

REPORT ON STEAM TURBINE MACHINERY. No. 59888

Date of writing Report *13/6/38* When handed in at Local Office *13/6/38* Port of *Glasgow*
 No. in Survey held at *Glasgow* Date, First Survey *2.12.37* Last Survey *1st June 1938*
 Reg. Book. *S/S "SCIENTIST"* (Number of Visits *19*) Tons { Gross *6199* Net *3794* }
 on the
 Built at *Port Glasgow* By whom built *Lithgows Ltd* Yard No. *911* When built
 Engines made at *Glasgow* By whom made *Barclay, Currie & Co Ltd* Engine No. *BW59* When made
 Boilers made at By whom made Boiler No. When made
 Shaft Horse Power at Full Power *1512* Owners *THE CHARANTE S.S. Co (J. & J. Harrison)* Port belonging to *Liverpool*
 Nom. Horse Power as per Rule *252* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*
 Trade for which Vessel is intended

TEAM TURBINE ENGINES, &c.—Description of Engines *One L.P. Turbine with Double Reduction Gear & Hydraulic Coupling*

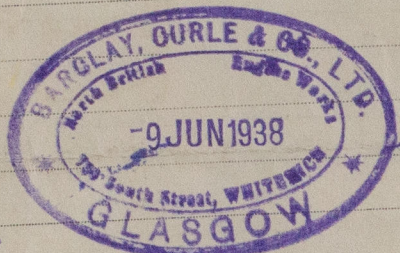
No. of Turbines *one* *Direct coupled, single reduction geared* to *one* propelling shafts. No. of primary pinions to each set of reduction gearing *one*
 direct coupled to { *Alternating Current Generator* ✓ phase *periods per second* } rated ✓ *Kilowatts* ✓ *Volts* at ✓ *revolutions per minute*;
 for supplying power for driving *Propelling Motors, Type* ✓
 rated ✓ *Kilowatts* ✓ *Volts* at ✓ *revolutions per minute*. Direct coupled, single or double reduction geared to ✓ *propelling shafts*.

	H.P.			I.P.			L.P.			ASTERN.		
URBINE LADING.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION							94mm	1138mm	1			
2ND							115	1180	1			
3RD							136	1222	1			
4TH							154	1264	1			
5TH							179	1308	1			
6TH							204	1364	1			
7TH							235	1420	1			
8TH												
9TH												
0TH												
1TH												
2TH												

Shaft Horse Power at each turbine { H.P. ✓ I.P. ✓ L.P. *1512* } *Revolutions per minute, at full power, of each Turbine Shaft* { H.P. ✓ I.P. ✓ L.P. *2640* }
 Rotor Shaft diameter at journals { H.P. ✓ I.P. ✓ L.P. *170mm* } *Pitch Circle Diameter* { 1st pinion *11.1407"* 1st reduction wheel *68.7722"* 2nd pinion *18.2927"* main wheel *91.6992"* } *Width of Face* { 1st reduction wheel *310mm* main wheel *680mm* }
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion *330mm* 2nd pinion *487mm* } *main wheel* *590mm* }
 Transmission Flexible Pinion Shaft, diameter { 1st *130mm* 2nd ✓ } *Pinion Shafts, diameter at bearings* { External 1st *170mm* 2nd *420mm* } *diameter at bottom of pinion teeth* { 1st *10.5641"* 2nd *14.5163"* }
 Wheel Shafts, diameter at bearings { 1st *300mm* main *550mm* } *diameter at wheel shroud* { 1st *1650mm* main *2218mm* } *Generator Shaft, diameter at bearings* *Propelling Motor Shaft, diameter at bearings*
 Intermediate Shafts, diameter { as per rule as fitted } *Thrust Shaft, diameter at collars* *425mm* *Tube Shaft, diameter* { as per rule as fitted }
 Screw Shaft, diameter { as per rule as fitted } *Is the { tube screw } shaft fitted with a continuous liner* { *Bronze Liners, thickness in way of bushes* as per rule as fitted }
 Thickness between bushes { as per rule as fitted } *Is the after end of the liner made watertight in the propeller boss* *If the liner is in more than one length are the junctions*
made by fusion through the whole thickness of the liner *If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a*
plastic material insoluble in water and non-corrosive *If two liners are fitted, is the shaft lapped or protected between the liners* *Is an approved Oil Gland*
or other appliance fitted at the after end of the tube shaft *Length of Bearing in Stern Bush* *next to and supporting propeller*
 Propeller, diameter Pitch No. of Blades State whether Moveable Total Developed Surface square feet.
 If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Can the H.P. or L.P. Turbine exhaust direct to the
 Condenser No. of Turbines fitted with astern wheels Feed Pumps { No. and size How driven }

Pumps connected to the Main Bilge Line { No. and size How driven }
 Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size
 Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 Pumps, No. and size:—In Engine and Boiler Room
 in Holds, &c.
 Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room
 Bilges, No. and size Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges
 Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Overboard Discharges above or below the deep water line
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate
 That pipes pass through the bunkers How are they protected
 That pipes pass through the deep tanks Have they been tested as per rule
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
 Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one
 compartment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) ☒ Total Heating Surface of Boilers ☒ Working Pressure ☒
 Is Forced Draft fitted ☒ No. and Description of Boilers ☒
 Is a Report on Main Boilers now forwarded? ☒ If so, is a report now forwarded? ☒
 Is a Donkey (an Auxiliary) Boiler fitted? ☒ Main Boilers ☒ Auxiliary Boilers ☒ Donkey Boilers ☒
 Plans. Are approved plans forwarded herewith for Shafting (If not state date of approval) ☒ Oil Fuel Burning Arrangements ☒
 Superheaters ☒ General Pumping Arrangements ☒
 Spare Gear. State the articles supplied:— *As per attached list*



FOR BARGLEY, CURLE & CO., LTD.

Alexander Macneil
 Chief Draughtsman

The foregoing is a correct description,

1937. Dec 2. 1938. Jan 14. Feb 9. 22. Mar 22. Apr 1. 7. 15.
 May 2. 5. 11. 14. 16. 18. 25. 30 June 1.

Dates of Examination of principal parts—Casings 14-5-38 Rotors 11-5-38 Blading 16-5-38 Gearing 16-5-38
 Wheel shaft 15-4-38 Thrust shaft 4-4-38 Intermediate shafts ☒ Tube shaft ☒ Screw shaft ☒
 Propeller ☒ Stern tube ☒ Engine and boiler seatings ☒ Engine holding down bolts ☒
 Completion of pumping arrangements ☒ Boilers fixed ☒ Engines tried under steam ☒
 Main boiler safety valves adjusted ☒ Thickness of adjusting washers ☒
 Rotor shaft, Material and tensile strength *Siemens Martin Ingt Steel 37.4 tons (min)* Identification Mark *LLOYDS 23 GA*
 Pinion shaft, Material and tensile strength *Siemens Martin Ingt Steel 44.0 tons (min)* Identification Mark *LLOYDS 22 GA*
 Pinion shaft, Material and tensile strength *Siemens Martin Ingt Steel 43.0 tons* Identification Mark *LLOYDS 21 GA*
 1st Reduction Wheel Shaft, Material and tensile strength *S.M. Ingt Steel 31.1 tons* Identification Mark *LLOYDS 16 GA*
 Wheel shaft, Material *S.M. Ingt Steel* Identification Mark *LLOYDS 28 GA* Thrust shaft, Material *S.M. Ingt Steel* Identification Mark *LLOYDS 17 GA*
 Intermediate shafts, Material *S.M. Ingt Steel* Identification Marks *LLOYDS 8 GA* Tube shaft, Material ☒ Identification Marks ☒
 Screw shaft, Material ☒ Identification Marks ☒ Steam Pipes, Material ☒ Test pressure ☒
 Date of test ☒ Is an installation fitted for burning oil fuel ☒
 Is the flash point of the oil to be used over 150°F. ☒ Have the requirements of the Rules for carrying and burning oil fuel been complied with ☒
 Is this machinery a duplicate of a previous case ☒ If so, state name of vessel ☒

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been built under Special Survey and in accordance with the Rules. The materials and workmanship are good. It will be fitted on board Messrs Lloyds Yard No 911, at Glasgow in conjunction with Messrs D. Rowan & Co. No 1023.*

GLASGOW 20-8-38. The LP turbine with its gearing and clutch has been satisfactory fitted on board the vessel see Gls Rpt. No 60115.

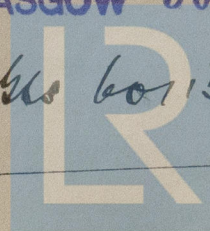
The amount of Entry Fee ... £ : :
 Special ... £ 25 : 4 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 14 JUN 1938
 When received, 4. 8. 1938

Glennison
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 14 JUN 1938

GLASGOW 30 AUG 1938

Assigned TRANSMIT TO LONDON



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