Rpt. 4. No. 19163.

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 19 MAR 1930

Date of writing Report 28th Feb 1930 When handed in at Local Office 12th MARCH 1930 Port of Greenock

No. in Reg. Book. Survey held at Greenock Date, First Survey 11th FEBRUARY 1929 Last Survey 11th MARCH 1930 (Number of Visits 68)

on the S/S Charterhurst Tons Gross / Net

Built at Irvine By whom built Ayrshire Dockyard Ltd Yard No. 515 When built 1929-30

Engines made at Greenock By whom made Rankin & Blackmore Engine No. 435 when made 1929-30

Boilers made at —" — By whom made —" — Boiler No. 435 when made 1929-30

Registered Horse Power ✓ Owners Charter Shipping Co Port belonging to Cardiff

Nom. Horse Power as per Rule 470 ✓ Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which Vessel is intended Foreign

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute 70

Dia. of Cylinders 25½"-43"-72" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 13·9" / as fitted 14" Crank pin dia. 14" / Crank webs Mid. length breadth ✓ Mid. length thickness ✓ shrunk Thickness parallel to axis 8¾" / Thickness around eye-hole 6⅛" /

Intermediate Shafts, diameter as per Rule 13·24" / as fitted 13·375" ✓

Thrust shaft, diameter at collars as per Rule 13·9" / as fitted 14" /

Tube Shafts, diameter as per Rule ✓ as fitted ✓

Screw Shaft, diameter as per Rule 14·74" / as fitted 14·875" / Is the {tube / screw} shaft fitted with a continuous liner {✓ / yes /}

Bronze Liners, thickness in way of bushes as per Rule ·749" as fitted ·75" / Thickness between bushes as per Rule ·5625" as fitted ·625" Is the after end of the liner made watertight in the propeller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length

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 no Length of Bearing in **Stern Bush** next to and supporting propeller 59½" /

Propeller, dia. 18'-0" / Pitch 18'-6" No. of Blades 4 Material C.I. whether Moveable no Total Developed Surface 100 sq. feet

Feed Pumps worked from the **Main Engines,** No. 2 / Diameter 3¾ / Stroke 26" / Can one be overhauled while the other is at work yes /

Bilge Pumps worked from the **Main Engines,** No. 2 / Diameter 4" Stroke 26" / Can one be overhauled while the other is at work yes /

Feed Pumps {No. and size One 4/6 Duplex One 4/6 Duplex / How driven Steam /} **Pumps** connected to the **Main Bilge Line** {No. and size One @ 12"×12" Duplex / How driven Steam /}

Ballast Pumps, No. and size One @ 12"×12" Duplex **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;—In Engine and Boiler Room 3 @ 2½ bore /

In Holds, &c. 3 @ 8" / 2 @ 3½" / 2 @ 2¼" / 2 @ 2¾" / 1 @ 2¼" tunnel well

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Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 6" / **Independent Power Pump Direct Suctions** to the Engine Room Bilges, No. and size 1 @ 4½" / Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes /

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 yes

Are all **Sea Connections** fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks both /

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes / Are the Overboard Discharges above or below the deep water line above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes / Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

What Pipes pass through the bunkers N°1 & 2 hold bilge pipes / How are they protected Wood 2½ thick /

What 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 yes

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 yes / Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes / worked from

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MAIN BOILERS, &c.—(Letter for record S /) Total Heating Surface of Boilers Main 5200 ft² Aux; 1495 ft²

Is Forced Draft fitted Main Blr only No. and Description of Boilers Two main & one auxiliary Working Pressure 200 lbs / 250 ✓ 1 Aux S.B.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A ~~DONKEY~~ AUXILIARY BOILER FITTED? yes If so, is a report now forwarded? yes

PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers yes Donkey Boilers ✓ (If not state date of approval)

Superheaters ✓ General Pumping Arrangements yes Oil fuel Burning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:—

Two piston rod top end bolts & nuts Two connecting rod bottom end bolts & nuts Two main bearing bolts One set of coupling bolts One set of feed & bilge pump valves A quantity of assorted bolts & nuts Iron of various sizes ✓

The foregoing is a correct description,

RANKIN & BLACKMORE, LTD.

Manufacturer.

Director.

Dates of Survey while building

During progress of work in shops — (1929) Feb. 11·13·28· Mar. 4·13·19·22·24· Apl. 1·15·25·30· May 4·14·21·23·28· June 4·7·10·14·20·23· July 12·14·25· Aug. 1·24·13·16·21·29· Sept. 13·23·25·26· Oct. 4·9·15·14·29· Nov. 11·12·19· Dec. 2·12·16·18·23·24· (1930) Jan. 8·13·14·15·20·21·22·24·28·31· Feb. 4·5·12·13·18·20· Mar. 11·

During erection on board vessel —

Total No. of visits 68.

Dates of Examination of principal parts—Cylinders 2-8-29 Slides 29-8-29 Covers 14-5-29

Pistons 29-8-29 Piston Rods 13-9-29 Connecting rods 17-7-29

Crank shaft 14-5-29 Thrust shaft 2-12-29 Intermediate shafts 16-12-29

Tube shaft ✓ Screw shaft 15-10-29 Propeller 15-10-29

Stern tube 13-9-29 Engine and boiler seatings ✓ Engines holding down bolts 21-1-30

Completion of fitting sea connections ✓ See Glasgow report. N°49970

Completion of pumping arrangements 31-1-30 Boilers fixed 8-1-30 Engines tried under steam 11-3-30

Main boiler safety valves adjusted 18-2-30 Thickness of adjusting washers Main blr P 11/32 S 25/64 P 11/32 S 11/32 Aux blr P 11/32 S 5/16

Crank shaft material S Identification Mark LR2364 WSM Thrust shaft material S Identification Mark LR167 CRR

Intermediate shafts, material S Identification Marks LR. 125, 109, 104, 2359 CRR. 125, 2198, 2168 Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material S Identification Mark LR2226 CRR Steam Pipes, material L.W.W.I. Test pressure 600 lbs Date of Test 24-1-30

Is an installation fitted for burning oil fuel no 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 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 built under special survey in accordance with the rules and approved plans, and the material and workmanship are of good quality, they have been securely fitted on board, tried under steam and found satisfactory.

The machinery in our opinion is eligible to be classed with record

✠ L.M.C. 3-30

It is submitted that this vessel is eligible for THE RECORD. ✠ L.M.C. 3.30.

2 S.B. (F.D.) & 1 Aux. B.

C.L.

J.T. 8/3/30.

Certificate to be sent to GREENOCK OFFICE.

The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee ...	£ 5	: 0	:	When applied for,
Special	£ 95	: 10	:	11TH MARCH 1930.
Donkey Boiler Fee ...	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	12TH MARCH 1930.

Chas. R. Rowcliffe ✠ Wm. Gordon-Mitchell

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 18 MAR 1930

Assigned ✠ L.M.C. 3.30. J.D.

CERTIFICATE WRITTEN