

REPORT ON STEAM TURBINE MACHINERY.

No. 96703

Rpt. 4a.

Received at London Office 17 SEP 1931

Date of writing Report 8th Sept. 1931. When handed in at Local Office 1st SEP 1931. Port of London

No. in Survey held at Brit. & Witten Date, First Survey 15th July 1930 Last Survey 8th June 1931.

Reg. Book 28831 on the Steel Quad. Se. "MONARCH OF BERMUDA" (Number of Visits 36) Tons Gross 20,500 Net

Built at Newcastle By whom built Vickers, Armstrongs, Ltd. Yard No. 1 When built 1931.

Engines made at Brit. By whom made Fraser & Chalmers Engine No. 668 When made 1931.

Boilers made at Barron By whom made Babcock & Wilcox Ltd. Boiler No. 6/1266 When made 1931.

Shaft Horse Power at Full Power 19,000 Owners Furness, Withy & Co., Ltd. Port belonging to London

Nom. Horse Power as per Rule 4411 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes

Trade for which Vessel is intended

STEAM TURBINE ENGINES, &c.—Description of Engines Single-casing, multi-stage, impulse turbines

No. of Turbines Ahead 2 Direct coupled to propelling shafts. No. of primary pinions to each set of reduction gearing

direct coupled to 2 Alternating Current Generators 3 phase 50 periods per second rated 15,000 Kilowatts 3000 Volts at 3000 revolutions per minute;

for supplying power for driving 4 Propelling Motors, Type Synchronous, three-phase rated 4750 H.P. Volts at 155 revolutions per minute. Direct coupled, single or double reduction geared to 4 propelling shafts.

Table with columns: TURBINE BLADING, H.P., I.P., L.P., ASTERN. Rows 1-12 with blade heights and diameters.

Shaft Horse Power at each turbine H.P. 10,050 I.P. 3,000 L.P. 3,000

Rotor Shaft diameter at journals H.P. 7" I.P. Diameter 2nd pinion

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings

Pinion Shafts, diameter at bearings 1st 2nd diameter at bottom of pinion ball

Generator Shaft, diameter at bearings 9" Propelling Motor Shaft, diameter at bearings 15"

Intermediate Shafts, diameter as per rule 12.58 as fitted 13.45 Thrust Shaft, diameter at collars as per rule 13.66 as fitted 14.875

Tube Shaft, diameter as per rule as fitted Screw Shaft, diameter as per rule 13.66 as fitted 14.875

Bronze Liners, thickness in way of bushes as per rule 15.42 as fitted 15.76 Thickness between bushes as per rule 1.54 as fitted 1.0

Propeller, diameter 13-0" Pitch No. of Blades State whether Movable Total Developed Surface square feet.

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 Lubricating Oil Pumps, including Spare Pump, No. and size

Ballast Pumps, 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

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

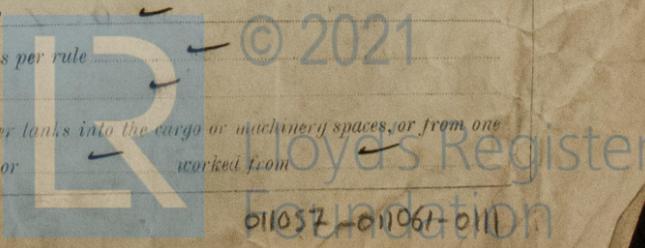
Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

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

NOTE: The words which do not apply should be deleted.



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BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers 42,200 square feet
 Is Forced Draft fitted Yes No. and Description of Boilers 8 Babcock & Wilcox W.T. Working Pressure 400 lb.
 Is a Report on Main Boilers now forwarded?
 Is a Donkey an Auxiliary Boiler fitted? If so, is a report now forwarded?
 Is the donkey boiler intended to be used for domestic purposes only?
 Plans. Are approved plans forwarded herewith for Shafting 12-9-30 Main Boilers Auxiliary Boilers Donkey Boilers
 (If not state date of approval)
 Superheaters General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied? Yes
 State the principal additional spare gear supplied See blue print No. 89556 for main turbines.
" " " " 89557 " auxiliary "

FOR VICKERS-ARMSTRONGS LIMITED

Hubert Thompson
DIRECTOR

The foregoing is a correct description,

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel --
 Total No. of visits 36

Written: 1930 July 15, Aug. 28, Nov. 20, Dec. 18, 1931 Jan. 13, Feb. 4, 13, 14, 16.
Mar. 2, 3, 10, 13, 16, 20, 31, Apr. 20, 22, June 8.
 Erith: 1930 Aug. 26, Sep. 23, Oct. 8, 16, 21, 31, Nov. 11, 20, 27, Dec. 8.
1931 Feb. 4, 25, Mar. 18, 24, 27, 31, June 5.

Dates of Examination of principal parts—Casings 20-11-30 Rotors 4-2-31 Blading 4-2-31 Alternator shafts
28-8-30 Thrust shafts 24/1/31 Intermediate shafts 24/2/31, 2/3/31 Tube shaft Gearing 28-8-30.
 Propellers 14/2/31 Stern tube 22/12/30, 23/12/30, 4/1/31 Engine and boiler seatings Engine holding down bolts
 Completion of fitting sea connections Completion of pumping arrangements Boilers fired in shop 24-3-31.
 Main boiler safety valves adjusted Thickness of adjusting washers Engines tried under steam 31-3-31

Rotor shaft, Material and tensile strength O.H.S. 41 and 43 tons Identification Mark 3982 L.V. 21-10-30.
Alternator Pinion shaft, Material and tensile strength O.H.S. 39 to 42 tons Identification Mark 8781 L.V. 9-8-30
 Identification Mark 8775 J.P. 30-7-30

Pinion shaft, Material and tensile strength Identification Mark
 Propeller Wheel Shaft, Material and tensile strength Identification Mark
 Thrust shafts, Material O.H.S. Identification Mark 3824 J.P. 28-8-30. Thrust shafts, Material Ingot Steel Identification Mark 584 W.C.
 Intermediate shafts, Material Ingot Steel Identification Marks 584 W.C. Tube shaft, Material Identification Marks
 Screw shafts, Material Ingot Steel Identification Marks 584 W.C. 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 the use of oil as fuel been complied with
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo If so, have the requirements of the Rules been complied with
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with
 Is this machinery a duplicate of a previous case? No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery has been constructed under special survey and in accordance with the requirements of the Rules and the approved plans. The materials and workmanship are good. The machinery has been despatched to Newcastle for fitting on board. In our opinion the machinery on completion of installation will be eligible to be classed with the record of L.M.C. (with date). This machinery has now been satisfactorily fitted on board the vessel - see Newcastle Rpt. H.G. Foster Newcastle 2-11-31

The amount of Entry Fee ... £ 243 - 1 - 11
 Special ... £
 Donkey Boiler Fee ... £
 Travelling Expenses (if any) ... £ 100 - 11 - 4
 Committee's Minute TUE. 10 NOV 1931

L. Young & Arthur Palmer
 Engineer Surveyors to Lloyd's Register of Shipping.

Certificate (if required) to be sent to...

