

No. 1917

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 1743 No. in Register Book 5030

S.S.

"BRORA"

Makers of Engines AILSA SHIPBUILDING CO LTD

Works No. 120

Makers of Main Boilers DUNSMUIR & JACKSON L^{TD}

Works No. B.147

Makers of Donkey Boiler MESSRS COCHRAN & CO (ANNAN) L^{TD}

Works No. 9148

MACHINERY.



© 2020

Lloyd's Register
Foundation

002435-002441-0089

No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 1743 No. in Register Book 3030

Received at Head Office 12th May 1924

Surveyor's Report on the **Peto Engines, Boilers, and Auxiliary Machinery of the ~~Single Triple~~ ^{Single Triple} Screw "BRORA"**

Official No. 147895. Port of Registry GLASGOW.

Registered Owners WILLIAM SLOAN & CO LTD.

Engines Built by AILSA SHIPBUILDING CO LTD

at TROON, Ayrshire

Main Boilers Built by DUNSMUIR & JACKSON, L^{rs}

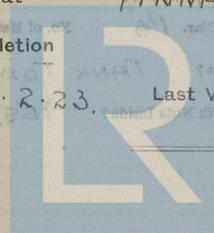
at GOVAN, GLASGOW

Donkey " " COCHRAN & CO (ANNAN) LTD

at ANNAN

Date of Completion

First Visit 16.2.23. Last Visit 29.4.24. Total Visits 47



© 2020

Lloyd's Register
Foundation

RECIPROCATING ENGINES.

Works No. 120 No. of Sets ONE Description TRIPLE EXPANSION,
SURFACE CONDENSING, DIRECT ACTING, INVERTED,
SINGLE SCREW.

No. of Cylinders each Engine THREE No. of Cranks THREE

Diams. of Cylinders 18 28 $\frac{3}{4}$ 50 Stroke 42"

Cubic feet in each L.P. Cylinder 47.7

Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr.? YES

" " " each Receiver? YES

Type of H.P. Valves, DOUBLE PORT BALANCED A & C TYPE

" 1st I.P. " " " " " " " " " " " "

" 2nd I.P. " " " " " " " " " " " "

" L.P. " " " " " " " " " " " "

" Valve Gear STEPHENSON LINK MOTION.

" Condenser MORRISON CONTRAFLO Cooling Surface 1450 sq. ft.

Diameter of Piston Rods (plain part) 5 $\frac{3}{4}$ " Screwed part (bottom of thread) 4"

Material " STEEL

Diam. of Connecting Rods (smallest part) 5 $\frac{1}{2}$ " Material IRON

" Crosshead Gudgeons 5" Length of Bearing 5" Material STEEL

No. of Crosshead Bolts (each) 4 Diam. over Thrd. 2 $\frac{1}{8}$ " Thrds. per inch 7 Material STEEL

" Crank Pin " " 2 " 2 $\frac{3}{4}$ " " 4 " " " "

" Main Bearings 6 Lengths 15"

" Bolts in each 2 Diam. over Thread 2 $\frac{1}{4}$ " Threads per inch 4 Material "

" Holding Down Bolts, each Engine 88 Diam. 1 $\frac{1}{8}$ " No. of Metal Chocks 88

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 KERR & SONS IRVINE,

Piston " " LANARKSHIRE STEEL CO

Crossheads, DENNYSTOWN FORGE CO.

Connecting Rods, Finished by AILSO SHIPBUILDING CO LTD

Piston " " " " " " " " " " " "

Crossheads, " " " " " " " " " " " "

Date of Harbour Trial 25. 4. 24.

" Trial Trip 29. 4. 24

Trials run at FIRTH OF CLYDE

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

If so, what was the I.H.P.?

1364.

Pressure in 1st I.P. Receiver, 68 lbs., 2nd I.P.,

lbs., L.P., 13.5 lbs., Vacuum, 26 $\frac{1}{2}$ ins.

Speed on Trial 12.3 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.

1200

Revs. per min. 80

Estimated Speed

12 KNOTS.

DOUBLE RUN CUMBRAE LIGHT TO PLADDA 36 KNOTS
AVERAGE SPEED 12 KNOTS



© 2020

Lloyd's Register
Foundation

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? _____
 Dia. of 1st Reduction Pinion _____ } Width _____ Pitch of Teeth _____
 " 1st " Wheel _____ }
 Estimated Pressure per lineal inch _____
 Dia. 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 _____

TURBO-ELECTRIC PROPELLING MACHINERY. DESCRIPTION OF INSTALLATION.

No. of Turbo-Generating Sets _____ Capacity of each _____
 Type of Turbines employed _____
 Description of Generators _____
 No. of Motors driving Propeller Shafts _____
 Are the Propeller Shafts driven direct by the Motors or through Gearing? _____
 Is Single or Double Reduction Gear employed? _____
 Description of Motors _____
 Dia. of 1st Reduction Pinion _____
 " " Wheel _____
 Estimated Pressure per lineal inch _____
 Dia. of 2nd Reduction Pinion _____
 " " Wheel _____
 Estimated Pressure per lineal inch _____
 Revols. per min. of Generators at Full Power _____
 " " Motors _____
 " " 1st Reduction Shaft _____
 " " Propellers at Full Power _____
 Date of Harbour Trial _____
 " Trial Trip _____
 Speed on Trial _____ Knots. Propeller Revols. per min. _____ S.H.P. _____



© 2020

Lloyd's Register Foundation

SHAFTING.

Are the Crank Shafts Built or Solid? **BUILT**

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

Diar. by Rule **10.09** Actual **11"** In Way of Webs **11 1/4"**

" of Crank Pins **11"** Length between Webs **1'-3"**

Greatest Width of Crank Webs **1-8 1/2"** Thickness **7"**

Least " " **-**

Diar. of Keys in Crank Webs **2"** Length **4 3/4"**

" Dowels in Crank Pins **1 1/2"** Length **3 1/2"** Screwed or Plain **PLAIN**

No. of Bolts each Coupling **6** Diar. at Mid Length **2 5/8"** Diar. of Pitch Circle **17 1/4"**

Greatest Distance from Edge of Main Bearing to Crank Web **3 1/8"**

Type of Thrust Blocks **MICHELL**

No. " Rings **2**

Diar. of Thrust Shafts at bottom of Collars **11"** No. of Collars **ONE**

" " Forward Coupling **1'-9 3/4"** At Aft Coupling **1'-9 3/4"**

Diar. of Intermediate Shafting by Rule **9.58** Actual **10.25** No. of Lengths **THREE**

No. of Bolts, each Coupling **6** Diar. at Mid Length **2 5/8"** Diar. of Pitch Circle **17 1/4"**

Diar. of Propeller Shafts by Rule **10.39** Actual **11 1/2"** At Couplings **11 3/8"**

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

Diar. over Liners **1'-1", 1'-8 3/16", 1'-1 1/8"** Length of After Bearings **5'-0"**

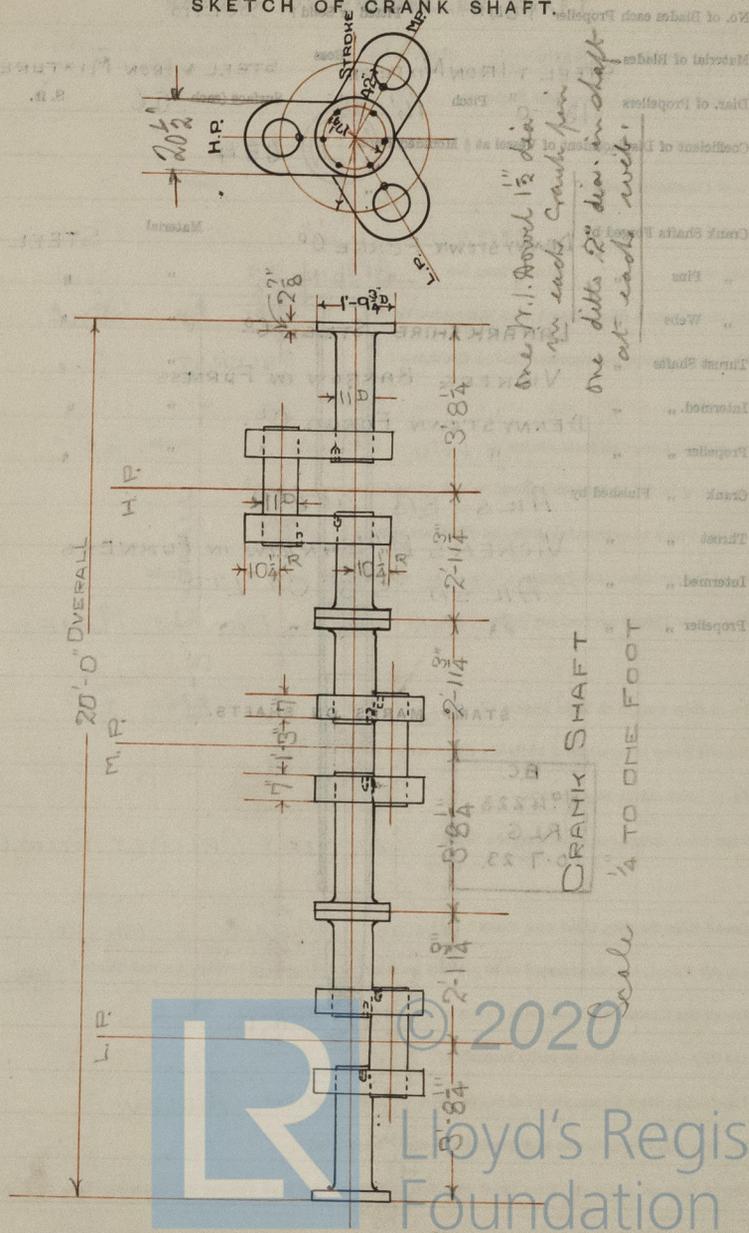
Of what Material are the After Bearings composed? **LIGNUM VITAE**

Are Means provided for lubricating the After Bearings with Oil? **NO**

" " to prevent Sea Water entering the Stern Tubes? **NO**

If so, what Type is adopted?

SKETCH OF CRANK SHAFT.



Thickness of End Plates in Steam Space Approved	$\frac{3}{16}$ "
" " " " " in Boilers	"
Pitch of Steam Space Stays	1'-7 $\frac{1}{4}$ " x 1'-6 $\frac{3}{4}$ "
Diar. " " " " Approved	2 $\frac{7}{8}$ "
Threads per Inch	6
" " " " " in Boilers	"
Material of " " "	STEEL
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	$\frac{29}{32}$ "
" " " " " in Boilers	"
Thickness of Doublings in Wide Spaces between Fireboxes	✓
Pitch of Stays at " " " "	8 $\frac{1}{2}$ "
Diar. of Stays Approved	1 $\frac{3}{4}$ "
Threads per Inch	9
" " in Boilers	"
Material "	STEEL
Are Stays fitted with Nuts outside?	YES
Thickness of Back End Plates at Bottom Approved	$\frac{29}{32}$ "
" " " " " in Boilers	$\frac{15}{16}$ "
Pitch of Stays at Wide Spaces between Fireboxes	8 $\frac{1}{2}$ "
Thickness of Doublings in " "	✓
Thickness of Front End Plates at Bottom Approved	1 $\frac{1}{2}$ "
" " " " " in Boilers	"
No. of Longitudinal Stays in Spaces between Furnaces	3

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	



© 2020

Lloyd's Register
Foundation

Diar. of Stays Approved	$2\frac{1}{4}"$	Threads per Inch	8
" " in Boilers	"	"	"
Material			STEEL
Thickness of Front Tube Plates Approved			$1\frac{1}{32}"$
" " " " in Boilers			"
Pitch of Stay Tubes at Spaces between Stacks of Tubes			$9\frac{1}{4}"$
Thickness of Doublings in " " "			"
" Stay Tubes at " " "			$\frac{7}{16}"$ & $\frac{3}{8}"$
Are Stay Tubes fitted with Nuts at Front End?			MARGINAL NUTS
Thickness of Back Tube Plates Approved			$\frac{27}{32}"$
" " " in Boilers			"
Pitch of Stay Tubes in Back Tube Plates			$9\frac{1}{4}"$ & $13\frac{7}{8}"$
" Plain "			$4\frac{5}{8}"$
Thickness of Stay Tubes			$40 @ \frac{7}{16}"$, $47 @ \frac{3}{8}"$, $22 @ \frac{5}{16}"$
" Plain "			8 L.S.G. ($\frac{5}{32}"$ F)
External Diar. of Tubes			$3\frac{1}{2}"$
Material			IRON
Thickness of Furnace Plates Approved			$\frac{9}{16}"$
" " " in Boilers			"
Smallest outside Diar. of Furnaces			$3'-7\frac{1}{8}"$
Length between Tube Plates			$7'-7"$
Width of Combustion Chambers (Front to Back)			$3'-0"$ (MEAN)
Thickness of " " Tops Approved			$\frac{41}{64}"$
" " " in Boilers			"
Pitch of Screwed Stays in C.C. Tops			$8\frac{1}{2}"$ & $8\frac{1}{2}"$

Diar. of Screwed Stays Approved	$2\frac{1}{4}"$	Threads per Inch	8
" " in Boilers	"	"	"
Material			STEEL
Thickness of Combustion Chamber Plates Approved			$1\frac{1}{32}"$
" " " " in Boilers			"
Pitch of Screwed Stays in C.C. Tops			$9\frac{1}{4}"$
Thickness of Doublings in " " "			"
" Stay Tubes at " " "			$\frac{7}{16}"$ & $\frac{3}{8}"$
Are Stay Tubes fitted with Nuts at Front End?			MARGINAL NUTS
Thickness of Back Tube Plates Approved			$\frac{27}{32}"$
" " " in Boilers			"
Pitch of Stay Tubes in Back Tube Plates			$9\frac{1}{4}"$ & $13\frac{7}{8}"$
" Plain "			$4\frac{5}{8}"$
Thickness of Stay Tubes			$40 @ \frac{7}{16}"$, $47 @ \frac{3}{8}"$, $22 @ \frac{5}{16}"$
" Plain "			8 L.S.G. ($\frac{5}{32}"$ F)
External Diar. of Tubes			$3\frac{1}{2}"$
Material			IRON
Thickness of Furnace Plates Approved			$\frac{9}{16}"$
" " " in Boilers			"
Smallest outside Diar. of Furnaces			$3'-7\frac{1}{8}"$
Length between Tube Plates			$7'-7"$
Width of Combustion Chambers (Front to Back)			$3'-0"$ (MEAN)
Thickness of " " Tops Approved			$\frac{41}{64}"$
" " " in Boilers			"
Pitch of Screwed Stays in C.C. Tops			$8\frac{1}{2}"$ & $8\frac{1}{2}"$



© 2020

Lloyd's Register
Foundation

Diar. of Screwed Stays Approved	$1\frac{3}{4}$ "	Threads per Inch	9
" " " in Boilers	"	"	"
Material " "		STEEL	
Thickness of Combustion Chamber Sides Approved			$\frac{41}{64}$ $\frac{5}{8}$ "
" " " " in Boilers			"
Pitch of Screwed Stays in C.C. Sides			$8\frac{1}{2}$ "
Diar. " " Approved	$1\frac{3}{4}$ "	Threads per Inch	9
" " " in Boilers	"	"	"
Material " "		STEEL	
Thickness of Combustion Chamber Backs Approved			$\frac{41}{64}$ $\frac{5}{8}$ "
" " " " in Boilers			"
Pitch of Screwed Stays in C.O. Backs			9"
Diar. " " Approved	$2\frac{1}{4}$ & 2"	Threads per Inch	9
" " " in Boilers	"	"	"
Material " "		STEEL	
Are all Screwed Stays fitted with Nuts inside C.O.?		YES	
Thickness of Combustion Chamber Bottoms			$\frac{13}{16}$ "
No. of Girders over each Wing Chamber			4
" " " Centre "			4
Depth and Thickness of Girders			9" x 2 - $\frac{7}{8}$ " PLATES
Material of Girders			IRON
No. of Stays in each			3
No. of Tubes, each Boiler	170 RAIN, 73 STAY,	243 TOTAL	
Size of Lower Manholes			16" x 12"

VERTICAL DONKEY BOILERS

No. of Boilers ONE
 Gross H.P. 7-0
 Height of Boiler from base fire grate 12-11"
 Air boiler Crown Plate or Diaphragm DISKED
 Internal Diameter of Jacketed Boilers 3-0"
 Description of seams in boiler Crown 2 1/2" LAP SINGLE RIVETS
 Diameter of Rivet Holes 3/16"
 Height of Rivet Crown above fire grate 2-10"
 Air boiler Crown Plate or Diaphragm DISKED
 External Diameter of Jacketed Boilers 3-0"
 No. of Crown Plates 1
 Internal Diameter of Jacketed Boilers 2-0"
 No. of Water Tubes 173
 Diameter of Water Tubes 2 1/2"
 Material of Water Tubes LAP WELDED IRON
 Size of Manhole in Shell 16" x 12"
 Thickness of Combustion Chamber 2 1/4" x 2" THICK
 Jacketed Surface each Boiler 26-72 sq ft

SUPERHEATERS



© 2020

Lloyd's Register
Foundation

VERTICAL DONKEY BOILERS.

No. of Boilers ONE Type COCHRAN VERTICAL MULTITUBULAR
 Greatest Int. Diar. 7'-0" Height 15'-0" OVERALL
 Height of Boiler Crown above Fire Grate 12'-11"
 Are Boiler Crowns Flat or Dished? DISHED
 Internal Radius of Dished Ends 3'-6" Thickness of Plates 7/8"
 Description of Seams in Boiler Crowns 2 5/8" LAP SINGLE RIVETED 2/8" PITCH 13/16" RIVETS
 Diar. of Rivet Holes 27/32" Pitch 2/8" Width of Overlap 2 5/8"
 Height of Firebox Crowns above Fire Grate 2'-10 1/4"
 Are Firebox Crowns Flat or Dished? DISHED
 External Radius of Dished Crowns 3'-0" Thickness of Plates 17/32"
 No. of Crown Stays — Diar. — Material —
 External Diar. of Firebox at Top — Bottom 5'-0" Thickness of Plates 17/32"
 No. of ^{SMOKE} Water Tubes 173 Ext. Diar. 2 1/2" Thickness 9 LSG & 11/32"
 Material of ^{SMOKE} Water Tubes LAP WELDED IRON.
 Size of Manhole in Shell 16" x 12"
 Dimensions of Compensating Ring 2'-4" DIA x 1/16" THICK.
 Heating Surface, each Boiler 600 SQ FT. Grate Surface 26.75 ϕ

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



© 2020

Lloyd's Register
Foundation

MAIN STEAM PIPES.

No. of Lengths	3		
Material	COPPER		
Brazed, Welded or Seamless	SEAMLESS		
Internal Diar.	4 1/4		
Thickness	7WG.		
How are Flanges secured?	BRAZED		
Date of Hydraulic Test	15-4-24.		
Test Pressure	360/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			



© 2020

Lloyd's Register
Foundation

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. ONE	Type	CONTRA FLOW.	VB148
Makers	CONTRAFLO CONDENSER & KINETIC CO LTD LONDON.		
Working Pressure	180	Test Pressure	450 lbs
		Date of Test	

FEED WATER FILTERS.

No. ONE	Type	SUCTION	Size	VB196.
Makers	CONTRAFLO CONDENSER & KINETIC CO LTD			
Working Pressure	ATMOS.	Test Pressure	ATMOS.	Date of Test
				29-4-24.

LIST OF DONKEY PUMPS.

No 12282

GENERAL SERVICE PUMP T. LAMONT & CO CYL 6" PUMP 1/2" STROKE 6"
SUCTIONS BILGE MAIN, CONDENSER, DIRECT BILGE, TANKS, SEA, HOTWELL & FILTER.
DELIVERY HOSE, DECK, OVERBOARD SEA TANKS, BOILERS.

No 12280

BALLAST PUMP T LAMONT & CO CYL 9" PUMP 10" STROKE 10"
SUCTIONS BILGES SEA TANKS
DELIVERY OVERBOARD, JET CONDENSER, CONDENSER, TANKS.

No 12284

DONKEY PUMP T LAMONT & CO CYL 4 1/2" PUMP 3" STROKE 6"
SUCTIONS SEA TANKS HOTWELL
DELIVERY DONKEY BOILER MAIN FEED



© 2020

Lloyd's Register
Foundation

SPARE GEAR.

No. of Top End Bolts.	2	No. of Bot. End Bolts.	2	No. of Cylinder Cover Studs	} 18
" Coupling Bolts	6	" Main Bearing Bolts	2	" Valve Chest "	
" Junk Ring Bolts	12	" Feed Pump Valves	-	" Bilge Pump Valves	
" H.P. Piston Rings	-	" I.P. Piston Rings	-	" L.P. Piston Rings	
" Springs	-	" Springs	-	" Springs	
" Safety Valve "	4	" Fire Bars	1 SET	" Feed Check Valves	2 ALX. 2 MAIN. 1 DB.
" 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	1 SET	" Crosshead Bushes	1 SET
" Propeller Shafts	107	" Propellers	-	" Propeller Blades	-
" Boiler Tubes	18	" Condenser Tubes	24	" Condenser Ferrules	6

OTHER ARTICLES OF SPARE GEAR:-

- 12 PINS FOR VALVE FACE.
- 1 PAIR TOP END BUSHES
- 1 " BOT "
- 2 BOLTS & NUTS HP, MP, & LP ECC STRAPS
- 1 RUBBER RING FOR SHIP
- 2 BILGE VALVES
- 1 SPRING EACH SIZE

REFRIGERATORS



© 2020

Lloyd's Register
Foundation

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.
Makers of Engines				
No. of Cranks				
Character of Alternating or Continuous				
Kind of Double Wire System				
Position of Engines				
Main Switch Board				
No. of Circuits to which switches are provided on Main System Board				
Particulars of Class Engines—				
Class	Temp. at Start	Temp. at End	Time	Rise of Temp.
FORWARD ROOM	21	16	7/02 1427	100%
BRIDGE	15	16	7/02 930	
MAIN DECK	12	16	7/02 837	
WATER	16	17	7/02 1000	
ENGINE ROOM	24	16	7/02 1700	
FORWARD	9	16	7/02 640	
HELDS	51	16	7/02 1106	
NAVIGATION	12	16	7/02 1070	

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



© 2020

Lloyd's Register
Foundation

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.

Have Tests been made to prove that this condition has been satisfactorily fulfilled?

Has the Installation Resistance over the whole system been tested?

What does the Resistance amount to?

Is the Installation supplied with a Voltmeter?

At what Rate?

Date of Trial of complete Installation

Have all the requirements of Section 43 been satisfactorily carried out?

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. "BRORA"

as ascertained by me from personal examination

Robert Craig
 Robert Craig
 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.O.	Cub. ft.	:	:	
		£	:	:
Testing, &c. ...		:	:	
		£	:	:
Expenses ...		:	:	
Total ...		£	:	:

It is submitted that this Report be approved.

Joe Barr for Chief Surveyor.
 Approved by the Committee for the Class of M.B.S.* on the 14th May 1924

Fees advised
 Fees paid



© 2020
 Lloyd's Register
 Foundation
 Secretary.

Donald ...

GENERAL CONSTRUCTION

MAN'S BOILER	
H.S.	2d. H.
G.S.	"
GOKNEY BOILER	
H.S.	2d. H.
G.S.	"
ENGINES	
L.P.O.	Cap. H.
Expenses	
Total	

It is submitted that this Report be approved.

Approved by the Committee for the Class of M.B.E. on the
 1904

Res paid
 Res advised
 1904



© 2020

Lloyd's Register Foundation



© 2020

Lloyd's Register
Foundation



© 2020

Lloyd's Register
Foundation



© 2020

Lloyd's Register
Foundation