No. 2283

THE BRITISH CORPORATION FOR THE SURVEY AND REGISTRY OF SHIPPING.

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

S.S. "Baron Stranraer."

Makers of Engines David Rowan & Co., Ltd.

Works No. 908.

Makers of Main Boilers [Same.]

Works No. "

Makers of Donkey Boiler [none.]

Works No. —

MACHINERY.

No.

THE BRITISH CORPORATION FOR THE SURVEY AND REGISTRY OF SHIPPING.

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

Received at Head Office 30th October 1929.

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

"Baron Stranraer"

Official No. Port of Registry Ardrossan.

Registered Owners

Engines Built by David Rowan & Co., Ltd.

at Glasgow.

Main Boilers Built by [Same]

at "

Donkey " "

at —

Date of Completion 25/10/29

First Visit 1/3/29 Last Visit 25/10/29 Total Visits 48

RECIPROCATING ENGINES.

Works No. 908 No. of Sets One Description Triple expansion vertical steam, surface-condensing.

No. of Cylinders each Engine 3 No. of Cranks 3

Diars. of Cylinders 21½", 37" and 62" Stroke 42"

Cubic feet in each L.P. Cylinder 73·38

Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr.? Top H.P. only; bottoms of all 3.

" " each Receiver? Bottoms only.

Type of H.P. Valves, Piston.

~~Int~~ I.P., " } Andrews & Cameron.

L.P. "

" Valve Gear Stephenson Link Motion.

" Condenser Riveted Steel ▽ Cooling Surface 1850 sq. ft.

Diameter of Piston Rods (plain part) 6" Screwed part (~~bottom of~~ over thread) 5"

Material " Steel. Screwed 4 thds/in.

Diar. of Connecting Rods (smallest part) 5¾" Material I.S.

" Crosshead Gudgeons 6¼" Length of Bearing both 6¼" Material Steel.

No. of Crosshead Bolts (each side) 2 Diar. over Thrd. 2½" Thrds. per inch 6 Material Steel.

" Crank Pin " " 2 " 3½" " 6 " "

" Main Bearings Lengths —

" Bolts in each Diar. over Thread — Threads per inch Material

" Holding Down Bolts, each Engine Diar. No. of Metal Chocks

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 Vickers-Armstrongs Ltd. } @

Piston " " D. Rowan & Co. Ltd.

Crossheads, " " " "

Connecting Rods, Finished by " " "

Piston " " " "

Crossheads, " " " "

Date of Harbour Trial 11/10/29.

" Trial Trip 25/10/29

Trials run at Skelmorlie, Firth of Clyde.

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

If so, what was the I.H.P.? 1750 Revols. per min. 70·6

Pressure in ~~Int~~ H.P. Receiver, 20½ lbs., ~~Int~~ I.P., 67 lbs., L.P., 15¼ lbs., Vacuum, 26⅝ ins.

Speed on Trial 10·96 Knots.

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 —

Cylinders tested 27/8/29;—

H.P. 315 lb/□" }
M.P. 105 " } hydraulic pressure.
L.P. 25 "

Condenser tested 5/9/29;—
15 lb/□" (Weir-Uniflux type.)

Contraflo auxiliary condenser no. 2692.

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?

None

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

Revols. 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 Revols. 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.

TURBO-ELECTRIC PROPELLING MACHINERY.

No. of Turbo-Generating Sets Capacity of each

Type of Turbines employed

Description of Generators

None.

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

Revols. 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 Revols. 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 (see Note, p. 41)

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

Diar. by Rule 12.097" Actual 12 3/8" In Way of Webs 12 5/8"

" of Crank Pins 12 1/2" Length between Webs 12 1/2"

Greatest Width of Crank Webs 1'-11 3/4" Thickness 8"

Least " " " 8"

Diar. of ~~Keys~~ Dowels in Crank Webs 2 1/4" Length 6"

" Dowels in Crank Pins 2 1/4" Length 6" Screwed or Plain Plain.

No. of Bolts each Coupling 6 Diar. at Mid Length 2 7/8" Diar. of Pitch Circle 1'-6 3/4"

Greatest Distance from Edge of Main Bearing to Crank Web 1/4"

Type of Thrust Blocks Michell

No. " Rings one

Diar. of Thrust Shafts at bottom of Collars 12 3/8" No. of Collars one

" " Forward Coupling 12 3/8" At Aft Coupling 12 3/8"

Diar. of Intermediate Shafting by Rule 11.521" Actual 11 5/8" No. of Lengths 5

No. of Bolts, each Coupling 6 Diar. at Mid Length 2 7/8" Diar. of Pitch Circle 1'-6 3/4"

Diar. of Propeller Shafts by Rule Actual 13 1/2" At Couplings 12 3/8"

Are Propeller Shafts fitted with Continuous Brass Liners? Yes.

Diar. over Liners 15" Length of After Bearings 5'-8"

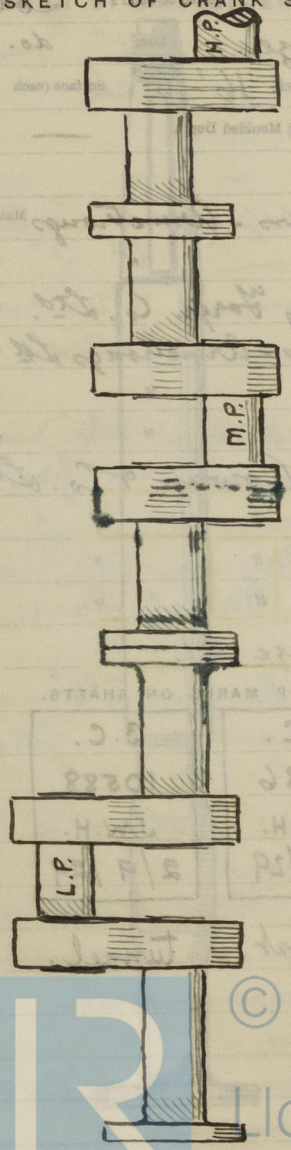
Of what Material are the After Bearings composed? Lignum vitae.

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.



No. of Blades each Propeller 4 Fitted or Solid? Solid

Material of Blades Bronze. Boss do.

Diar. of Propellers 16'-9" Pitch 16'-6" Surface (each 85 S. ft.)

Coefficient of Displacement of Vessel at ⅔ Moulded Depth —

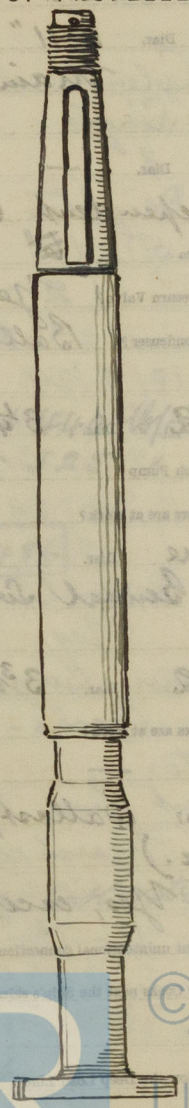
* Crank Shafts Forged by	Vickers - Armstrongs	Material	I. S.	
,, Pins ,,	"	"	"	
,, Webs ,,	Langley Forge Co. Ltd.	"	"	
Thrust Shafts ,,	Vickers - Armstrongs Ltd	"	"	
Intermed. ,, ,,	"	"	"	
Propeller ,, ,,	"	"	"	
Crank ,, Finished by	D. Rowan & Co. Ltd.			
Thrust ,, ,,	"			
Intermed. ,, ,,	"		"	
Propeller ,, ,,	"		"	

* See note on page 41.

STAMP MARKS ON SHAFTS.

Crank.	Thrust.	Tunnel.	Tail.
B.C.	B.C.	B.C.	B.C.
10584	10586	10588	10588
J.W.H.	J.W.H.	J.W.H.	J.W.H.
7/8/29.	9/8/29	2/9/29	2/9/29.

SKETCH OF PROPELLER SHAFT.



PUMPS, ETC.

No. of Air Pumps One Diar. 1'-11" Stroke 1'-10"

Worked by Main or Independent Engines? Main.

No. of Circulating Pumps One Diar. — Stroke —

Type of " Independent Centrifugal.

Diar. of " Suction from Sea 9"

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

What other Pumps can circulate through Condenser? Ballast.

No. of Feed Pumps on Main Engine 2 Diar. 3¼" Stroke 1'-10"

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 One Diar. Stroke ⟷

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

No. of Bilge Pumps on Main Engine 2 Diar. 3¾" Stroke 1'-10"

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, (& Circulating pump special bilge.)

Are all Bilge Suctions fitted with Roses? Yes, except mucy spaces, where mud boxes with straight tail pipes.

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? "

Are they placed so as to be easily accessible? "

Are the Discharge Chests placed above or below the Deep Load Line? Above, except circulating pump.

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.

Barrels tested at 440 lb/□" hyd. JW HS 12/9/29.
Air vessels " 525 " " 18/9/29.

Weir's no. 91486

BOILERS

Works No. 908

No. of Boilers 2 Type Cylindrical multitubular.

Single or Double-ended Single.

No. of Furnaces in each 3

Type of Furnaces Deighton.

Date when Plan approved 5/12/28

Approved Working Pressure 210 lb/□"

Hydraulic Test Pressure 365 "

Date of Hydraulic Test 10/9/29

" when Safety Valves set 11/10/29.

Pressure at which Valves were set 216 lb/□"

Date of Accumulation Test 11/10/29.

Maximum Pressure under Accumulation Test 216 lb/□"

System of Draught Natural.

Can Boilers be worked separately? Yes.

Makers of Plates Witkowitzer Bergbau & Eisenhutten Gewerkschaft, Czecho-Slovakia.

" Stay Bars ditto.

" Rivets North West Rivet, Bolt & Nut Factory Ld.

" Furnaces John Marshall & Co. Ltd.

Greatest Internal Diar. of Boilers 16'-0"

" " Length " 11'-7¾"

Square Feet of Heating Surface each Boiler 2605.

" " Grate " " 58.75

No. of Safety Valves each Boiler 2 Rule Diar. 2 5/32" Actual 2¼" H.L.

Are the Safety Valves fitted with Easing Gear? Yes.

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

" Test Cocks " 3 " Salinometer Cocks One.

B.C. TEST.
5262
365 lb.
W.P. 210 lb.
J.W.H.
10/9/29.

$$A = 2605 \times \frac{1.25}{210 + 15} = 14.46 \square''$$

or $= 7.23 \square''$ for High Lift.

Each valve $\frac{7.23}{2} = 3.615 \square''$ equivalent to a diameter of 2 5/32" say.

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

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

Are these Pipes connected to Boilers by Cocks or Valves? —

Are Blow-off Cocks or Valves fitted on Boiler ~~Shells~~? Valves on back end plates.

No. of Strakes of Shell Plating in each Boiler One.

" Plates in each Strake 2

Thickness of Shell Plates Approved $1\frac{15}{32}$"

" " in Boilers "

Are the Rivets Iron or Steel? Steel.

Are the Longitudinal Seams Butt or Lap Joints? Butt.

Are the Butt Straps Single or Double? Double.

Are the Double Butt Straps of equal width? Yes.

Thickness of outside Butt Straps $1\frac{1}{8}$"

" inside " $1\frac{1}{4}$"

Are Longitudinal Seams Hand or Machine Riveted? Machine.

Are they Single, Double, or Treble Riveted? Treble.

No. of Rivets in a Pitch 5

Diar. of Rivet Holes $1\frac{1}{2}$" Pitch $10\frac{3}{8}$"

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 2

Are these Seams Hand or Machine riveted? Hand.

Diar. of Rivet Holes $1\frac{3}{8}$" Pitch 3.45"

No. of Rows of Rivets in Back End Circumferential Seams 2.

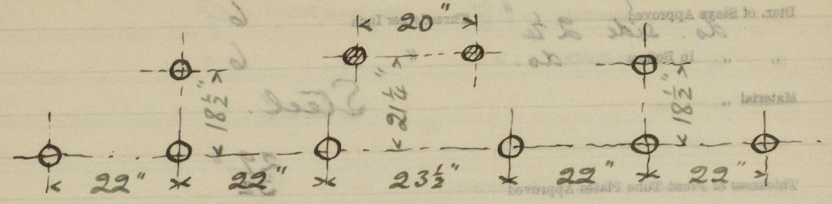
Are these Seams Hand or Machine Riveted? Machine.

Diar. of Rivet Holes $1\frac{1}{2}$" Pitch 4.05"

Size of Manholes in ~~Shell~~ Back end plate 16" x 12"

Dimensions of Compensating Rings —

Thickness of End Plates in Steam Space Approved	$1\frac{7}{16}$"
" " " " " in Boilers	"
Pitch of Steam Space Stays	See sketch, opposite page.
Diar. " " " " Approved	2 @ $3\frac{1}{2}$" ⊗ Threads per Inch 6
" " " " " in Boilers	8 @ $3\frac{1}{4}$" ○ do. " 6
Material of " " "	Steel.
How are Stays Secured?	Nuts inside & outside.
Diar. and Thickness of Loose Washers on End Plates	—
" " Riveted " "	—
Width " " Doubling Strips "	—
Thickness of Middle Back End Plates Approved	$\frac{13}{16}$"
" " " " " in Boilers	"
Thickness of Doublings in Wide Spaces between Fireboxes	—
Pitch of Stays at " " " "	$13\frac{3}{8}$"
Diar. of Stays Approved	$1\frac{7}{8}$" Threads per Inch 9
" " in Boilers	" " "
Material "	Steel.
Are Stays fitted with Nuts outside?	Yes.
Thickness of Back End Plates at Bottom Approved	$\frac{13}{16}$"
" " " " " in Boilers	"
Pitch of Stays at Wide Spaces between Fireboxes	widening.
Thickness of Doublings in " "	—
Thickness of Front End Plates at Bottom Approved	$\frac{29}{32}$"
" " " " " in Boilers	"
No. of Longitudinal Stays in Spaces between Furnaces	3 round each bottom manhole; total = 6



Diar. of Stays Approved	In hole top $2\frac{1}{2}$" do. side $2\frac{1}{4}$"	Threads per Inch	6
" " in Boilers	do.	"	6
Material "			Steel.
Thickness of Front Tube Plates Approved			$\frac{29}{32}$"
" " " " in Boilers			"
Pitch of Stay Tubes at Spaces between Stacks of Tubes			$13\frac{7}{8}$"
Thickness of Doublings in " " "			—
" Stay Tubes at " " "			$\frac{5}{16}$" and $\frac{7}{16}$"; top corners $\frac{3}{8}$"
Are Stay Tubes fitted with Nuts at Front End			Yes.
Thickness of Back Tube Plates Approved			$\frac{13}{16}$"
" " " in Boilers			"
Pitch of Stay Tubes in Back Tube Plates			$10\frac{5}{8}$" × $8\frac{1}{4}$"
" Plain "			$4\frac{1}{4}$" × $4\frac{1}{8}$"
Thickness of Stay Tubes			$\frac{1}{4}$"
" Plain "			8 W.G.
External Diar. of Tubes			3"
Material "			Lapwelded iron.
Thickness of Furnace Plates Approved			$\frac{47}{64}$"
" " " in Boilers			"
Smallest outside Diar. of Furnaces			4'-0 $\frac{15}{32}$"
Length between Tube Plates			7'-3"
Width of Combustion Chambers (Front to Back)			3'-3 $\frac{33}{64}$"
Thickness of " " Tops Approved			$\frac{3}{4}$"
" " " " in Boilers			"
Pitch of Screwed Stays in C.C. Tops			$9\frac{15}{16}$" × $9\frac{1}{2}$"

Diar. of Screwed Stays Approved $1\frac{7}{8}$" Threads per Inch 9

" " " in Boilers " " "

Material " " Steel.

Thickness of Combustion Chamber Sides Approved $\frac{3}{4}$"

" " " " in Boilers "

Pitch of Screwed Stays in C.C. Sides $9\frac{15}{16}$" × $9\frac{1}{2}$"

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

" " " in Boilers " " "

Material " " Steel.

Thickness of Combustion Chamber Backs Approved $\frac{43}{64}$"

" " " " in Boilers "

Pitch of Screwed Stays in C.C. Backs $8\frac{3}{4}$" × $8\frac{1}{4}$"

Diar. " " Approved $1\frac{5}{8}$" Threads per Inch 9

" " " in Boilers " "

Material " " Steel.

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

Thickness of Combustion Chamber Bottoms $\frac{15}{16}$"

No. of Girders over each Wing Chamber 4

" " " Centre " 3

Depth and Thickness of Girders $10\frac{3}{4}$" × $\frac{7}{8}$" double plates.

Material of Girders Steel.

No. of Stays in each

No. of Tubes, each Boiler 370

Size of Lower Manholes 16" × 12"

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

none.

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

none.

MAIN STEAM PIPES.

No. of Lengths	4			
Material	Steel			
Brazed, Welded or Seamless	Welded.			
Internal Diar.	4½"			
Thickness	¼"			
How are Flanges secured?	Sc'd + exp'd.			
Date of Hydraulic Test	2 lengths on 27/9/29; 2 on 7/10/29.			
Test Pressure	630 lb/□"			
No. of Lengths				
Material				
Brazed, Welded or Seamless				
Internal Diar.				
Thickness				
How are Flanges secured?				
Date of Hydraulic Test				
Test Pressure				
No. of Lengths				
Material				
Brazed, Welded or Seamless				
Internal Diar.				
Thickness				
How are Flanges secured?				
Date of Hydraulic Test				
Test Pressure				

EVAPORATORS.

No. One. Type Vertical marine Tons per Day 20

Makers G. & J. Weir Ltd. no. 91487 (a)

Working Pressure 25 lb/□" Test Pressure Shell 50 lb/□" Coils 420 " Date of Test 14/4/29

Date of Test of Safety Valves under Steam

FEED WATER HEATERS.

No. One Type Direct - Contact. 91485 (a)

Makers G. & J. Weir Ltd.

Working Pressure 20 lb/□" Test Pressure 40 lb/□" Date of Test 14/6/29.

FEED WATER FILTERS.

No. One Type Pressure Size (a)

Makers Davie & Horne Ltd.

Working Pressure 210 lb/□" Test Pressure 525 lb/□" Date of Test 24/7/29.

(S.V. 252 lb.)

STEERING GEAR.

One 2 cyl. horizontal steam; worm, wheel, & quadrant, direct; (housed on poop.) no. 2451 by Caldwell & Co. Ltd.

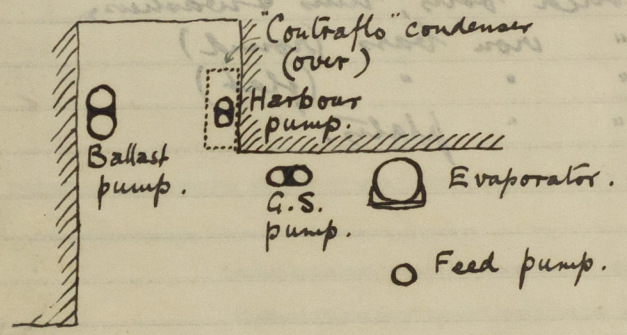
LIST OF DONKEY PUMPS.

Ballast pump; vert. dup. 9" and 11" x 12"; by Thom, Lamont & Co. Ltd. 14683

General Service pump; vert. dup. 8" & 5" x 8"; by Same Makers. 14677

Harbour pump; vert. dup. 6" & 4¼" x 6"; by Same Makers. 14671

Port side Engine Room.



SPARE GEAR.

No. of Top End Bolts.	2	No. of Bot. End Bolts.	2	No. of Cylinder Cover Studs	6
" Coupling Bolts taper / parallel	6 / 6	" Main Bearing Bolts	2	" Valve Chest "	6
" Junk Ring Bolts	6	" Feed Pump Valves	1 set.	" Bilge Pump Valves	1 set.
" H.P. Piston Rings		" I.P. Piston Rings		" L.P. Piston Rings	
" " " Springs		" " Springs		" " Springs	
" Safety Valve "	1	" Fire Bars	1/4 set	" Feed Check Valves main / aux.	2 / 2
" Piston Rods		" Connecting Rods		" Valve Spindles	
" Air Pump Rods		" Air Pump Buckets		" Air Pump Valves	
" Cir. "		" Cir. "		" Cir. "	
" Crank Shafts		" Crank Pin Bushes		" Crosshead Bushes	
" Propeller Shafts		" Propellers	One C.I.	" Propeller Blades	—
" Boiler Tubes		" Condenser Tubes	72	" Condenser Ferrules	144

OTHER ARTICLES OF SPARE GEAR:—

6 holding-down studs.
50 assorted bolts, nuts & washers.
5 " iron bars (round)
3 " " " (flat)
1/2 cwt. " " plates.

REFRIGERATORS.

No. of Machines Capacity of each

Makers

Description

None.

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

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.

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

Dynamo no.

E.1 / 15591 / 11

Single cyl. steam eng. no.

11
115588

ELECTRIC LIGHTING.

Installation Fitted by Telford, Brier, & Mackay Ltd.

No. and Description of Dynamos One 8 KW. Compound winding

Makers of Dynamos W.H. Allen, Sons & Co., Ltd.

Capacity " 73 Amperes, at 110 Volts, 330 Revols. per Min.

Current Alternating or Continuous Continuous.

Single or Double Wire System Double.

Position of Dynamos Recess above Engine Room Store.

" Main Switch Board " " " " "

No. of Circuits to which Switches are provided on Main Switch Board 6

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.
Forward	22	various	7	7/.036	1000	100%	~~600~~ Meg.
Aft	28	"	8	7/.029	1778	"	"
Midship	37	"	10	"	2222	"	"
Navigation	12	"	5	"	1111	"	"
W/T.	—			"		"	"
Engine Room.	30	"	12	"	2667	"	"

Total No. of Lights 129 No. of Motors driving Fans, &c. — No. of Heaters —

Current required for Motors and Heaters —

Positions of Auxiliary Switch Boards, with No. of Switches on each none.

Are Cut-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits Yes.

On Aux. " " each Auxiliary Circuit none.

Wherever a Cable is reduced in size Yes.

To each Lamp Circuit "

To both Flow and Return Wires of all Circuits when the Double-Wire System is adopted Yes.

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. 1/18 S.W.G., Largest, No. 1/18 S.W.G.

How are Conductors in Engine and Boiler Spaces protected? A. & L.C.

" " Saloons, State Rooms, &c., " ? L.C.

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp Macomite insulated wire in galvanized steel tube.

(2) " passing through Bunkers or Cargo Spaces " " " "

(3) " " Deck Beams or Bulkheads Tubing clipped to beams, with packed glands in W.T. bulkheads.

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 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? 600,000 Ohms.

Is the Installation supplied with a Voltmeter? Yes.

" " " an Ampere Meter "

Date of Trial of complete Installation 25/10/29 Duration of Trial 6 hours.

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

Earth lamps found to function; o.k.
Governor trials;—
Load 25 amps. Pressure 210 volts.
Main Switch, out:— 110, 123, 105.
in:— 110, 98, 105.

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 Strauracr"

as ascertained by ~~us~~ me from personal examination

J. Wood Harrington.

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

Fees—

MAIN BOILERS.		£	s.	d.
H.S.	Sq. ft.		:	:
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,

Jas Barr for *Chief Surveyor.*

Approved by the Committee for the Class of M.B.S.* on the 13th November 1929

Fees advised

Fees paid

Secretary.

Crank pin J. 389/2086, made by Vickers - Armstrong, used for repair to L.P. engine of "Baron Murray", ex. contract 908; and coupling end used ex. contract 762.
Coupling end ex. 801 to be used for 908; and new crank pin ordered for latter.

JHT.
17/5/29.