No. 2337

THE BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. 2311 No. in Register Book 3404

" "

S.S. STORA

Makers of Engines Smiths Dock Co Ld.

Works No. 370.

Makers of Main Boilers Richardsons Westgarth & Co Ld.

Works No. 5909.

Makers of Donkey Boiler

Works No.

MACHINERY.

No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. ..... No. in Register Book 10

Received at Head Office 19th March 1930

Surveyor's Report on the New Engines, Boilers, and Auxiliary Machinery of the ~~Single~~ ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw "Whale" "Clara"

Official No. 160672 Port of Registry Leith.

Registered Owners The South Georgia Co Ld.

Engines Built by Cyclops Docks & Ld.

at South Bank-on-Tees.

Main Boilers Built by Richardson Westgarth & Co Ld

at Middlesbrough.

Donkey " " —

at —

Date of Completion 9-29.

First Visit 20-6-29. Last Visit 17-9-29. Total Visits 36

RECIPROCATING ENGINES.

Works No. 370 No. of Sets 1 Description Triple expansion S.C. 3 cranks.

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

Diars. of Cylinders 16" - 26" - 44" Stroke 26"

Cubic feet in each L.P. Cylinder 23

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. " Piston

2nd I.P. "

L.P. " slide

" Valve Gear Stephenson link.

" Condenser Surface. Cooling Surface 16 25/75 sq. ft.

Diameter of Piston Rods (plain part) 4 1/2" Screwed part (bottom of thread) 3 5/32"

Material " Steel.

Diar. of Connecting Rods (smallest part) 4 1/4" Material I. Steel.

" Crosshead Gudgeons 4 3/4" Length of Bearing 11 1/8" Material "

No. of Crosshead Bolts (each) 4 Diar. over Thrd. 2 1/8" Thrds. per inch 8 Material Steel.

" Crank Pin " " 2 " 2 3/8" " 6 " "

" Main Bearings 8 1/2" Lengths 11 3/8"

" Bolts in each 2 Diar. over Thread 2 3/8" Threads per inch 6 Material Steel.

" Holding Down Bolts, each Engine 20 Diar. 1 3/8" No. of Metal Chocks 20

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? no.

If not, how are they fitted? —

Connecting Rods, Forged by Brown Bros.

Piston " " "

Crossheads, " "

Connecting Rods, Finished by Smiths Docks.

Piston " " "

Crossheads, " "

Date of Harbour Trial 13-9-29.

" Trial Trip 13-9-29.

Trials run at In Tees Bay.

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

If so, what was the I.H.P.? 1575 Revols. per min. 180

Pressure in 1st I.P. Receiver, 68 lbs., 2nd I.P., — lbs., L.P., 11 lbs., Vacuum, 26.5 ins.

Speed on Trial 12.9 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

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?

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

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.

No. of Lengths in each 1 — Angle of Cranks 120°

Diar. by Rule — Actual 8½" — In Way of Webs 8 3/8"

" of Crank Pins 8¾" — Length between Webs 12"

Greatest Width of Crank Webs 2'-0" — Thickness 5¼"

Least " " 13" — " 5¼"

Diar. of Keys in Crank Webs 1½" — Length 4"

" Dowels in Crank Pins 1" — Length 3½" — Screwed or Plain plain.

No. of Bolts each Coupling 6 — Diar. at Mid Length 2" — Diar. of Pitch Circle 12½"

Greatest Distance from Edge of Main Bearing to Crank Web 3/16"

Type of Thrust Blocks Horseshoe.

No. " Rings 6

Diar. of Thrust Shafts at bottom of Collars 8½" — No. of Collars 6

" " Forward Coupling 8½" — At Aft Coupling 8½"

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 8 3/8" — At Couplings 8½"

Are Propeller Shafts fitted with Continuous Brass Liners? yes.

Diar. over Liners 10" — Length of After Bearings 4'-0½"

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

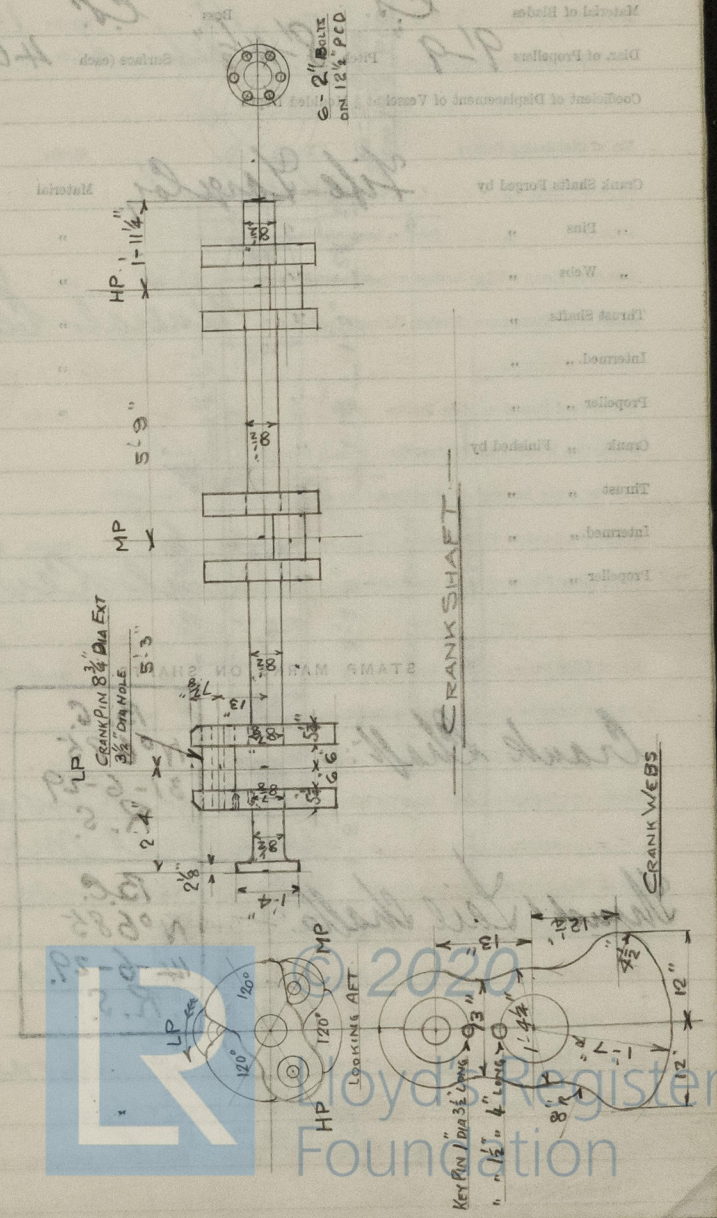
Are Means provided for lubricating the After Bearings with Oil? no

" " to prevent Sea Water entering the Stern Tubes? no.

If so, what Type is adopted? open to Sea.

STERN TUBE

SKETCH OF CRANK SHAFT.



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

Material of Blades C.S. Boss C.S.

Diar. of Propellers 9'-9" Pitch 8'-4½" Surface (each 40 S. ft.)

Coefficient of Displacement of Vessel at ⅔ Moulded Depth

Crank Shafts Forged by	Fife Forgings	Material	I.R.
,, Pins ,,	,,	,,	,,
,, Webs ,,	,,	,,	,,
Thrust Shafts ,,	,,	,,	,,
Intermed. ,, ,,		,,	
Propeller ,, ,,	,,	,,	,,
Crank ,, Finished by	,,		
Thrust ,, ,,	,,		
Intermed. ,, ,,			
Propeller ,, ,,	,,		

@

STAMP MARKS ON SHAFTS.

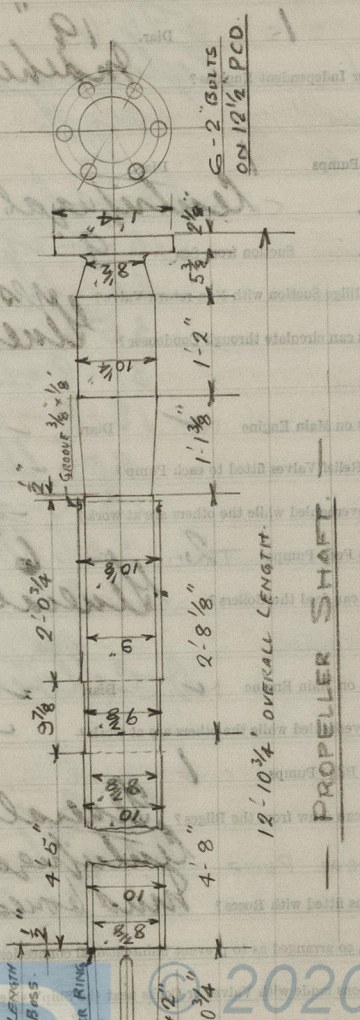
Crank Shaft:-

B.C.
N°685
31-6-29
R.S.

Thrust & Tail Shafts:-

B.C.
N°685
14-6-29.
R.S.

SKETCH OF PROPELLER SHAFT.



PUMPS, ETC.

No. of Air Pumps 1 Diar. 19" Stroke 15"

Worked by Main or Independent Engines? Independent.

No. of Circulating Pumps 1 Diar. Stroke

Type of " 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? General Service.

No. of Feed Pumps on Main Engine — 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 2 Diar. 6" Stroke 18"

What other Pumps can feed the Boilers? General Service.

No. of Bilge Pumps on Main Engine — Diar. — Stroke —

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

No. of Independent Bilge Pumps 1

What other Pumps can draw from the Bilges? General Service. & Centrifugal pump.

CENTRIFUGAL PUMP

Are all Bilge Suctions fitted with Roses? mud boxes & drop 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? Yes.

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

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

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.

BOILERS

Works No.	5909.
No. of Boilers 1 Type	Cylindrical multitubular
Single or Double-ended	single.
No. of Furnaces in each	4
Type of Furnaces	Deighton
Date when Plan approved	15-5-29.
Approved Working Pressure	200 lbs.
Hydraulic Test Pressure	350 "
Date of Hydraulic Test	31-8-29.
" when Safety Valves set	13-9-29.
Pressure at which Valves were set	206 lbs.
Date of Accumulation Test	13-9-29.
Maximum Pressure under Accumulation Test	206 lbs.
System of Draught	C.A.
Can Boilers be worked separately?	yes.
Makers of Plates	D. Colville & Sons.
" Stay Bars	"
" Rivets	R. B. & C. Ld.
" Furnaces	Deighton & Co.
Greatest Internal Diar. of Boilers	13'-0"
" " Length "	12'-4 25/32"
Square Feet of Heating Surface each Boiler	3503 ft
" " Grate " "	85 ft
No. of Safety Valves each Boiler 2	Rule Diar. Actual 3"
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

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

No. of Strakes of Shell Plating in each Boiler 1

" Plates in each Strake 3 "

Thickness of Shell Plates Approved 1½ "

" " in Boilers 1½ "

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 5/32 "

" inside " 1 9/32 "

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 1½ " Pitch 10 3/8 "

No. of Rows of Rivets in Centre Circumferential Seams ~~3~~ ✓

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 13/32 " Pitch 3 7/8 "

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

Are these Seams Hand or Machine Riveted? machine.

Diar. of Rivet Holes 1 13/32 " Pitch 3 7/8 "

Size of Manholes in Shell 16½ " × 13 "

Dimensions of Compensating Rings 2'-7½ × 2'-6 " × 27/32 "

Thickness of End Plates in Steam Space Approved 1 7/32"

" " " " " in Boilers 1 7/32"

Pitch of Steam Space Stays 20" x 16 3/4"

Diar. " " " " Approved 3" Threads per Inch 6

" " " " " in Boilers 3" " 6

Material of " " " stub.

How are Stays Secured? double-nuts.

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 " " " " 13 5/8" x 8 3/8"

Diar. of Stays Approved 2" + 1 3/4" Threads per Inch 9

" " in Boilers 2" + 1 3/4" " 9

Material " stub.

Are Stays fitted with Nuts outside? yes.

Thickness of Back End Plates at Bottom Approved 27/32"

" " " " " in Boilers 27/32"

Pitch of Stays at Wide Spaces between Fireboxes 13 5/8" x 8 3/8"

Thickness of Doublings in " " 3/4"

Thickness of Front End Plates ~~at Bottom~~ Approved 27/32"

" " " " " in Boilers 27/32"

No. of Longitudinal Stays in Spaces between Furnaces 1

Diar. of Stays Approved	2 3/4"	Threads per Inch	6
" " in Boilers	2 3/4"	"	6
Material "			stub.
Thickness of Front Tube Plates Approved	27/32"		
" " " " in Boilers	27/32		
Pitch of Stay Tubes at Spaces between Stacks of Tubes	13 5/8" × 7 3/8"		
Thickness of Doublings in " " "	7/16" + 3/8"		
" Stay Tubes at " " "			
Are Stay Tubes fitted with Nuts at Front End	yes.		
Thickness of Back Tube Plates Approved	3/4"		
" " " in Boilers	3/4"		
Pitch of Stay Tubes in Back Tube Plates	~~Fa~~ " × 11 1/4" × 7 3/8"		
" Plain "	3 3/4" × 3 11/16"		
Thickness of Stay Tubes	7/16" 3/8" + 5/16"		
" Plain "	8 W.G.		
External Diar. of Tubes	2 1/2"		
Material "	Iron.		
Thickness of Furnace Plates Approved	5/8"		
" " " in Boilers	5/8"		
Smallest outside Diar. of Furnaces	3'-7 3/4"		
Length between Tube Plates	8'-7 1/4"		
Width of Combustion Chambers (Front to Back)	2'-10 7/32"		
Thickness of " " Tops Approved	7/16"		
" " " in Boilers	11/16"		
Pitch of Screwed Stays in C.C. Tops	8" × 9 3/4"		

Diar. of Screwed Stays Approved 1 3/4" Threads per Inch 9

" " " in Boilers 1 3/4" " 9

Material " " stub.

Thickness of Combustion Chamber Sides Approved 11/16"

" " " " in Boilers 11/16"

Pitch of Screwed Stays in C.C. Sides 8" x 9 3/4"

Diar. " " Approved 1 3/4" Threads per Inch 9

" " " in Boilers 1 3/4" " 9

Material " " stub.

Thickness of Combustion Chamber Backs Approved 5/8"

" " " " in Boilers 5/8"

Pitch of Screwed Stays in C.C. Backs 8 3/8" x 7 1/2"

Diar. " " Approved 2", 1 3/4", 1 5/8" Threads per Inch 9

" " " in Boilers 2", 1 3/4", 1 5/8" " 9

Material " " stub.

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

Thickness of Combustion Chamber Bottoms 3/8"

No. of Girders over each Wing Chamber 4

" " " Centre " 2

Depth and Thickness of Girders 9 1/4" x 1 3/4"

Material of Girders stub.

No. of Stays in each 3

No. of Tubes, each Boiler 510

Size of Lower Manholes 16" x 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

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.

No. of Lengths	2	1		
Material	copper.	copper.		
Brazed, Welded or Seamless	S.D.	S.D.		
Internal Diar.	5"	5"		
Thickness	3 W.G.	3 W.G.		
How are Flanges secured ?	brazed.	brazed.		
Date of Hydraulic Test	9-9-29	11-9-29		
Test Pressure	400 lbs.	400 lbs.		
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. ✓ Type Tons per Day

Makers

Working Pressure Test Pressure Date of Test

Date of Test of Safety Valves under Steam

FEED WATER HEATERS.

No. 1 Type Exhaust Steam Surface Heater.

Makers Holden & Brook.

Working Pressure 200 lbs. Test Pressure 400 lbs. Date of Test

FEED WATER FILTERS.

No. 1 Type Gravitation Size

Makers Smith's Dk Co Ld.

Working Pressure Test Pressure Date of Test

LIST OF DONKEY PUMPS.

1. Independent-Monotype air pump.
2 " Feed pumps.
1 " Centrifugal pump.
1 General service pump (Duplex)
1 Bilge pump. (Duplex).

SPARE GEAR.

No of Top End Bolts.	2	No. of Bot. End Bolts.	2	No. of Cylinder Cover Studs	
„ Coupling Bolts	6	„ Main Bearing Bolts	2	„ Valve Chest „	
„ Junk Ring Bolts	6	„ Feed Pump Valves	1 set.	„ Bilge Pump Valves	1 set.
„ H.P. Piston Rings	1	„ I.P. Piston Rings		„ L.P. Piston Rings	
„ „ Springs	1	„ „ Springs		„ „ Springs	
„ Safety Valve „	1	„ Fire Bars	½ set.	„ Feed Check Valves	2
„ 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	1	„ Propellers	1	„ Propeller Blades	
„ Boiler Tubes	8	„ Condenser Tubes	12	„ Condenser Ferrules	30

OTHER ARTICLES OF SPARE GEAR:—

24 BOLTS & NUTS ASSORTED. 12 GAUGE GLASSES.
2 DOZ DEWRANCE'S HEX PLUGS FOR " "
6 COMP CHAMBER STAYS & NUTS. 4 DIAMOND BLOWER TUBES
1 SET PUMP VALVES FOR GENERAL SERVICE PUMP.
2 MANHOLE DOOR JOINTS. 12 DIAPHRAMS FOR REDUCING VALVE
1 SET METALLIC PACKING SEGMENTS FOR PISTON ROD & SLIDE ROD.
1 SPARE ORDINARY GLAND FOR PISTON ROD
1 " " " " VALVE "
1 SET AIR DISTRIBUTING VALVES FOR FURNACE FRONTS
1 SET MICA PLATES " " "
1 WOODEN FIRE BAR PATTERN.
2 SETS EBONITE RINGS FOR WIERS FEED PUMPS

SPARE GEAR FOR FAN ENG.
1 SET MAIN BEARINGS WITH BOLTS & NUTS.
1 " CON. ROD TOP & BOTT END BUCHES WITH BOLTS & NUTS.
1 ECCENTRIC SHEAVE & STAP COMPLETE.
1 PISTON ROD.
1 SLIDE ROD.
2 SETS OF PISTON RINGS.
1 PISTON.

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

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:—

ELECTRIC LIGHTING.

Installation Fitted by R. Pickersgill Sons.

No. and Description of Dynamos 1 compound wound.

Makers of Dynamos Sunderland Forge Eng Co Ld.

Capacity " 41 Amperes, at 110 Volts, 350 Revols. per Min.

Current Alternating or Continuous Continuous

Single or Double Wire System double.

Position of Dynamos Engine Room platform. Starbd.

" 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.
Navigation	12	380 watt	3.8	7/22	110 volts	12	5.3870 Meg.
Amidship Accommodation	17	240 "	2.4	"	110 "	12	" "
Engine Room	17	240 "	2.4	"	110	12	" "
Aft. Accom:	6	180	1.8	3/20	110	8	8.1800 "

Total No. of Lights 52 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

Engine Room 5 Switches
Aft Accomodation 4 "
Midship " 3 "
Navigation 6 "
Forward 3 "

Are Cut-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 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/.044 S.W.G., Largest, No. 7/.029 S.W.G.

How are Conductors in Engine and Boiler Spaces protected? Lead covered / Armoured.

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

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp Lead covered / Armoured.

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

(3) " " Deck Beams or Bulkheads " "

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables is unimpaired? yes.

Are all Joints in accessible positions, none being made in Bunkers or Cargo Spaces? yes.

Are all Hull Connections for Single-Wire Systems made with Screws of large Surface? ~~yes~~. —

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? 4. 5 Megohms. Ohms.

Is the Installation supplied with a Voltmeter? yes.

" " " an Ampere Meter yes.

Date of Trial of complete Installation 17-9-29 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. "STORA" as ascertained by me from personal examination

J. D. Gilchrison

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

Fees—

			£	s.	d.
MAIN BOILERS.					
H.S.	3503	Sq. ft.		:	:
G.S.	85	"		:	:
DONKEY BOILERS.					
H.S.	—	Sq. ft.		:	:
G.S.	—	"		:	:
		£		:	:
ENGINES.					
L.P.C.	23	Cub. ft.		:	:
		£		:	:
Testing, &c.				:	:
		£		:	:
Expenses				:	:
		Total ... £		:	:

It is submitted that this Report be approved,

Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the 2nd April 1930.

Fees advised

Fees paid

Secretary.