-2-43

Webs gas cut profile by Charles Hill & Co
 finished machined by Barclay Curle & Co.

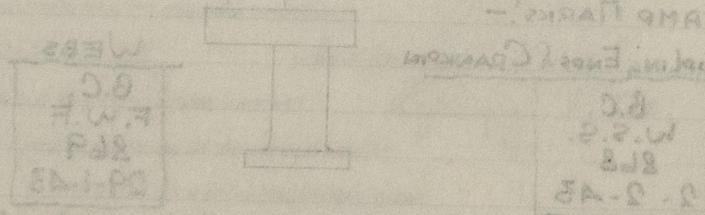
No. of Blades each Propeller **4** Fitted or Solid? **Fitted.**
 Material of Blades **Bronze.** Boss **Cast iron.**
 Diam. of Propellers **18'-3"** Pitch **19'-0"** Surface (each) **111** S. ft.
 Coefficient of Displacement of Vessel at $\frac{3}{4}$ Moulded Depth

Crank Shafts Forged by **Haniel & Lueg,** Material **I. S.**
 " Pins " " " "
 " Webs " " " "
 Thrust Shafts " " " "
 Intermed. " " " "
 Propeller " " " "
 Crank " Finished by **D. Rowan & Co. Ltd.**
 Thrust " " " "
 Intermed. " " " "
 Propeller " " " "

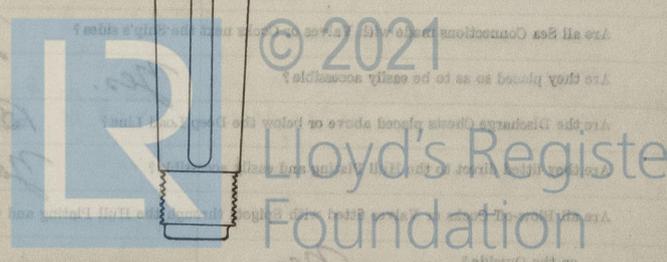
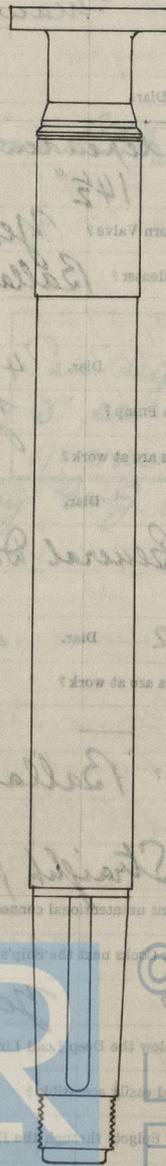
STAMP MARKS ON SHAFTS.

B. C.
3264
J. W. H.
26/2/25.

1 Crank shaft
1 Thrust "
6 tunnel shafts
2 tail shafts



SKETCH OF PROPELLER SHAFT.



PUMPS, ETC.

No. of Air Pumps *One* Diar. *2'-2"* Stroke *2'-2"*

Worked by Main or Independent Engines? *Main.*

No. of Circulating Pumps *One* Diar. _____ Stroke _____

Type of " *Independent Centrifugal by*

Diar. of " Suction from Sea *14½"*

Has each Pump a Bilge Suction with Non-return Valve? *Yes.* Diar. *10"*

What other Pumps can circulate through Condenser? *Ballast and General Donkey.*

No. of Feed Pumps on Main Engine *2* Diar. *4½"* Stroke *2'-2"*

Are Spring-loaded Relief Valves fitted to each Pump? *Yes.*

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

No. of Independent Feed Pumps *2* Diar. _____ Stroke _____

What other Pumps can feed the Boilers? *General Donkey & Harbour Donkey.*

No. of Bilge Pumps on Main Engine *2* Diar. *4½"* Stroke *2'-2"*

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? *Ballast.*

Are all Bilge Suctions fitted with Roses? *Straight pipe with mud box*

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? *Yes.*

Are they placed so as to be easily accessible? *Yes.*

Are the Discharge Chests placed above or below the Deep Load Line? *Below, main & aux. injections*

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.*

Henry Watson & Sons Ltd. 14094

75480 75480 by *S. J. Weir Ltd.*

Sanitary plunger pump
3" dia x 1'-3" stroke
off main engines



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BOILERS.

Works No. **802**

No. of Boilers **3** Type **Cylindrical multitubular.**

Single or Double-ended **Single**

No. of Furnaces in each **3**

Type of Furnaces **Deighton**

Date when Plan approved **15/4/24**

Approved Working Pressure **200 lb/0"**

Hydraulic Test Pressure **350 "**

Date of Hydraulic Test **10/3/25**

" when Safety Valves set **5/6/25**

Pressure at which Valves were set **206 lb/0"**

Date of Accumulation Test **5/6/25**

Maximum Pressure under Accumulation Test **217 lb/0"**

System of Draught **Forced.**

Can Boilers be worked separately? **Yes.**

Makers of Plates **Mannesmannrohren Werke, Dusseldorf.**

Stay Bars **Lancashire Steel Co. Ltd. ✓**

Rivets **North West Rivet, Bolt & Nut Factory,**

Furnaces **Deighton's Patent Flue & Tube Co. Ltd.**

Greatest Internal Diam. of Boilers **16'-1 7/32"**

" " Length " **11'-11 1/4"**

Square Feet of Heating Surface each Boiler **2834**

" " Grate " " **60**

No. of Safety Valves each Boiler **One pair** Rule Diam. **3 1/4"** Actual **3 3/4"**

Are the Safety Valves fitted with Easing Gear? **Yes.**

No. of Pressure Gauges, each Boiler **One** No. of Water Ganges **2**

" Test Cocks " **—** " Salinometer Cocks **One.**

B. C. TEST
4904
350 lbs
WP 200 lbs
J. W. H
10/3/25

Weight of water, (one boiler) = **30 tons.**

Steam space, " " " = **574 cub. ft.**

Rings; -

Port boiler.	Centre boiler.	Starboard boiler.
P. 3/32" S. 3/32"	P. 3/32" S. 3/32"	P. 1/4" S. 3/32"

Air pressures; - Port 1/2", Centre 5/8", Starboard 5/8".

Howden's installation **8870**

Tubes by **Scottish Tube Co. Ltd.**

Plates by **The Leeds Forge Co. Ltd.**



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Thickness of End Plates in Steam Space Approved $1 \frac{15}{32}$ "

" " " " " in Boilers "

Pitch of Steam Space Stays (See opposite.)

Diar. " " " " Approved $2 @ 3 \frac{1}{2}$ " marked \otimes 6 Threads per Inch

" " " " " in Boilers $8 @ 3 \frac{1}{4}$ " "

Material of " " " Steel.

How are Stays Secured? Nuts inside & outside.

Diar. and Thickness of Loose Washers on End Plates none

" " Riveted " " " "

Width " " Doubling Strips "

Thickness of Middle Back End Plates Approved $5 \frac{7}{64}$ "

" " " " " in Boilers "

Thickness of Doublings in Wide Spaces between Fireboxes none.

Pitch of Stays at " " " $1 \frac{1}{2}$ " x $8 \frac{5}{8}$ "

Diar. of Stays Approved 2" Threads per Inch 10

" " in Boilers " "

Material " Steel.

Are Stays fitted with Nuts outside? Yes.

Thickness of Back End Plates at Bottom Approved $5 \frac{7}{64}$ "

" " " " " in Boilers 2"

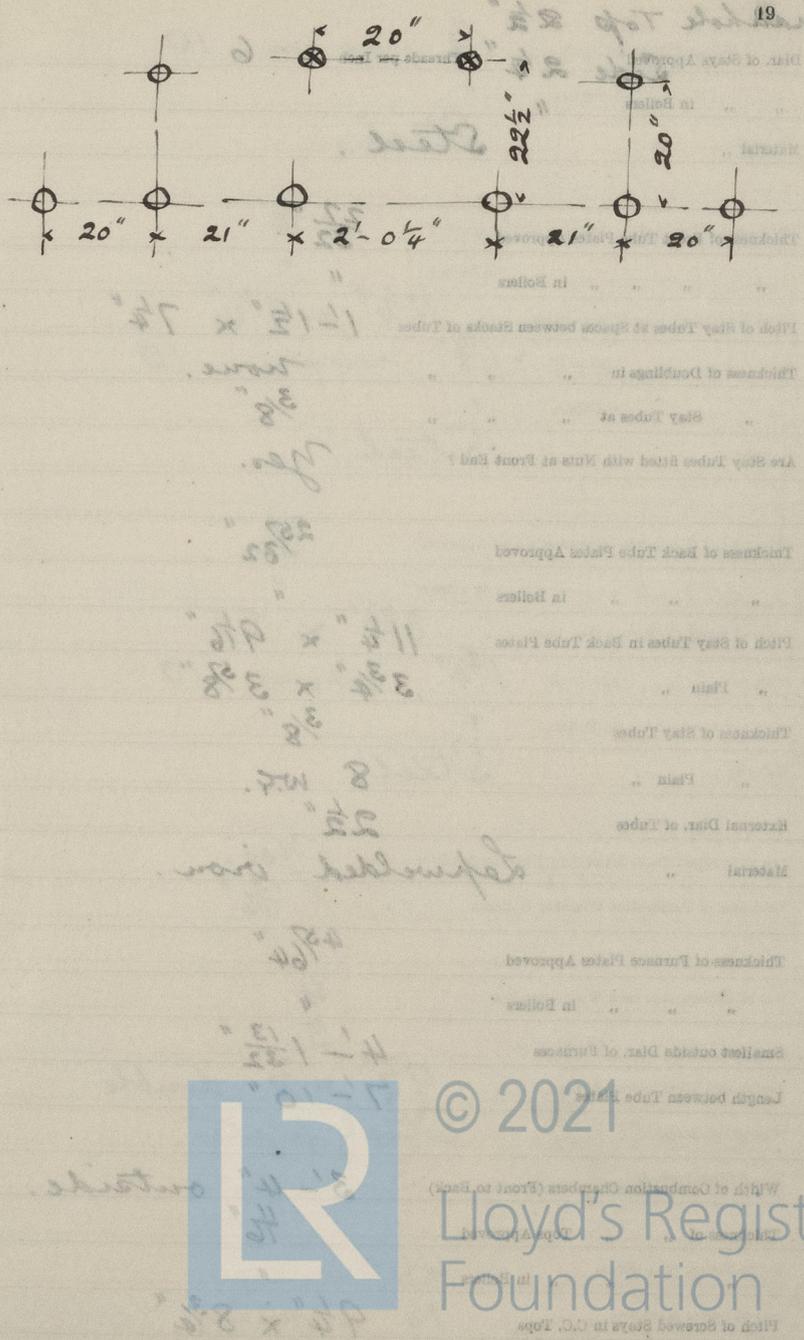
Pitch of Stays at Wide Spaces between Fireboxes widening.

Thickness of Doublings in " " none.

Thickness of Front End Plates at Bottom Approved $7 \frac{7}{8}$ "

" " " " " in Boilers "

No. of Longitudinal Stays in Spaces between Furnaces 3 each side.



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Manhole Top $2\frac{1}{2}$ "

Diar. of Stays Approved $2\frac{1}{4}$ " Threads per Inch 6

" " in Boilers

Material

Steel

Thickness of Front Tube Plates Approved

$\frac{27}{32}$ "

" " " in Boilers

Pitch of Stay Tubes at Spaces between Stacks of Tubes

$1'-1\frac{1}{2}" \times 7\frac{1}{4}"$

Thickness of Doublings in

none

" Stay Tubes at

$\frac{3}{8}"$

Are Stay Tubes fitted with Nuts at Front End?

Yes

Thickness of Back Tube Plates Approved

$\frac{25}{32}"$

" " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

$11\frac{1}{4}" \times 9\frac{1}{16}"$

" Plain

$3\frac{3}{4}" \times 3\frac{5}{8}"$

Thickness of Stay Tubes

$\frac{3}{8}"$

" Plain

8 w.g.

External Diar. of Tubes

$2\frac{1}{2}"$

Material

Lapwelded iron

Thickness of Furnace Plates Approved

$4\frac{5}{64}"$

" " " in Boilers

Smallest outside Diar. of Furnaces

$4'-1\frac{13}{32}"$

Length between Tube Plates

$7'-10"$

Width of Combustion Chambers (Front to Back)

$3'-4"$ outside

Thickness of " " Tops Approved

$\frac{11}{16}"$

" " " in Boilers

"

Pitch of Screwed Stays in O.C. Tops

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



Diar. of Screwed Stays Approved $1\frac{3}{8}$ " Threads per Inch 10

" " " in Boilers "

Material " " Steel.

Thickness of Combustion Chamber Sides Approved $\frac{11}{16}$ "

" " " in Boilers "

Pitch of Screwed Stays in C.C. Sides $9\frac{1}{4}" \times 8\frac{3}{4}"$

Diar. " " Approved $1\frac{3}{8}$ " Threads per Inch 10

" " " in Boilers "

Material " " Steel.

Thickness of Combustion Chamber Backs Approved $\frac{21}{32}$ "

" " " in Boilers "

Pitch of Screwed Stays in C.C. Backs $8\frac{5}{8}" \times 8\frac{1}{2}"$

Diar. " " Approved $1\frac{3}{4}"$ Threads per Inch 10

" " " in Boilers "

Material " " Steel.

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

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

Thickness of Combustion Chamber Bottoms

No. of Girders over each Wing Chamber 4

" " " Centre " 3

Depth and Thickness of Girders $9\frac{3}{8}" \times \frac{7}{8}"$ double.

Material of Girders Steel plates.

No. of Stays in each 3

No. of Tubes, each Boiler 460

Size of Lower Manholes $16" \times 12"$

VERTICAL DONKEY BOILERS

No. of Boilers
Type
Grossed In. Diar.
Height
Height of Boiler Crown above Fire Grate
Are Boiler Crown Flat or Dished?
Internal Radius of Dished Boilers
Description of Booms in Boiler Crown
Diar. of Rivet Hoops
Width of Overlap
Height of Ribbox (above above Fire Grate)
Are Ribbox Crown Flat or Dished?
External Radius of Dished Crown
No. of Crown Booms
Diar.
Material
Thickness of Plates
External Diar. of Ribbox at Top
Bottom
No. of Water Tubes
E.L. Diar.
Thickness
Material of Water Tubes
Diar. of Manhole in Shell
Dimensions of Compressing Ring
Internal surface each boiler
Grate Surface

SUPERHEATERS

Description of Superheaters

Water surface?

Do Superheaters lie flat or with tubes and fittings?
What boilers are connected to them?



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McNeil door.

MAIN STEAM PIPES.

No. of Lengths	4		
Material	Steel.		
Brazed, Welded or Seamless	Welded.		
Internal Diam.	5"		(JW) H
Thickness	1/4"		
How are Flanges secured?	Sc'd exp'd.		
Date of Hydraulic Test	1 length (no. 100) 15/5/25; 3 lengths 3/6/25. (no. 101-102)		
Test Pressure	600 lb/□" hyd.		
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			

No. of Lengths	1		
Material	Vertical		
Brazed, Welded or Seamless			
Internal Diam.	22 1/2"		
Thickness	1 1/2"		
How are Flanges secured?			
Date of Hydraulic Test	19/1/25		
Test Pressure	400		
No. of Lengths	2		
Material	Horizontal		
Brazed, Welded or Seamless			
Internal Diam.	20 1/2"		
Thickness	1 1/2"		
How are Flanges secured?			
Date of Hydraulic Test	13/5/25		
Test Pressure	400		
No. of Lengths	1		
Material	Vertical		
Brazed, Welded or Seamless			
Internal Diam.	20 1/2"		
Thickness	1 1/2"		
How are Flanges secured?			
Date of Hydraulic Test	13/5/25		
Test Pressure	400		
No. of Lengths	1		
Material	Vertical		
Brazed, Welded or Seamless			
Internal Diam.	20 1/2"		
Thickness	1 1/2"		
How are Flanges secured?			
Date of Hydraulic Test	13/5/25		
Test Pressure	400		



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EVAPORATORS.

75481

No. One Type Vertical merchant service Tons per Day 30
 Makers S. J. Weir Ltd
 Working Pressure 25 lb/0" Test Pressure shell 50 lb. Date of Test 19/1/25.
tubes 400"
 Date of Test of Safety Valves under Steam 12/6/25. (G)

FEED WATER HEATERS.

75479

No. One Type Direct Contact
 Makers S. J. Weir Ltd.
 Working Pressure 20 lb/0" Test Pressure 40 lb. Date of Test 13/2/25.
G.M.L.

FEED WATER FILTERS.

695

No. One Type "Cascade" (gravity) Size
 Makers Contraflo Eng'ng. Co. Ltd., London.
 Working Pressure — Test Pressure — Date of Test —

STEERING GEAR.

3879

One horiz. 2 cyl. worm + wheel to spur + quadrant gear, by Bow M. Lachlan & Co. Ltd., Paisley. (Fitted with Delemotor Gear.)

LIST OF DONKEY PUMPS.

Ballast; vert. dup. 10" x 12" x 12" 6984 by
J.H. Carruthers & Co. Ltd.

General Service; vert. dup. 7½" x 5" x 10" 6983
 by same makers.

Harbour; vert. dup. 5" x 3½" x 8" 6986 by
 same makers.

(For Independent Circulating & Feed pumps,
 see p.p. 12-13.)

REFRIGERATORS.

No. of Machines 2 Capacity of each 2
 Makers 18
 Description 12
 No. of Steam Cylinders, each Machine 18 No. of Compressors 4 No. of Cranks 2
 Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines or Independently

System of Refrigeration

,, Insulation

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

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.

COMPARTMENT.	Temp. at beginning of Trial.	Temp. at end of Trial.	Time required to obtain this Result.	Rise of Temp. after hours.
Navigation	11	7/10	1143	100
up. Room	32	12	1714	
Midship	51	13	1857	
Saloon	41	20	1143	
Forward	29	9	1300	
W/T		19	1430	
Water		16	2143	

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



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Dynamo direct-coupled to 2 Cyl. Comp.
eng. 1127 by Caldwell & Co.

ELECTRIC LIGHTING

Installation Fitted by Telford, Grier & Mackay Ltd.
 No. and Description of Dynamo One 13.2 Kw. Comp. wound 23906
 Makers of Dynamo J. H. Holmes & Co. Newcastle.
 Capacity 120 Amperes, at 110 Volts, ^{343/}330 Revols. per Min.
 Current Alternating or Continuous Continuous.
 Single or Double Wire System Double.
 Position of Dynamo Starboard side, eng. room, bottom platform.
 „ Main Switch Board „ „ „ „
 No. of Circuits to which Switches are provided on Main Switch Board 6 and 1 motor
 Particulars of these Circuits:— circuit taken from bus bars.

Circuit.	Number of Lights.	Candle Power.	Current Required. Amps.	Size of Conductor.	Current Density.	Conductivity of Conductor.	Insulation Resistance per Mile.
Navigation	11	various	8	7/20	1143	100%	600 Ω
Eng. Room.	32	"	12	"	1714	"	"
Midship	51	"	13	"	1857	"	"
Saloon	41	20	8	"	1143	"	"
Forward.	29	various	9	"	1300	"	"
W/T.			10	"	1430	"	"
Motor			15	"	2143	"	"

Total No. of Lights 164 No. of Motors driving Fans, &c. One No. of Heaters

Current required for Motors and Heaters 15 amps.



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

(none.)

23906

Installation of Dynamometers
 No. and Description of Dynamometers
 Makers of Dynamometers
 Capacity
 Currents Alternating or Continuous
 Single or Double Wire System
 Position of Dynamometers
 No. of Circuits to which Switches are provided on Main Switch Board
 Particulars of these Circuits

Classification	Installation	Capacity	Current	Size	Current	Capacity	Number	Classification

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 Cut-outs constructed of Non-inflammable Material?

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

Smallest Single Wire used, No. $\frac{1}{17}$ S.W.G., Largest, No. $\frac{1}{17}$ 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

*L. C. & A.**Tubing.**W.T. glands in bulk-*

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables

is unimpaired?

(no joints.)

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 Dynamometers, Motors, Main and Branch Cables, so placed that the Compasses are not injuriously

affected by them?

Yes.

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

Yes.

Has the Insulation Resistance over the whole system been tested?

Yes.

What does the Resistance amount to?

1.6 Meg Ohms.

Is the Installation supplied with a Voltmeter?

Yes.

" " " an Ampere Meter?

Yes.

Date of Trial of complete Installation

12/6/25

Duration of Trial

6 hours.

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

Yes.

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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.

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.

"Baron Belhaven"

as ascertained by *me* from personal examination

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

$$\frac{200}{180} = \frac{x}{8502} \quad x = 9446.6 + 25\% = 11808.3 \text{ £.}$$

Fees—

200 H.P. MAIN BOILERS.		F.D.	£	s.	d.
H.S.	8502	Sq. ft.	40	: 15	: 2½
G.S.	180	"	:	:	:
DONKEY BOILERS.					
H.S.	(none)	Sq. ft.	:	:	:
G.S.		"	:	:	:
			£	:	:
65 H.P. ENGINES.					
L.P.C.	126.01	Cub. ft.	65	: 4	: -
			£	:	:
Testing, &c.					
			£	:	:
Expenses					
			£	:	:
Total ...			£	:	:

It is submitted that this Report be approved,

Jas Barr for Chief Surveyor.

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

26th August 1915

Fees advised

Fees paid



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 Foundation Secretary.

GENERAL CONSTRUCTION

It is submitted that this Report be approved.

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

24th August 1924

Baron

Visits.

16/4/24.

25/6/24

26 "

31/7/24.

7/8/24.

14 "

22 "

1/9/24.

30 "

24/10/24.

30 "

3/11/24.

5 "

12 " (R.L.G.)

9/12/24.

24 "

30 "

9/1/25

14 "

22 "

26 "

10/2/25

26 "

3/3/25

4 " (ship)

6 "

10 "

24 "



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27/3/25
 1/4/25
 10 "
 21 "
 22 " (G.M.L.)
 23 " (ship)
 27 "
 29 "
 7/5/25 (and ship)
 8 " (G.M.L.)
 11 "
 15 "
 29 " (ship)
 2/6/25
 3 "
 5 " (ship)
 11 "
 12 " (trial trip)



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27/3/25

1/4/25

10 "

21 "

22 " (S.M.L.)

23 " (S.M.L.)

27 "

29 "

7/4/25 (Wed. ship)

8 " (S.M.L.)

9 "

10 "

11 "

12 "

13 "

14 "

15 "

16 "

17 "



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