

No. 1492

*Ordinance Gas Co  
1999*

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. *1248* No. in Register Book *2475*

*LADY CYNTHIA*  
" *EX*  
T.S.S. *BARNSTAPLE* — MINESWEEPER.

Makers of Engines

*Ross & Duncan.*

Works No.

*1049-1050.*

Makers of Main Boilers

*GALLOWAY'S LTD MANCHESTER.*

Works No.

Makers of Donkey Boiler

*NONE*

Works No.

MACHINERY.



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THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. .... No. in Register Book .....

H.M.S. ....

*"Barustaple"*

Makers of Engines .....

*Ross & Duncan*

Works No. *1049-50*

Makers of Main Boilers .....

*Galloway's Ltd Manchester.*

Works No. ....

Makers of Donkey Boiler .....

*None*

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 *Detw* Engines, Boilers, and Auxiliary  
Machinery of the *Single Triple* Screw *MINE SWEEPER*

"BARNSTAPLE"

Official No. - Port of Registry -

Registered Owners *ADMIRALTY.*

Engines Built by *ROSS & DUNCAN*

at *GOVAN, GLASGOW.*

Main Boilers Built by *GALLOWAY'S LTD*

at *MANCHESTER.*

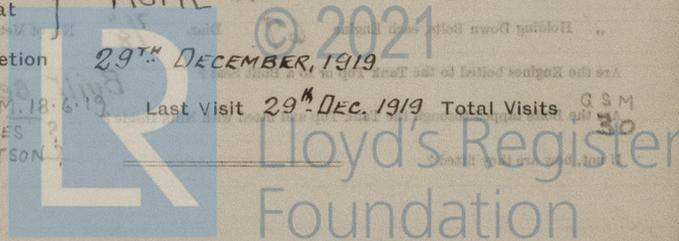
Donkey " " }  
at } *NONE*

Date of Completion *29<sup>th</sup> DECEMBER, 1919*

First Visit *Q.S.M. 18.6.19* Last Visit *29<sup>th</sup> DEC. 1919* Total Visits *3*

*M<sup>r</sup> BOYES*

*" WATSON*



## RECIPROCATING ENGINES.

Works No. 1049-50 No. of Sets 2 Description *Tw. screw, Tr. exp<sup>2</sup>*

*Inverted. Surface condensing.*

No. of Cylinders each Engine 3 No. of Cranks 3  
 Diars. of Cylinders *13 1/4", 21 1/4", 34"* Stroke *21"*  
 Cubic feet in each L.P. Cylinder *11.04*  
 Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr? *Yes*  
 " " " each Receiver? *Yes*  
 Type of H.P. Valves, *Piston valves*  
 " 1st I.P. " *Do.*  
 " 2nd I.P. " *Do.*  
 " L.P. " *Andrews & Cameron's Balanced valve.*  
 " Valve Gear *Stephenson's Link.*  
 " Condenser *Surface - Two* Cooling Surface *1000* sq. ft. *each*  
 Diameter of Piston Rods (plain part) *3 1/2"* Screwed part (bottom of thread) *3.18"*  
 Material " *Steel.*  
 Diar. of Connecting Rods (smallest part) *3 1/2"* Material *Steel*  
 " Crosshead Gudgeons *4 1/4"* Length of Bearing *8"* Material *Steel.*  
 No. of Crosshead Bolts (each) 2 Diar. over Thrd. 2" Thrds. per inch 6 Material *Iron.*  
 " Crank Pin " " 2 " 2" " 6 " *Do.*  
 " Main Bearings Lengths  
 " Bolts in each 2 Diar. over Thread *1 3/4"* Threads per inch 6 Material *Iron*  
 " Holding Down Bolts, each Engine *67* Diar. *7/8"* No. of Metal Chocks *67*  
 Are the Engines bolted to the Tank Top or to a Built Seat? *Built seat.*  
 Are the Bolts tapped through the Tank Top and fitted with Nuts Inside? *—*  
 If not, how are they fitted? *—*

Connecting Rods, Forged by *Denny & Co. Dumbarton.*

Piston " " *Do.*

Crossheads, " *Solid with Piston Rods.*

Connecting Rods, Finished by *Ross & Duncan.*

Piston " " *Do.*

Crossheads, " *Do.*

Date of Harbour Trial *26/9/19*

" Trial Trip *23/12/19*

Trials run at *Firth of Clyde.*

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

If so, what was the I.H.P.? *2406* Revols. per min. *262*

Pressure in 1st I.P. Receiver, *205* lbs., 2nd I.P., *77* lbs., L.P., *20* lbs., Vacuum, *24* ins.

Speed on Trial *16.466* Knts. *MEAN.*

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

data:—

Builders' estimated I.H.P. *—*

Revol. 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 Astern

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

Is Single or Double Reduction Gear employed?

Revol. 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

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

DESCRIPTION OF INSTALLATION.



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NOT SO FITTED

TURBINE ENGINES

No. of Turbine	Type of Turbine	Waste No.
No. of H.P. Turbine	No. of H.P.	No. of H.P.

Are the Propeller Shafts driven direct by the Turbine or through Gear(s)?

In Single or Double Reduction Gear employed?

Excess capacity of H.P. Turbine at full power

11

12

13

14

15

16

17

18

19

20

Turbine shafts used by

1. Directly on shaft

2. Through Gear shafts (used in

Waste listed on case in

DESCRIPTION OF INSTALLATION

NOT SO FITTED

TURBO-ELECTRIC PROPELLING MACHINERY

No. of Turbo-Generator Sets

Capacity of each

Type of Turbine employed

Description of Generator

NOT SO FITTED

Excess capacity of generator

Excess capacity of turbine

Excess capacity of generator

No. of Motors driving Propeller Shafts

Are the Propeller Shafts driven direct by the Motor or through Gear(s)?

In Single or Double Reduction Gear employed?

Description of Motor

Excess per cent of generator at full power

11

12

13

14

15

16

17



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## TURBO-ELECTRIC PROPELLING MACHINERY.

No. of Turbo-Generating Sets      Capacity of each  
 Type of Turbines employed  
 Description of Generators

NOT SO FITTED.

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

Revs. per min. of Generators at Full Power

” ” Motors ”

” ” Propellers ”

Total Shaft Horse Power ”

Date of Harbour Trial

” Trial Trip

Trials run at

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



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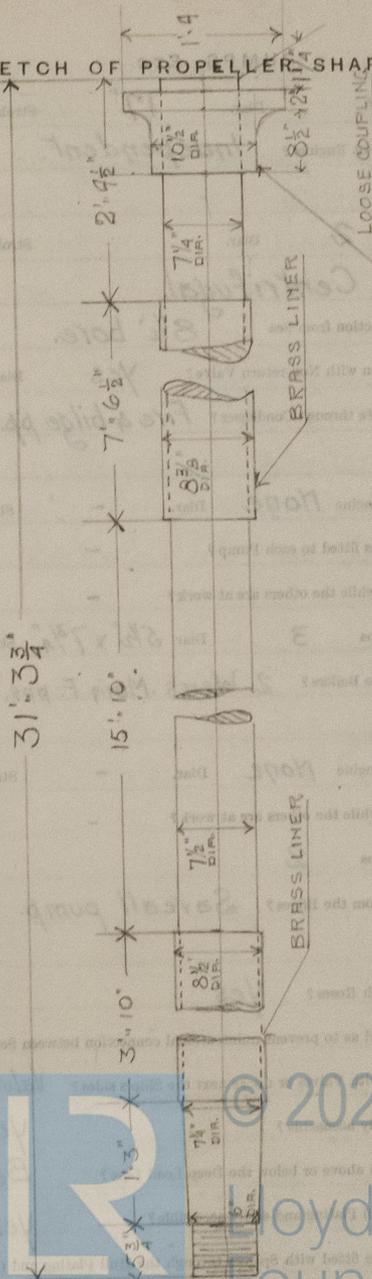


No. of Blades each Propeller 4 Fitted or Solid? Solid  
 Material of Blades Bronze Boss Bronze  
 Diam. of Propellers 6' 6" Pitch 8' 3" Surface (each) 18.0 S. ft.  
 Coefficient of Displacement of Vessel at  $\frac{1}{2}$  Moulded Depth

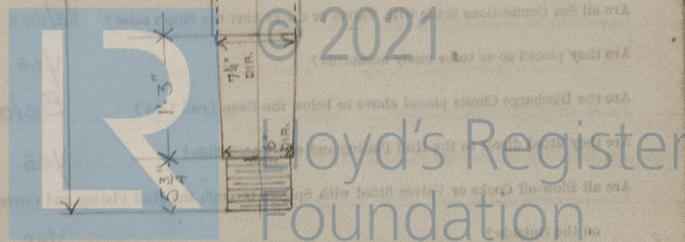
Crank Shafts Forged by Portland Forge Co. Ld. Material Steel  
 " Pins " } Solid with Shaft. "  
 " Webs " } "  
 Thrust Shafts " Langley Forge Co. "  
 Interned. " Do. "  
 Propeller " Portland Forge Co. "  
 Crank " Finished by A. F. Craig & Co. Paisley.  
 Thrust " " Ross & Duncan, Govan.  
 Interned. " Do.  
 Propeller " " A. F. Craig & Co. Paisley.

STAMP MARKS ON SHAFTS.

SKETCH OF PROPELLER SHAFT.



H.M.S. BARNSTABLE - PROPELLER SHAFT  
 2 OFF - INGOT STEEL



## PUMPS, ETC.

No. of Air Pumps 2      Diar. 17"      Stroke 12"

Worked by Main or Independent Engines? *Independent.*

No. of Circulating Pumps 2      Diar.      Stroke /

Type of " *Centrifugal.*

Diar. of " Suction from Sea *8 1/2" bore.*

Has each Pump a Bilge Suction with Non-return Valve? *Yes*      Diar. 6"

What other Pumps can circulate through Condenser? *Fire & bilge pp. in Aff' Bl' r'm.*

No. of Feed Pumps on Main Engine *None*      Diar. -      Stroke -

Are Spring-loaded Relief Valves fitted to each Pump? -

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

No. of Independent Feed Pumps 3      Diar. *5 1/2" x 7 3/4"*      Stroke 12"

What other Pumps can feed the Boilers? *2 Weir's Main F. pps. 1 Aux. (See page 33)*

No. of Bilge Pumps on Main Engine *None*      Diar. -      Stroke -

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

No. of Independent Bilge Pumps 2

What other Pumps can draw from the Bilges? *Saveall pump.*

Are all Bilge Suctions fitted with Roses? *Yes*

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? *Valves & cocks.*

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

Are the Discharge Chests placed above or below the Deep Load Line? *Below.*

Are they fitted direct to the Hull Plating and easily accessible? *Yes*

Are all Blow-off Cocks or Valves fitted with Spigots through the Hull Plating and Covering Plates or Flanges on the Outside? *Yes*



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## BOILERS.

Works No. \_\_\_\_\_

No. of Boilers 2 Type Yarrow Water tube.

Single or Double-ended -

No. of Furnaces in each 1

Type of Furnaces \_\_\_\_\_

Date when Plan approved \_\_\_\_\_

Approved Working Pressure 235 lbs.

Hydraulic Test Pressure 352½

Date of Hydraulic Test 23/12/18, 24/2/19 (Lloyds.) 16/9/19 (B.G.)

„ when Safety Valves set 23/9/19.

Pressure at which Valves were set 237 lbs. & 242 lbs.

Date of Accumulation Test \_\_\_\_\_

Maximum Pressure under Accumulation Test \_\_\_\_\_

System of Draught Closed stokehold.

Can Boilers be worked separately? Yes

Makers of Plates \_\_\_\_\_

„ Stay Bars \_\_\_\_\_

„ Rivets \_\_\_\_\_

„ Furnaces \_\_\_\_\_

Greatest Internal Diam. of Boilers \_\_\_\_\_

„ „ Length „ \_\_\_\_\_

Square Feet of Heating Surface each Boiler About 3500 ft<sup>2</sup>

„ „ Grate „ „ 60 ft<sup>2</sup>

No. of Safety Valves each Boiler 2 Diam. 1 7/8

Are the Safety Valves fitted with Easing Gear? Yes.

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

„ Test Cocks - „ Salinometer Cocks 1

Marks on Boilers.  
3rd boiler aft boiler.

N<sup>o</sup> 36  
LLOYD'S TEST  
353 LBS. 0" F.R.  
23/12/1918

14027  
N<sup>o</sup> 7 BOILER

Boilers made by Galloways, Ltd  
Manchester.

N<sup>o</sup> 41  
LLOYD'S TEST  
353 LBS. 0" F.R.  
24/2/1913

N<sup>o</sup> 8 BOILER.



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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

LOYD'S REGISTER  
251/1919

Thickness of Shell Plates in Steam Space Approved  
in Boilers  
Pitch of Steam Space Seams  
Thickness of Shell Plates Approved  
in Boilers  
Thickness of  
How are they riveted?  
Diar. and Thickness of Loose Rivets on End Plates  
Riveted  
Pitch of Seams  
Thickness of Shell Plates Approved  
in Boilers  
Thickness of Rivets in the Space between  
Pitch of Seams  
Pitch of Seams Approved  
in Boilers  
Thickness of Rivets in the Space between  
Pitch of Seams  
Thickness of Rivets in the Space between  
Pitch of Seams  
Thickness of Rivets in the Space between  
Pitch of Seams  
Thickness of Rivets in the Space between  
Pitch of Seams  
Thickness of Rivets in the Space between  
Pitch of Seams



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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



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24  
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

Diagonal of Screwed Stays Approved  
in Boilers  
Material  
Thickness of Combustion Chamber Ends Approved  
in Boilers  
Pitch of Screwed Stays in C.C. Ends  
Diar. of Stays Approved  
in Boilers  
Material  
Thickness of Combustion Chamber Ends Approved  
in Boilers  
Pitch of Screwed Stays in C.C. Ends  
Diar. of Stays Approved  
in Boilers  
Material  
Are all Screwed Stays fitted with Nuts inside C.C.?  
Thickness of Combustion Chamber Bottoms  
No. of Stays over each Wire Chamber  
Depth and Thickness of Stays  
Material of Stays  
No. of Stays in each  
No. of Tubes in each Boiler  
Size of Lower Stays



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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.C. Sides

Diar. " " Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Backs Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. 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

VERTICAL DONKEY BOILERS

Type of Boiler

Greatest Int. Diam.

Height of Boiler Crown above Fire Grate

Are Boiler Crowns Flat or Dished?

Internal Radius of Dished Boils

Thickness of Crown in Boiler Crown

Height of Ribbed Crown above Fire Grate

Are Ribbed Crowns Flat or Dished?

Essential Radius of Dished Crowns

Int. of Crown shell

External Diam. of Ribbed at Top

Int. of Water Tubes

Material of Water Tubes

Size of Manhole in Shell

Dimensions of Connecting Flange

Height of Ribbed crown above boiler

Gate Valves

SUPERHEATERS

Description of Superheaters

When situated?

Which flange are connected to boiler?

Can superheaters be shut off while boiler is working?

Int. of water tubes on each superheater?

Int. of steam tubes?

Date of inspection?

Date of re-visit?

Remarks on Valve



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## MAIN STEAM PIPES.

No. of Lengths	9		
Material	Steel		
Brazed, Welded or Seamless	Solid drawn		
Internal Diam.	4 1/2"		
Thickness	3/16" - 1/4"		
How are Flanges secured?	Screwed & riveted over.		
Date of Hydraulic Test	28-8-19 & 12-9-19		
Test Pressure	470 lbs.		
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			

## STEAM EVAPORATORS

No. of Lengths	30		
Material	Steel		
Brazed, Welded or Seamless	Solid drawn		
Internal Diam.	4 1/2"		
Thickness	3/16" - 1/4"		
How are Flanges secured?	Screwed & riveted over.		
Date of Hydraulic Test	28-8-19 & 12-9-19		
Test Pressure	470 lbs.		
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			



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## EVAPORATORS.

No. *One* Type *Quiggin's* *30* Tons per Day  
 Makers *Liverpool Engineering Co. Ltd. Liverpool*  
 Working Pressure *220* Test Pressure *-* Date of Test *-*  
 Date of Test of Safety Valves under Steam *28/10/19*

## FEED WATER HEATERS.

No. \_\_\_\_\_ Type \_\_\_\_\_  
 Makers \_\_\_\_\_  
 Working Pressure \_\_\_\_\_ Test Pressure \_\_\_\_\_ Date of Test \_\_\_\_\_

**NOT SO FITTED**

## FEED WATER FILTERS.

No. *One* Type *Gravitation (Twin Type)* Size *3½"*  
 Makers *Carruther's Ltd.*  
 Working Pressure *-* Test Pressure *-* Date of Test \_\_\_\_\_

## FORCED DRAUGHT FANS

No. *Two* Type *Howden's F.D.* Size *72" diam.*  
*6" x 5" Forced Lubrication Engine.*

## LIST OF DONKEY PUMPS.

"Monotype" Air Pumps, 2 in No. *Weir's, Cathcart.*  
 Circulating Centrifugal Pumps, 2 in No. \_\_\_\_\_  
 Main Feed Pumps 2 in No. *Weir's, Cathcart.*  
 Aux<sup>y</sup> " " 1 " " *do.*  
 Fire & Bilge " 2 " " *do.*  
 Saveall " 1 " " \_\_\_\_\_



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REFRIGERATORS.

No. of Machines

Capacity of each

Makers

Description

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

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

NOT SO FITTED

NOT SO FITTED

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.	
				after	hours.
Upper Deck	34.0	34.0	1000	34.0	34.0
Lower Deck	34.0	34.0	1000	34.0	34.0
Engine Room	34.0	34.0	1000	34.0	34.0
Galley	34.0	34.0	1000	34.0	34.0
Stowage	34.0	34.0	1000	34.0	34.0
Water Tank	34.0	34.0	1000	34.0	34.0
Oil Tank	34.0	34.0	1000	34.0	34.0
Coal Bunker	34.0	34.0	1000	34.0	34.0
Water Bunker	34.0	34.0	1000	34.0	34.0
Oil Bunker	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
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Coal	34.0	34.0	1000	34.0	34.0
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Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0	1000	34.0	34.0
Water	34.0	34.0	1000	34.0	34.0
Oil	34.0	34.0	1000	34.0	34.0
Coal	34.0	34.0			

## ELECTRIC LIGHTING.

Installation Fitted by *Telford, Gunn & Mackay Glasgow*  
 No. and Description of Dynamos *2 off 4 Pole Drip-proof, compound.*  
 Makers of Dynamos *Ashworth, Parker & Co. British Thomson-Houston*  
 Capacity " *12 KW* Amperes, at *120* Volts, *100* Revols. per Min. *500*  
 Current Alternating or Continuous *Continuous*  
 Single or Double Wire System *Double*  
 Position of Dynamos *Fore End of Engine Room P & S.*  
 " Main Switch Board *Adjacent to start<sup>g</sup> Dynamo.*  
 No. of Circuits to which Switches are provided on Main Switch Board *Nine*  
 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.
1 Wireless	-	-	12.5	7/18	1000	100%	2500
2 Rotary	-	-	15	7/18	800	"	"
3 Navigation	20	16	13	19/20	684	"	"
4 Forward	34	16	30	19/20	1052	"	"
5 after	33	16	16	19/20	841	"	"
6 10" Projector	76	32	25	19/20	1314	"	"
7 Engine & B. Room	36	16	65	19/16	1055	"	"
8 Police	21	16	15	7/18	1200	"	"
9 Radiators	-	-	40	19/17	870	"	"

Total No. of Lights *166* No. of Motors driving Pumps, &c. *10* No. of Heaters *5*  
 Current required for Motors and Heaters *55 amperes*



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

Position of Switch Board	No. of Switches	Material	Access	Protection	Special Protection
Are Out-outs fitted as follows?—					
On Main Switch Board, to Cables of Main Circuits		yes			
On Aux. " " each Auxiliary Circuit		—			
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 Size?		Admiralty Standard			
Are all Switches and Cut-outs constructed of Non-inflammable Material?		yes			
Are they placed so as to be always and easily accessible?		yes			
Smallest Single Wire used, No. 1/17 S.W.G., Largest, No. 1/16 S.W.G.					
How are Conductors in Engine and Boiler Spaces protected?		Lead covered.			
" " Saloons, State Rooms, &c., " ?		Do Do			
What special protection is provided in the following cases?—					
(1) Conductors exposed to Heat or Damp		Lead covered			
(2) " " passing through Bunkers or Cargo Spaces		none			
(3) " " Deck Beams or Bulkheads		Lead Baskets & W.T. Glants			

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

is unimpaired? *none*

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? *Admiralty Standard tests*

Is the Installation supplied with a Voltmeter? *yes*

" " " an Ampere Meter? *yes*

Date of Trial of complete Installation *29/12/19* Duration of Trial *6 hours*

*Jno. G. Allan*  
*Surveyor.*



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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 (Admiralty)

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 H.M.S. "BARNSTAPLE"

as ascertained by me from personal examination

*Geo. S. Macfarlane*  
 Engineer Surveyor to the British Corporation for the  
 Survey and Registry of Shipping.

Fees—

MAIN BOILERS.

H.S. Sq. ft. : : £ : s. d.

G.S. " " : : £ : s. d.

DONKEY BOILERS.

H.S. Sq. ft. : : £ : s. d.

G.S. " " : : £ : s. d.

ENGINES.

L.P.C. Cub. ft. : : £ : s. d.

Testing, &c. . . . . : : £ : s. d.

Expenses . . . . . : : £ : s. d.

Total ... £ : : £ : s. d.

It is submitted that this Report be approved,

Chief Surveyor.

Approved by the Committee for the Class of M.B.S.\* on the 14<sup>th</sup> January.

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 Secretary.

Fees advised

Fees paid



STEERING GEAR Alex. Turnbull & Co. Ltd. Glasgow.  
 ENGINE No 1331 No 2

TRAWL WINCH Wm Stephenson & Co. Ltd. Grimsby

WINDLASS Emerson Walker & Thomson  
 Glasgow & London



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