

No. 1814

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. 2126 No. in Register Book 3481

S.S. "CARTIER DOC."

Makers of Engines Swan Hunter & W. R. Ltd.

Works No. 1258.

Makers of Main Boilers Swan Hunter & W. R. Ltd.

Works No. 1258.

Makers of Donkey Boiler None fitted.

Works No. ✓

MACHINERY.



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004374.004381-0154

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AND

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Report No. No. in Register Book

Received at Head Office

22<sup>nd</sup> August 1928

Surveyor's Report on the Petrol Engines, Boilers, and Auxiliary Machinery of the *Cartierdoc*

Official No. 149455 Port of Registry Newcastle-on-Tyne

Registered Owners

*Pateron's Steamships Ltd*

Engines Built by

*Swan Hunter & W.R. Ltd.*

at

*Neptune Works, Walker, R. Tyne.*

Main Boilers Built by

*Swan Hunter & W.R. Ltd.*

at

*Neptune Works, Walker, R. Tyne*

Donkey

*None fitted*

at

Date of Completion

*22-3-18*

First Visit

*24/9/24*

Last Visit

*23-3-78*

Total Visits *50*



## RECIPROCATING ENGINES

Works No. **1258.** No. of Sets **One** Description **Inverted.**

No. of Cylinders each Engine **3.** No. of Cranks **3.**  
 Diars. of Cylinders **15" 25" & 40"** Stroke **33"**  
 Cubic feet in each L.P. Cylinder **24**  
 Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr.?  
 " " " each Receiver? **yes**  
 Type of H.P. Valves, **Piston Valve**  
 " 1st L.P. " **Slide valve**  
 " 2nd L.P. " **✓**  
 " L.P. " **Double ported Slide valve.**  
 " Valve Gear **Stephenson Link.**  
 " Condenser **Circular Two flow.** Cooling Surface **400** sq. ft.  
 Diameter of Piston Rods (plain part) **3 3/8"** Screwed part (bottom of thread) **2.66"**  
 Material " **Forged steel.**  
 Diar. of Connecting Rods (smallest part) **4 1/4"** Material **Forged steel**  
 " Crosshead Gudgeons **4 1/2"** Length of Bearing **6 1/2"** Material " "  
 No. of Crosshead Bolts (each) **2** Diar. over Thrd. **2 1/4"** Thrds. per inch **6** Material **Steel**  
 " Crank Pin " **2** " **2 1/4"** " **6** " "  
 " Main Bearings **6** Lengths **8**  
 " Bolts in each **2** Diar. over Thread **2"** Threads per inch **6** Material **Steel**  
 " Holding Down Bolts, each Engine **65** Diar. **1 1/4"** No. of Metal Chocks **61**  
 " " " **thrust 10**  
 Are the Engines bolted to the Tank Top or to a Built Seat? **Tank top**  
 Are the Bolts tapped through the Tank Top and fitted with Nuts Inside? **yes.**  
 If not, how are they fitted? **—**

Connecting Rods, Forged by **Life Forge Coy.**  
 Piston " " **do**  
 Crossheads, " " **do**  
 Connecting Rods, Finished by **Swan Hunter & W.R.**  
 Piston " " **do**  
 Crossheads, " " **do**  
 Date of Harbour Trial **4<sup>th</sup> March 1928.**  
 " Trial Trip **22<sup>nd</sup> March 1928. (Vessel sailed 23/3/28.)**  
 Trials run at **Off Rivezque in North Sea.**  
 Were the Engines tested to full power under Sea-going conditions? **Yes**  
 If so, what was the I.H.P.? **✓** Revols. per min. **104**  
 Pressure in 1st L.P. Receiver, **55** lbs., 2nd L.P., **5** lbs., L.P., **5 1/2** lbs., Vacuum, **26 3/4** ins.  
 Speed on Trial **none taken**  
 If the Conditions on Trial were such that full power records were not obtained give the following estimated data:—  
 Builders' estimated I.H.P. **✓** Revols. per min. **✓**  
 Estimated Speed **✓**



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## TURBINE ENGINES.

Works No. *257* Type of Turbines *Vertical*

No. of H.P. Turbines *2* No. of L.P. *1* No. of A stern *1*

Are the Propeller Shafts driven direct by the Turbines or through Gearing? *Direct*

Is Single or Double Reduction Gear employed? *Single*

Diam. of 1st Reduction Pinion *10 1/2* } Width *10 1/2* Pitch of Teeth *1 1/2*  
 " 1st " Wheel *10 1/2* }

Estimated Pressure per lineal inch *100*

Diam. of 2nd Reduction Pinion *6 1/2* } Width *6 1/2* Pitch of Teeth *1 1/2*  
 " 2nd " Wheel *6 1/2* }

Estimated Pressure per lineal inch *100*

Revs. per min. of H.P. Turbines at Full Power *1500* S.H.P. *1500*

" " L.P. " " *1500*

" " 1st Reduction Shaft *1500*

" " 2nd " *1500*

" " Propeller Shaft *1500*

Total Shaft Horse Power *1500*

Date of Harbour Trial *1910*

" Trial Trip *10*

Trials run at *6*

Speed on Trial *2* Knots. Propeller Revs. per min. *1500* S.H.P. *1500*

Turbine Spindles forged by *W. & A. Mitchell*

" Wheels forged or cast by *W. & A. Mitchell*

Reduction Gear Shafts forged by *W. & A. Mitchell*

" Wheels forged or cast by *W. & A. Mitchell*

## DESCRIPTION OF INSTALLATION.

Main Boiler aux & stop valves tested 360 lbs  $\square$  19.10.27. *H.*  
 Two main stop valves. test 21.11.27. *G.H.B.*  
 HP Cylinder tested 240 lbs  $\square$  7.11.27  
 Condenser tested 15 lbs  $\square$  7.11.27.



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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

Diam. of 1st Reduction Pinion } Width Pitch of Teeth  
 " 1st " Wheel }

Estimated Pressure per lineal inch

Diam. 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.

Type of Thrust Blocks  
 No. of Hubs  
 Diam. of Thrust Shafts at bottom of Collars  
 " " Forward Coupling  
 " " At All Couplings  
 No. of Collars

Diam. of Intermediate Shafting by Hub  
 " " Actual  
 No. of Bolts each Coupling  
 " " Diam. at Mid Length  
 " " Diam. of Pitch Circle

Diam. of Propeller Shafts by Hub  
 " " Actual  
 " " At Couplings

Are Propeller Shafts fitted with Constant Bore Liners?  
 If yes, over what length of shaft?  
 Of what material are the Aft Bearings composed?

Are Plans provided for indicating the Aft Bearings with Oil?  
 If so, what type of indicator?



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## SHAFTING.

Are the Crank Shafts Built or Solid?

*Built*

No. of Lengths in each

*one*

Angle of Cranks

*120°*

Diar. by Rule

*8.26"*

Actual

*8 3/8"*

In Way of Webs

*8 7/8"*

" of Crank Pins

*8 3/8"*

Length between Webs

*8 1/4"*

Greatest Width of Crank Webs

*16 1/4"*

Thickness

*5 1/4"*

Least

*11 3/4"*

"

*5 1/4"*

Diar. of Keys in Crank Webs

*1 3/4"*

Length

*3 3/4"*

" Dowels in Crank Pins

-

Length

Screwed or Plain

*plain*

No. of Bolts each Coupling

*6*

Diar. at Mid Length

*2"*

Diar. of Pitch Circle

*12 7/8"*

Greatest Distance from Edge of Main Bearing to Crank Web

*3/16"*

Type of Thrust Blocks

*Multi. Collar loose choc.*

No. " Rings

*4*

Diar. of Thrust Shafts at bottom of Collars

*8 3/8"*

No. of Collars

*4*

" " Forward Coupling

*8 3/8"*

At Aft Coupling

*8 3/8"*

Diar. of Intermediate Shafting by Rule

*7.858*

Actual

No. of Lengths

No. of Bolts, each Coupling

-

Diar. at Mid Length

-

Diar. of Pitch Circle

-

Diar. of Propeller Shafts by Rule

*8.878*

Actual

*9 7/8 to 9 1/8"*

At Couplings

*9 1/8"*

Are Propeller Shafts fitted with Continuous Brass Liners?

*Yes*

Diar. over Liners

*10 7/16 - 10 5/16"*

Length of After Bearings

*3'-0"*

Of what Material are the After Bearings composed?

*Lignum Vitae.*

Are Means provided for lubricating the After Bearings with Oil?

*no*

" " to prevent Sea Water entering the Stern Tubes?

*no.*

If so, what Type is adopted?

## SKETCH OF CRANK SHAFT.

*Final mark crank shaft.**propeller  
thrust**Bl. 10454**J.L.**3 Con. rods**5.1.28.**6 Ecc rods**3 Valve spindles**3 piston rods*

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BOILERS.

Works No. *1258*

No. of Boilers *2* Type *Cylindrical Multitubular.*

Single or Double-ended *Single.*

No. of Furnaces in each *2.*

Type of Furnaces *Deighton*

Date when Plan approved

Approved Working Pressure *180 lbs.*

Hydraulic Test Pressure *320 lbs. (BC 3114 J.L. 15.12.27)*

Date of Hydraulic Test *15.12.27.*

„ when Safety Valves set *4.3.28.*

Pressure at which Valves were set *185 lbs.*

Date of Accumulation Test *no test taken.*

Maximum Pressure under Accumulation Test

System of Draught *Howdens Forced P.A. pump*

Can Boilers be worked separately? *Yes.*

Makers of Plates *Steel Coy of Scotland.*

„ Stay Bars *do*

„ Rivets *R. Bolt & Nut Coy.*

„ Furnaces *Deightons*

Greatest Internal Diam. of Boilers *10'-1 3/8"*

„ „ Length „ *10'-9 15/16"*

Square Feet of Heating Surface each Boiler *1068 sq ft* ? *1068 sq ft*

„ „ Grate „ „ *32 sq ft*

No. of Safety Valves each Boiler *2* Rule Diam. Actual *2" High lift*

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

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

„ Test Cocks „ *3* „ Sallinometer Cocks *One*

Are the Water Gauges fitted direct to the Boiler Shell or mounted on Fitters? *on fitters*

Are the Water Gauge Fitters fitted direct to the Boiler Shell or connected by Pipes? *connected by pipes*

Are those Pipes connected to Boilers by Cocks or Valves? *Yes*

Are Blow-off Cocks or Valves fitted on Boiler Shells? *Yes*

No. of Strakes of Shell Plating in each Boiler

Plates in each Strake

Thickness of Shell Plates Approved

„ „ in Boilers

Are the Rivets Iron or Steel?

Are the Longitudinal Seams Joint or Lap Joints?

Are the Joint Seams Single or Double?

Are the Double Butt Straps of equal width?

Thickness of outside Butt Straps

„ „ inside

Are Longitudinal Seams Hand or Machine Riveted?

Are they Single, Double, or Triple Riveted?

No. of Rivets in a Pitch

Diam. of Rivet Holes

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes

No. of Rows of Rivets in Front and Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes

No. of Rows of Rivets in Shell

Dimensions of Compensating Rings





Thickness of End Plates in Steam Space Approved

$1\frac{1}{2}$

*duplitan pipes.*

" " " " " in Boilers

$1\frac{1}{2}$  full

Pitch of Steam Space Stays

$18 \times 14$

Diar. " " " " Approved

$2\frac{3}{4}$

Threads per Inch

6

*plate*

" " " " in Boilers

$2\frac{3}{4}$

6

Material of " " "

*Steel*

How are Stays Secured?

*Nuts inside + outside + washers.*

Diar. and Thickness of Loose Washers on End Plates

$6 \times \frac{1}{4}$

" " Riveted " " "

*v*

Width " " Doubling Strips

*v*

Thickness of Middle Back End Plates Approved

$1\frac{1}{2}$

" " " " in Boilers

$1\frac{1}{2}$

Thickness of Doublings in Wide Spaces between Fireboxes

*None*

Pitch of Stays at

$13\frac{1}{2} \times 9$

Diar. of Stays Approved

$1\frac{7}{8} \times 1\frac{3}{4}$

Threads per Inch

9

" " in Boilers

*- do -*

*- do -*

Material "

*Steel*

Are Stays fitted with Nuts outside?

*Yes.*

$1\frac{1}{2}$

Thickness of Back End Plates at Bottom Approved

$1\frac{1}{2}$  full

" " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

$13\frac{1}{2} \times 9$

Thickness of Doublings in " "

*None*

Thickness of Front End Plates at Bottom Approved

$1\frac{1}{2}$

" " " " in Boilers

$1\frac{1}{2}$

No. of Longitudinal Stays in Spaces between Furnaces

*one.*

*d*

*1 1/2 x 1 3/4*  
*1 1/2 x 1 3/4*  
*1 1/2 x 1 3/4*

Dir. of Stays Approved

" " " " in Boilers

Material

Thickness of Front Tube Plates Approved

" " " " in Boilers

Dir. of Stay Tubes at Space between Stacks of Tubes

Thickness of Doublings in

Stay Tubes at

Are Stay Tubes fitted with Nuts at Front End?

Thickness of Back Tube Plates Approved

" " " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

" " " " " "

Thickness of Stay Tubes

" " " " " "

External Dir. of Tubes

Material

Thickness of Furnace Plates Approved

" " " " in Boilers

Smallest outside Dir. of Furnaces

Length between Tube Plates



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Dir. of Screwed Stays in C.C. Tops

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

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

Material " Steel

Thickness of Front Tube Plates Approved  $1\frac{1}{2}$

" " " " in Boilers  $1\frac{1}{2}$  full

Pitch of Stay Tubes at Spaces between Stacks of Tubes  $13\frac{1}{4} \times 7\frac{1}{2}$

Thickness of Doublings in " " " none

" Stay Tubes at " " "  $7\frac{3}{8} \times 9\frac{1}{16}$

Are Stay Tubes fitted with Nuts at Front End? at corners

Thickness of Back Tube Plates Approved  $2\frac{3}{8}$

" " " in Boilers  $2\frac{3}{8}$

Pitch of Stay Tubes in Back Tube Plates  $11\frac{1}{2} \times 7\frac{1}{2}$

" Plain "  $3\frac{3}{4} \times 3\frac{3}{4}$

Thickness of Stay Tubes  $3\frac{3}{8} \times 9\frac{1}{16}$

" Plain " 9 w.g.

External Diar. of Tubes  $2\frac{1}{2}$

Material " Iron

Thickness of Furnace Plates Approved  $7\frac{1}{16}$

" " " in Boilers  $7\frac{1}{16}$

Smallest outside Diar. of Furnaces  $2' - 10\frac{1}{2}"$

Length between Tube Plates  $7' - 5\frac{3}{16}"$

Width of Combustion Chambers (Front to Back)  $2' - 8" \text{ top}$   $2' - 10" \text{ at bottom}$

Thickness of " " Tops Approved  $4\frac{1}{16}$

" " " in Boilers  $4\frac{1}{16}$

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

Diagrams and notes on page 21, including a large 'R' logo and 'Lloyd's Register Foundation' text. The page contains faint, mostly illegible text from the reverse side of the paper, which appears to be a continuation of the technical specifications from page 20. Some legible fragments include 'Threads per Inch', 'in Boilers', 'Material', 'Thickness of...', 'Pitch of...', 'Diar.', 'Are all...', 'Thickness of...', '% of...', 'Depth and...', 'Material of...', '% of stays in...', and 'Size of...'. A large blue 'R' logo is superimposed over the lower right portion of the page, with 'Lloyd's Register Foundation' printed below it.

Diar. of Screwed Stays Approved  $1\frac{3}{4}$  Threads per Inch 9

" " " in Boilers  $1\frac{3}{4}$   
Material " " Steel Steel

Thickness of Combustion Chamber Sides Approved  $\frac{1}{16}$   
" " " " in Boilers  $\frac{1}{16}$

Pitch of Screwed Stays in C.O. Sides  $10 \times 9$

Diar. " " Approved  $1\frac{3}{4}$  Threads per Inch 9

" " " in Boilers  $1\frac{3}{4}$   
Material " " Steel

Thickness of Combustion Chamber Backs Approved  $\frac{1}{16}$   
" " " " in Boilers  $\frac{1}{16}$  fall

Pitch of Screwed Stays in C.O. Backs  $9\frac{3}{4} \times 9$

Diar. " " Approved  $1\frac{7}{8} \times 1\frac{3}{4}$  Threads per Inch 9

" " " in Boilers ~ do -  
Material " " Steel

Are all Screwed Stays fitted with Nuts inside C.O.?  $\frac{7}{16}$

Thickness of Combustion Chamber Bottoms  $\frac{1}{16}$

No. of Girders over each Wing Chamber Four

" " " Centre " No centre (2 Chambers)  
Depth and Thickness of Girders  $8\frac{3}{8} \times \frac{9}{8}$  (2 plates)

Material of Girders Steel

No. of Stays in each Two.  $2'-8" \text{ top } 2'-10" \text{ at bottom}$

No. of Tubes, each Boiler 17

Size of Lower Manholes  $15 \times 11$

VERTICAL DONKEY BOILERS

No. of Boilers	Type
Greatest Int. Diam.	Height
Height of Boiler Crown above Fire Grate	External Radius of Dished Crown
Internal Radius of Dished Ends	Thickness of Plates
Description of Seams in Boiler Crown	Plan of Rivet Joints
Height of Firebox Crown above Fire Grate	External Radius of Dished Crown
External Radius of Dished Crown	Material
No. of Crown Stays	External Diam. of Firebox at Top
Thickness of Plates	Bottom
No. of Water Tubes	Int. Diam.
Material of Water Tubes	Size of Manhole in Shell
Dimensions of Compressing Ring	Thickness of Compressing Ring
Working surface, each Boiler	Grate Surface

SUPERHEATERS

Description of Superheaters	Where situated?
Which boiler are connected to superheater?	Can superheaters be shut off while boiler are working?
No. of Safety Valves on each superheater	Date of Examination
Pressure on Valves	Date when safety Valves set



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EVAPORATORS.

No. *3* Type *3* Tons per Day *1*  
 Makers *Steel*  
 Working Pressure \_\_\_\_\_ Test Pressure \_\_\_\_\_ Date of Test \_\_\_\_\_  
 Date of Test of Safety Valves under Steam \_\_\_\_\_

FEED WATER HEATERS.

No. *one* Type *Richards' Feed Heater.*  
 Makers *Holden & Brooke.*  
 Working Pressure *180 lbs* Test Pressure *450 lbs* Date of Test *12.1.28*  
*50 body.*

FEED WATER FILTERS.

No. *one.* Type *High pressure.* Size *Dia 8" L 1'-10 5/8"*  
 Makers *Hy Watson & Sons.* *T&K. 4 1/2"*  
 Working Pressure *180* Test Pressure *432* Date of Test *29.11.24*

LIST OF DONKEY PUMPS.

1. *Simplex circulating pump.*  
*12" x 18" stroke. Cylinder 9 1/2" dia.*
1. *Duplex Ballast pump.*  
*9" x 11" x 10" stroke.*
1. *Duplex General Service pump.*  
*5 x 3 1/2 x 6" stroke*
1. *Sanitary 4 1/2 x 2 3/4 x 4" stroke.*
1. *Fresh water 4 1/2 x 2 3/4 x 4" stroke.*
1. *Greshams No 9 injector.*



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REFRIGERATORS.

No. of Machines *2* Capacity of each  
 Makers *6*  
 Description *6*  
 No. of Steam Cylinders, each Machine  
 No. of Compressors  
 No. of Cranks *1*  
 Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines or Independently  
 No. of Steam Cylinders, each Machine  
 No. of Compressors  
 No. of Cranks  
 Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines or Independently  
 No. of Steam Cylinders, each Machine  
 No. of Compressors  
 No. of Cranks  
 Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines or Independently

1. Set of 8 hydraulic valves.
  2. set of fire bars.
  6. lubricator glasses & washers
  1. set of 8 hydraulic valves.
  12. assorted iron studs & nuts for engine
  6. assorted iron studs & nuts for engine
  36. assorted common bolts & nuts
  1. set of 8 hydraulic valves
- 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	46.60	50.70	1500	1000
Food Acc.	46.30	48.10	1200	900
Off Acc.	46.30	48.10	1200	900
Surf & All rooms	46.30	48.10	1200	900

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



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REMARKS TO ENGINEERS

CONTRACT LIGHTING

Temp. at beginning of Trial

Temp. at end of Trial

Temp. at beginning of Trial

Temp. at end of Trial

Time required to obtain fair results

Time required to obtain fair results

Time in use in Temp. after 1 hour

## ELECTRIC LIGHTING.

Installation Fitted by *Swan Hunter & W. Ltd. Wallsend.*

No. and Description of Dynamos *1 - 10-KW Comp. wound dynamo*

Makers of Dynamos *Sunderland Forge Eng. Coy.*

Capacity *91* Amperes, at *110* Volts, *380* Revols. per Min.

Current Alternating or Continuous *Continuous.*

Single or Double Wire System *Double.*

Position of Dynamos *Starb Side Engine room.*

„ Main Switch Board *Near dynamo.*

No. of Circuits to which Switches are provided on Main Switch Board *4.*

Particulars of these Circuits:—

Circuit.	Number of Lights.	Candle Power.	Current Required. Amps.	Size of Conductor.	Current Density.	Conductivity of Conductor.	Insulation Resistance per Mile.
<i>Navigation</i>	<i>4</i>	<i>60W</i>				<i>100%</i>	<i>1750Ω</i>
	<i>2</i>	<i>30W</i>	<i>5.0</i>	<i>7/029</i>	<i>1500</i>		
<i>Ford Acc.</i>	<i>16</i>	<i>30W</i>					
	<i>14</i>	<i>16c.p.</i>	<i>12.0</i>	<i>7/044</i>	<i>1200</i>	<i>4</i>	<i>900Ω</i>
<i>app. acc.</i>	<i>16</i>	<i>30W.</i>					
	<i>76</i>	<i>16c.p.</i>	<i>18.0</i>	<i>7/044</i>	<i>1800</i>	<i>4</i>	<i>4</i>
<i>Eng &amp; Blk rooms</i>	<i>13</i>	<i>30W.</i>					
	<i>3</i>	<i>16c.p.</i>	<i>7.0</i>	<i>7/029</i>	<i>3500</i>	<i>4</i>	<i>1250Ω</i>

Total No. of Lights *94* No. of Motors driving Fans, &c. *4* No. of Heaters *4*

Current required for Motors and Heaters *4*

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Positions of Auxiliary Switch Boards, with No. of Switches on each *no auxly switchbrd*

Engine Room Distribution Box.

- 4 circuits :- *3/0rg wire*
1. Rbr room
  2. Pt side Eng Room
  3. Stb " "
  4. Bottom platform Eng Room.

Navigation Box 5 circuits *3/0rg*

- Forward Acc. 3 circuits *3/0rg*
- Aft acc. { 5 " *3/0rg*
- " " { 1 " *3/036 (clusters)*

- Are Out-outs fitted as follows?—
- On Main Switch Board, to Cables of Main Circuits *Yes*
  - On Aux. " " each Auxiliary Circuit *Yes*
  - Wherever a Cable is reduced in size *Yes*
  - To each Lamp Circuit *Yes*
  - To both Flow and Return Wires of all Circuits when the Double-Wire System is adopted *Yes*
  - Are the Fuses of Standard Sizes? *Yes*
  - Are all Switches and Out-outs constructed of Non-inflammable Material? *Yes*
  - Are they placed so as to be always and easily accessible? *Yes*

Smallest Single Wire used, No. S.W.G., Largest, No. S.W.G.

How are Conductors in Engine and Boiler Spaces protected? *Lead covered & tinned*

" Saloons, State Rooms, &c., " ? *Lead covered.*

- What special protection is provided in the following cases?—
- (1) Conductors exposed to Heat or Damp *In tubing*
  - (2) " " passing through Bunkers or Cargo Spaces *Lead covered in wood case*
  - (3) " " Deck Beams or Bulkheads *Rubber bushed & W.T. stands.*

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables is unimpaired? *None made.*

Are all Joints in accessible positions, none being made in Bunkers or Cargo Spaces? *None*

Are all Hull Connections for Single-Wire Systems made with Screws of large Surface? *None*

Are the Dynamos, 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? *990,000 Ohms.* Ohms.

Is the Installation supplied with a Voltmeter? *No*

" " " an Ampere Meter? *Yes*

Date of Trial of complete Installation *7.3.28.* Duration of Trial *6 hours.*

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



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, Yes

Fees—

MAIN BOILERS.

H.S. Sq. ft. £ s. d.

G.S. „ „ : :

DONKEY BOILERS.

H.S. Sq. ft. : :

G.S. „ „ : :

£ : :

ENGINES.

L.P.C. Cub. ft. : :

£ : :

Testing, &c. . . . . : :

£ : :

Expenses . . . . . : :

Total ... £ : :

It is submitted that this Report be approved,

*John King*  
Chief Surveyor.

Approved by the Committee for the Class of M.B.S.\* on the 22<sup>ND</sup> AUGUST, 1928



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Foundation  
Secretary.

Fees advised

Fees paid

**"CARTIERDOC"**  
*John King*  
Engineer Surveyor to the British Corporation for the  
Survey and Registry of Shipping.

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. "CARTIERDOC"  
as ascertained by me from personal examination

GENERAL CONSTRUCTION

Total		2
Sickness		1
Testing fee		1
L.P.C.		1
Exp. fee		1
Expenses		1
DONTLY BOHANN		1
H.S.		1
G.S.		1
H.S.		1
Exp. fee		1

It is submitted that this Report be approved.

*[Signature]*  
 Chief Surveyor  
 1932

Approved by the Committee for the Class of M.E.S. on the 17th day of February, 1932.

"CARTIERDOC"

*[Signature]*  
 Surveyor



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