

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office - 6 JUL 1932

Date of writing Report 19 10 32 When handed in at Local Office 17 7 10 32 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 29 9 31 Last Survey 24 6 1932
 Reg. Book. on the new steel 3/5 "HARMANTEN" (Number of Visits 87)
 Built at Port Glasgow By whom built Lithgous Ltd Yard No. 854 When built 1932
 Engines made at Glasgow By whom made David Rowan & Co Ltd Engine No. 943 When made 1932
 Boilers made at Glasgow By whom made David Rowan & Co Ltd Boiler No. 943 When made 1932
 Registered Horse Power Owners J & C Harrison Ltd Port belonging to London
 Nom. Horse Power as per Rule 502 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which Vessel is intended -

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute 73
 Dia. of Cylinders 25-43-72 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 14.196 Crank pin dia. 1 1/4 Crank webs Mid. length breadth 23 Thickness parallel to axis 9 1/4
 as fitted 14 3/4 Mid. length thickness 9 1/4 Thickness around eye-hole 6 3/4
 Intermediate Shafts, diameter as per Rule 13.52 Thrust shaft, diameter at collars as per Rule 14.196
 as fitted 14 as fitted 14 3/4 (Miskell)
 Tube Shafts, diameter as per Rule 15.06 Screw Shaft, diameter as per Rule 15 9/4 Is the tube screw shaft fitted with a continuous liner yes
 as fitted 15 9/4 as fitted 15 9/4 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 yes
 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
 If so, state type Length of Bearing in Stern Bush next to and supporting propeller 5-3 1/2
 Propeller, dia. 18-6 Pitch 17-9 1/2 19-3 No. of Blades 4 Material Bronze whether Moveable yes Total Developed Surface 92.5 sq. feet
 Feed Pumps worked from the Main Engines, No. none Diameter Stroke Can one be overhauled while the other is at work
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 1/2 Stroke 2 1/4 Can one be overhauled while the other is at work yes
 Feed Pumps No. and size 20 1-9 1/2 x 2 1/4 Pumps connected to the Main Bilge Line No. and size Ballast pump How driven steam
 Ballast Pumps, No. and size one @ 12-10 1/2 x 2 1/4 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 @ 3"
 In Pump Room In Holds, &c. Fitted at Gk. Plan sizes as below. Not verified at Gk
 N°1-2 @ 3" N°2-2 @ 3 1/2" Bomb burner-2 @ 3 1/2" Dry tank-1 @ 2 1/2" N°3-4 @ 2 1/2" N°4-2 @ 3" Tunnel well-1 @ 2 1/2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 4 3/4
 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 both
 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 forward hold suction How are they protected under timber boards
 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 bridge deck

MAIN BOILERS, &c.—(Letter for record (r)) Total Heating Surface of Boilers 6850 sq. ft.
 Is Forced Draft fitted yes No. and Description of Boilers 2 SB & 1 aux Working Pressure 220
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes Also on auxiliary boilers.
 IS A DONKEY BOILER FITTED? no 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 no Main Boilers yes Auxiliary Boilers yes Donkey Boilers
 Superheaters no General Pumping Arrangements no Oil fuel Burning Piping Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied as per Rules.
 State the principal additional spare gear supplied. two cast iron propeller blades. one propeller shaft. one spindle for centrifugal circulating pump.
 For Andrews & Cameron HP valve gear - one steam valve rod. one exhaust valve rod. two crosshead blocks for valve rods. two crosshead pins for valve rods. four cam rollers.

The foregoing is a correct description,
 For David Rowan & Co. Ltd
 Archd. W. Grierson

Manufacturer.



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 W523-0193

Note (Gk) If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship? NOTE.—The words which do not apply should be deleted.

1931 Sep. 29 Oct. 1, 16 Nov. 11, 12, 17, 20, 23, 24, 26, 27, 30 Dec. 3, 4, 7, 8, 9, 10, 17, 21, 24, 28 (1932)
 During progress of work in shops - - -
 During erection on board vessel - - -
 Total No. of visits 87 -

Dates of Examination of principal parts—Cylinders 27-4-32 Slides 11-5-32 Covers 21-3-32
 Pistons 3-2-32 Piston Rods 13-5-32 Connecting rods 27-1-32
 Crank shaft 28-4-32 Thrust shaft 11-5-32 Intermediate shafts 15-3-32
 Tube shaft - Screw shaft 11-5-32 Propeller 13-5-32
 Stern tube 4-5-32 Engine and boiler seatings Grk Engines holding down bolts 3-6-32
 Completion of fitting sea connections Grk
 Completion of pumping arrangements 8-6-32 Boilers fixed 7-6-32 Engines tried under steam 27-6-32

Main boiler safety valves adjusted 9-6-32 Thickness of adjusting washers all 3/8"
 Crank shaft material S. steel Identification Mark LLOYD'S NO 4193 L.C.D. 28-4-32 Thrust shaft material S. steel Identification Mark LLOYD'S NO 4193 L.C.D. 11-5-32
 Intermediate shafts, material S. steel Identification Marks LLOYD'S NO 4193 L.C.D. 15-3-32 Tube shaft, material - Identification Mark -
 Screw shaft, material S. steel Identification Mark LLOYD'S NO 4193 L.C.D. 11-5-32 Steam Pipes, material steel Test pressure 660 Date of Test 16-5-32

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 no 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 duplicate of a previous case yes If so, state name of vessel Harmatrus, Grk Rpt. 52530

General Remarks (State quality of workmanship, opinions as to class, &c.)
 Cam operated HP valve gear fitted. Approved plan forwarded with Grk Rpt. No. 52530

The materials and workmanship are good.
 The machinery has been constructed under Special Survey in accordance with the Rules, satisfactorily fitted in the vessel, tried under steam and found good.
 It is eligible in my opinion for classification and the Record LMC 6, 32

GLASGOW

The amount of Entry Fee ... £ 6 : :
 Special ... £ 100 : 2 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 4 JUL 1932
 When received, 8 July 1932

S. C. Davis
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 6-JUL 1932

Assigned + L.M.C. 6, 32

For S.S.F. please see S.S. Harmatrus F.E. Rpt Grk 19411

117/32

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