

*Swifwater 2165*  
No. 2165

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. 2032 No. in Register Book

3372

*KEYMOLT*  
" " S.S. SWIFWATER

" KEYDON \*

Makers of Engines

*Blair Co (1926) Ltd.*

Works No. *1940*

Makers of Main Boilers

*Blair Co (1926) Ltd.*

Works No. *1940*

Makers of Donkey Boiler

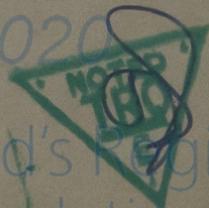
Works No. ✓

MACHINERY



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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 ~~Single Triple~~ ~~Twin Quadruple~~ Screw "Swiftwater"

Official No.

Port of Registry

Registered Owners

Engines Built by

at

Main Boilers Built by

at

Donkey " "

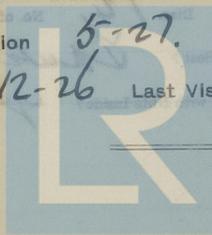
at

Date of Completion

First Visit

Last Visit

Total Visits



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5-27.  
10-12-26 17-5-27 50

Blythe.  
Water Transport Co. Ltd.

Blair & Co. (1926) Ltd.  
Stockton-on-Tees.  
Blair & Co. (1926) Ltd.  
Stockton-on-Tees.

## RECIPROCATING ENGINES

Works No. 1920 No. of Sets 1 Description *Lighterhauson  
S.C. Berke.*

No. of Cylinders each Engine 3 No. of Cranks 3  
Diars. of Cylinders 16"-2 1/4"-44" Stroke 33"  
Cubic feet in each L.P. Cylinder 29.03

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

Type of H.P. Valves, *piston*  
" 1st I.P. " *slide.*  
" 2nd I.P. " *slide*  
" L.P. " *slide*  
" Valve Gear *Stephenson link.*  
" Condenser *Cupace*

Cooling Surface 900 sq. ft.  
Diameter of Piston Rods (plain part) 4 5/8" Screwed part (bottom of thread) 3.53"

Material " *I.S.*  
Diar. of Connecting Rods (smallest part) 4 5/8" Material *Iron*

" Crosshead Gudgeons 4 3/4" Length of Bearings 4 3/4" Material *I.S.*

No. of Crosshead Bolts (each) 4 Diar. over Thrd. 2" Thrds. per inch 6 Material *M.S.*

" Crank Pin " " 2" " 2 3/4" " 6 " "

" Main Bearings 6 Lengths 9 1/2

" Bolts in each 2 Diar. over Thread 2 1/2" Threads per inch 6 Material *steel.*

" Holding Down Bolts, each Engine 59 Diar. 1 1/4" No. of Metal Chocks 59

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 *Blair (1926) Co.*

Piston " " " " " "

Crossheads, " " " " " "

Connecting Rods, Finished by " " " " " "

Piston " " " " " "

Crossheads, " " " " " "

Date of Harbour Trial 28-4-27.

" Trial Trip 17-5-27

Trials run at *on Whilly mts.*

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

If so, what was the I.H.P.? 955 Revols. per min. 103

Pressure in 1st I.P. Receiver, 53 lbs., 2nd I.P., lbs., L.P., 11 lbs., Vacuum, 25" ins.

Speed on Trial *8 1/2 knots.*

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

Bullders' estimated I.H.P. Revols. per min.

Estimated Speed



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## TURBINE ENGINES

Works No. Type of Turbines

No. of H.P. Turbines No. of I.P. No. of L.P. No. of Stern

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

Is Single or Double Reduction Gear employed?

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

Estimated Pressure per lineal inch

Diam. of 2nd Reduction Pinion } Width  
 " 2nd " Wheel } Pitch of Teeth

Estimated Pressure per lineal inch

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

" " I.P. " "

" " L.P. " "

" " 1st Reduction Shaft

" " 2nd " "

" " Propeller Shaft

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

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

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

## DESCRIPTION OF INSTALLATION.

No. of Turbine Shafts

Type of Turbine employed

Description of Gearbox

No. of Motors driving Propeller Shafts

Are the Turbine 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

Diam. of 2nd Reduction Pinion } Width  
 " " " " } Pitch of Teeth

Estimated Pressure per lineal inch

Revs. per min. of H.P. Turbines at Full Power

" " I.P. " "

" " L.P. " "

" " 1st Reduction Shaft

" " 2nd " "

" " Propeller Shaft

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

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

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by



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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.



## SHAFTING.

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

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

Diar. by Rule *9"* Actual *9"* In Way of Webs *9 1/4"*

" of Crank Pins *9"* Length between Webs *10"*

Greatest Width of Crank Webs *18"* Thickness *6"*

Least " " *14 1/4"* " " *6"*

Diar. of Keys in Crank Webs *2"* Length *5"*

" Dowels in Crank Pins *1 3/4"* Length *5"* Screwed or Plain *Plain*

No. of Bolts each Coupling *6* Diar. at Mid Length *2"* Diar. of Pitch Circle *1-1/2"*

Greatest Distance from Edge of Main Bearing to Crank Web *4/8"*

Type of Thrust Blocks *Horseshoe*

No. " Rings *6*

Diar. of Thrust Shafts at bottom of Collars *9"* No. of Collars *6*

" " Forward Coupling *9"* At Aft Coupling *9"*

Diar. of Intermediate Shafting by Rule  Actual  No. of Lengths

No. of Bolts, each Coupling  Diar. at Mid Length  Diar. of Pitch Circle

Diar. of Propeller Shafts by Rule Actual *9 3/4"* At Couplings *9 1/2"*

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

Diar. over Liners *10 7/8"* Length of After Bearings *3 1/4"*

Of what Material are the After Bearings composed? *Signum Nitid.*

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? *Open to Sea Water.*

## SKETCH OF CRANK SHAFT.

*Sketch of Crank Shaft*

*11 1/2"*

*18"*

*6"*

*9 1/4"*

*10"*

*2"*

*5"*

*1 3/4"*

*5"*

*6"*

*2"*

*1-1/2"*

*4/8"*

*Horseshoe*

*6*

*9"*

*6*

*9"*

*9 3/4"*

*9 1/2"*

*10 7/8"*

*3 1/4"*

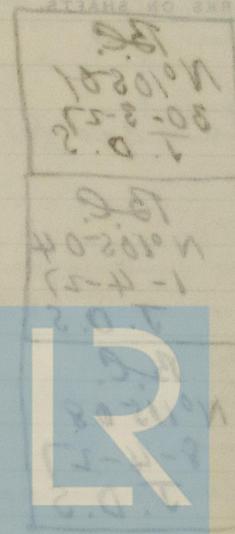
*Signum Nitid.*

*no*

*no*

*Open to Sea Water.*

STAMP MARKS ON SHAFTS



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No. of Blades each Propeller *4* Fitted or Solid? *Fitted*  
 Material of Blades *C.S.*  
 Diam. of Propellers *11'6"* Pitch *10'6"* Surface (each) *52* S. ft.  
 Coefficient of Displacement of Vessel at  $\frac{2}{3}$  Moulded Depth

Part	Forged by	Material
Crank Shafts	<i>Nickers Ltd.</i>	<i>I.S.</i>
" Pins	"	"
" Webs	<i>Blair &amp; Co. Ltd.</i>	<i>I.S.</i>
Thrust Shafts	<i>Nickers Ltd.</i>	<i>I.S.</i>
Intermed. "	"	"
Propeller "	<i>Blair &amp; Co. Ltd.</i>	<i>I.S.</i>
Crank " Finished by	"	"
Thrust " "	"	"
Intermed. " "	"	"
Propeller " "	"	"

## STAMP MARKS ON SHAFTS.

Crank Shaft:-

*B.C.*  
*N°10501*  
*30-3-27*  
*J. D. S.*

Thrust Shaft:-

*B.C.*  
*N°10504*  
*1-4-27*  
*J. D. S.*

Tail Shaft:-

*B.C.*  
*N°10508*  
*8-4-27*  
*J. D. S.*

## SKETCH OF PROPELLER SHAFT.

*Vertical shaft*  
*12"*  
*10"*  
*8"*  
*6"*  
*4"*  
*2"*  
*1"*  
*0.5"*  
*0.25"*  
*0.125"*  
*0.0625"*  
*0.03125"*  
*0.015625"*  
*0.0078125"*  
*0.00390625"*  
*0.001953125"*  
*0.0009765625"*  
*0.00048828125"*  
*0.000244140625"*  
*0.0001220703125"*  
*0.00006103515625"*  
*0.000030517578125"*  
*0.0000152587890625"*  
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## BOILERS.

Works No. 1970

No. of Boilers 2 Type *Cylindrical multitubular*

Single or Double-ended *single*

No. of Furnaces in each 2

Type of Furnaces *Single*

Date when Plan approved 14-1-27

Approved Working Pressure 180 lbs.

Hydraulic Test Pressure 320 "

Date of Hydraulic Test 8-4-27

„ when Safety Valves set 28-4-27

Pressure at which Valves were set 185 lbs.

Date of Accumulation Test 28-4-27

Maximum Pressure under Accumulation Test 187 lbs.

System of Draught *natural.*

Can Boilers be worked separately? *yes.*

Makers of Plates *Oswell Sons Ltd.*

„ Stay Bars *Oswell Sons Ltd.*

„ Rivets *R. B. L. Co. Ltd.*

„ Furnaces *Leeds Forge Co.*

Greatest Internal Diam. of Boilers 12-4 1/16

„ „ Length „ 10-4 1/16

Square Feet of Heating Surface each Boiler 1385 sq ft

„ „ Grate „ „ 39.6 sq ft

No. of Safety Valves each Boiler 2 Rule Diam. 1.94 Actual 2" Cockburn  
high lift.

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

No. of Pressure Gauges, each Boiler 2 No. of Water Gauges 1

„ Test Cocks „ 3 „ Salinometer Cocks 1

Are the Water Gauges fitted direct to the Boiler shells or mounted on Pillars?

Are the Water Gauge Pillars fitted direct to the Boiler shells or connected by Pipes?

Are these Pipes connected to Boilers by Cocks or Valves?

Are Blow-off Cocks or Valves fitted on Boiler shells?

No. of Stitches of Shell Laying in each Boiler

Stitches in each Shell

Thickness of Shell Plates Approved

„ „ in Boilers

Are the Rivets Iron or Steel?

Are the Longitudinal seams Iron or Lap Joints?

Are the Joint Stitches Single or Double?

Are the Double Joint Stitches of equal width?

Thickness of outside Joint Stitches

„ „ inside

Are Longitudinal seams Hand or Machine Riveted?

Are they Single, Double or Triple Riveted?

No. of Rivets in a Pitch

Pitch

No. of Rows of Rivets in Crown (Longitudinal seams)

Are these seams Hand or Machine Riveted?

Pitch of Rivets

No. of Rows of Rivets in Front and Crown (Longitudinal seams)

Are these seams Hand or Machine Riveted?

Pitch of Rivets

No. of Rows of Rivets in Head and Circumferential Seams

Are these seams Hand or Machine Riveted?

Pitch of Rivets

No. of Rows of Rivets in Head and Circumferential Seams

Are these seams Hand or Machine Riveted?

Pitch of Rivets

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Are the Water Gauges fitted direct to the Boiler Shells or mounted on Pillars ?

Are the Water Gauge Pillars fitted direct to the Boiler Shells or connected by Pipes ?

Are these Pipes connected to Boilers by Cocks or Valves ?

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

No. of Strakes of Shell Plating in each Boiler

„ Plates in each Strake

Thickness of Shell Plates Approved

„ „ in Boilers

Are the Rivets Iron or Steel ?

Are the Longitudinal Seams Butt or Lap Joints ?

Are the Butt Straps 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 Treble Riveted ?

No. of Rivets in a Pitch

Diar. of Rivet Holes Pitch

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted ?

Diar. of Rivet Holes Pitch

No. of Rows of Rivets in Front End Circumferential Seams

Are these Seams Hand or Machine riveted ?

Diar. of Rivet Holes Pitch

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams Hand or Machine Riveted ?

Diar. of Rivet Holes Pitch

Size of Manholes in Shell

Dimensions of Compensating Rings

*Handwritten notes:*  
"Screwed"  
"Screw as per drawing"  
"Screw as per drawing"

*Faint, mostly illegible printed text on page 17, possibly bleed-through from the reverse side.*



Thickness of End Plates in Steam Space Approved

" " " " " in Boilers

Pitch of Steam Space Stays

Diar. " " " " Approved Threads per Inch

" " " " " 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 Plates Approved

" " " " " in Boilers

Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at " " "

Diar. of Stays Approved Threads per Inch

" " in Boilers

Material "

Are Stays fitted with Nuts outside ?

Thickness of Back End Plates at Bottom Approved

" " " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

Thickness of Doublings in " "

Thickness of Front End Plates at Bottom Approved

" " " " " in Boilers

No. of Longitudinal Stays in Spaces between Furnaces

*Same as C/S Renewals*

Thickness of End Plates Approved

Thickness of End Plates Approved

" " " " " in Boilers

" " " " " in Boilers

Thickness of Middle Back End Plates Approved

" " " " " in Boilers

Pitch of Stay, Thickness of Spaces between Stays of Fireboxes

Thickness of Doublings in " " "

Stay Tubes at " " "

Are Stay Tubes fitted with Nuts at Front End ?

Thickness of Back End Plates Approved

" " " " " in Boilers

Pitch of Stay Tubes in Back End Plates

" " " " "

Thickness of Stay Tubes

" " " " "

Material of Stay Tubes

" " " " "

Thickness of Back End Plates Approved

" " " " " in Boilers

Thickness of Doublings in " " "

" " " " "

Thickness of Front End Plates Approved

" " " " " in Boilers

No. of Longitudinal Stays in Spaces between Furnaces

*Same as C/S Renewals*



Diar. of Stays Approved Threads per Inch

" " in Boilers

Material "

Thickness of Front Tube Plates Approved

" " " " in Boilers

Pitch of Stay Tubes at Spaces 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

" Plain "

Thickness of Stay Tubes

" Plain "

External Diar. of Tubes

Material "

Thickness of Furnace Plates Approved

" " " in Boilers

Smallest outside Diar. of Furnaces

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Thickness of " " Tops Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Tops

*Same as of Sureswala*

Diar. of Stays Approved Threads per Inch

" " " in Boilers

Material "

Thickness of Combustion Chambers (Front to Back)

" " " in Boilers

Pitch of Stay Tubes in C.C. Tops

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 C.C. Tops

Thickness of Stay Tubes

" Plain "

External Diar. of Tubes

Material "

Thickness of Furnace Plates Approved

" " " in Boilers

Smallest outside Diar. of Furnaces

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Thickness of " " Tops Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Tops

*2 1/2 inch*



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Diar. of Screwed Stays Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides Approved

" " " " in Boilers

Pitch of Screwed Stays in C.O. Sides

Diar. " " Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Backs Approved

" " " " in Boilers

Pitch of Screwed Stays in C.O. Backs

Diar. " " Approved Threads per Inch

" " " in Boilers

Material " "

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

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 Tubes, each Boiler

Size of Lower Manholes

*Same as of Screwed*

VERTICAL DONKEY BOILERS

No. of Boilers Type  
Greatest Int. Diam. Height  
Height of Boiler Crown above Fire Grate  
Are Boilers Crowned Flat or Dished?  
Internal Radius of Dished Boilers  
Thickness of Plates  
Description of Boilers in Tank Contents  
Diam. of Water Tubes  
Height of Boiler Crown above Fire Grate  
Are Boilers Crowned Flat or Dished?  
External Radius of Dished Crowns  
Thickness of Plates  
No. of Lower Flues  
U.S.C.  
Internal Diam. of Flues at Top  
Bottom  
Thickness  
No. of Water Tubes  
Height of Water Tubes  
Material of Water Tubes  
Size of Manhole in Shell  
Description of Components Risk  
Location outside each boiler  
Scale Boilers

SUPERHEATERS

Description of Superheaters  
Where situated?



## VERTICAL DONKEY BOILERS.

No. of Boilers	Type		
Greatest Int. Diar.		Height	
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	Diar.	Material	
External Diar. of Firebox at Top	Bottom	Thickness of Plates	
No. of Water Tubes	Ext. Diar.	Thickness	
Material of Water Tubes			
Size of Manhole in Shell			
Dimensions of Compensating Ring			
Heating Surface, each Boiler		Grate Surface	

## 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 each Superheater

Diar.

Are " " fitted with Easing Gear?

Date of Hydraulic Test

Test Pressure

Date when Safety Valves set

Pressure on Valves

## MAIN STEAM PIPES



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## MAIN STEAM PIPES.

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

47  
 W. Iron.  
 Lap welded.  
 4  
 1/4"  
 Screwed  
 } tested at maker

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

Vertical pipes by the pump  
 Ball valves  
 Feed water heaters  
 All pipes of the  
 Feed water heaters  
 180 lbs. test pressure

## FEED WATER FILTERS



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## SPARE GEAR.

No. of Top End Bolts.	No. of Bot. End Bolts.	No. of Cylinder Cover Studs
2	2	
" Coupling Bolts 1 set.	" Main Bearing Bolts 2	" Valve Chest "
" Junk Ring Bolts ✓	" Feed Pump Valves 2	" Bilge Pump Valves 2
" H.P. Piston Rings ✓	" L.P. Piston Rings ✓	" L.P. Piston Rings ✓
" " Springs ✓	" " Springs ✓	" " Springs ✓
" Safety Valve "	" Fire Bars 1 set 1 lb.	" Feed Check Valves ✓
" Piston Rods ✓	" Connecting Rods ✓	" Valve Spindles ✓
" Air Pump Rods ✓	" Air Pump Buckets ✓	" Air Pump Valves 1 set.
" Cir. " ✓	" Cir. " ✓	" Cir. " ✓
" Crank Shafts ✓	" Crank Pin Bushes ✓	" Crosshead Bushes ✓
" Propeller Shafts ✓	" Propellers ✓	" Propeller Blades 4
" Boiler Tubes 9	" Condenser Tubes 6	" Condenser Ferrules 50

## OTHER ARTICLES OF SPARE GEAR:—

1 set Ballast pump valves.  
 2 spare main & by check valve lids.  
 1 spare set of Sanitary pump valves.  
 1 set of Studs & nuts for One propeller blade.



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## REFRIGERATORS.

No. of Machines *2* Capacity of each *1000 lbs.*

Makers *W. H. & A. S. Co.*

Description *Vertical Piston*

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*

*4*

*50*

## 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, &amp;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.
Holdings of Cargo	<i>9.0</i>	<i>19.0</i>	<i>350 minutes</i>	
Current & Direction of Current	<i>Continuous</i>			
Direction of Trade Wind	<i>50 mph</i>			
Position of Cargo	<i>Below Deck</i>			
No. of Cranks in operation			<i>4</i>	
Particulars of Steam Cylinders				

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



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## ELECTRIC LIGHTING.

Installation Fitted by

Clark Chapman &amp; Co. Ltd.

No. and Description of Dynamos

Compound wound

Makers of Dynamos

Clark Chapman &amp; Co. Ltd.

Capacity

90

Amperes, at

110

Volts,

300

Revolts, per Min.

Current Alternating or Continuous

Continuous.

Single or Double Wire System

Double.

Position of Dynamos

Engine Room Platform.

,, Main Switch Board

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.
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Total No. of Lights

No. of Motors driving Fans, &amp;c.

No. of Heaters

Current required for Motors and Heaters

Same as of "Purwaters"

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

*Installation fitted by*  
*No. and Description of Dynamos*  
*Makers of Dynamos*  
*Speeds*  
*Current Alternating or Continuous*  
*Single or Double Wire System*  
*Position of Dynamos*  
*Main Switch Board*  
*No. of Circuits to which Dynamos are provided as follows*  
*Particulars of these Circuits*

*"Screws"*

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 Out-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?

Ohms.

Is the Insulation supplied with a Voltmeter?

*Same as of "Screws"*

" " an Ampere Meter?

Date of Trial of complete Installation 19-5-27 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.

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.

**" SWIFTWATER "**

as ascertained by me from personal examination

*J. P. Stinson*

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

Fees—

MAIN BOILERS.		£	s.	d.
H.S.	<i>2440</i> Sq. ft.	:	:	:
G.S.	<i>79.2</i> "	:	:	:
DONKEY BOILERS.				
H.S.	<i>✓</i> Sq. ft.	:	:	:
G.S.	<i>✓</i> "	:	:	:
		£	:	:
ENGINES.				
L.P.C.	<i>29.03</i> Cub. ft.	:	:	:
		£	:	:
Testing, &c. ...		:	:	:
		£	:	:
Expenses ...		:	:	:
Total ...		£	:	:

It is submitted that this Report be approved,

*J. H. Adam*  
Chief Surveyor.

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

*15<sup>th</sup> June 1917*

Fees advised

Fees paid



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