

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office
 Writing Report 19 When handed in at Local Office 27. 11. 1933 Port of Glasgow
 Survey held at Glasgow Date, First Survey 22. 2. 33 Last Survey 23-11- 1933
 on the new steel S/S "HARCALO" (Number of Visits 60)
 Tons { Gross 5081
 Net 3033
 Port Glasgow By whom built Lithgows Ltd Yard No. 863 When built 1933
 Engines made at Glasgow By whom made Davie Rowan & Co Ltd Engine No. 958 When made 1933
 Boilers made at Glasgow By whom made Davie Rowan & Co Ltd Boiler No. 958 When made 1933
 Indicated Horse Power 444 Owners F & C Harrison Ltd Port belonging to London
 Horse Power as per Rule 444 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 for which Vessel is intended

NES, & Co.—Description of Engines Triple expansion Revs. per minute 60
 of Cylinders 22 1/2 - 36 - 65 Length of Stroke 40" No. of Cylinders 3 No. of Cranks 3
 shaft, dia. of journals as per Rule 13.24" Crank pin dia. 13 3/4" Crank webs Mid. length breadth 2 1/2" Thickness parallel to axis HP & MP 9"
 as fitted 13 3/4" Mid. length thickness MP & LP 9 1/2" shrunk Thickness around eye-hole 6 7/8"
 Intermediate Shafts, diameter as per Rule 12.61" Thrust shaft, diameter at collars as per Rule 13.24"
 as fitted 13 3/8" as fitted 13 3/4" Michell
 Shafts, diameter as per Rule 14.193 Is the tube } shaft fitted with a continuous liner { yes
 as fitted 14 3/4" as fitted 14 3/4" Is the screw }
 Liners, thickness in way of bushes as per Rule 7.3" Thickness between bushes as per Rule 5.29" Is the after end of the liner made watertight in the
 as fitted 3/4" as fitted 1 1/16"
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner yes
 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 yes
 liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after end of the tube
 If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 5'0"
 Propeller, dia. 18'6" Pitch 20'0" No. of Blades 4 Material Bronze whether Moveable yes Total Developed Surface 92 sq. feet
 Pumps worked from the Main Engines, No. none Diameter — Stroke — Can one be overhauled while the other is at work —
 Pumps worked from the Main Engines, No. two Diameter 4 1/2" Stroke 27" Can one be overhauled while the other is at work yes
 No. and size 2 @ 4" - 9 1/2" x 21" Pumps connected to the { No. and size Ballast pump
 How driven Steam Main Bilge Line { How driven Steam
 Pumps, No. and size 1 @ 12 - 10 1/2" x 24" Lubricating Oil Pumps, including Spare Pump, No. and size —
 independent means arranged for circulating water through the Oil Cooler — Suctions, connected to both Main Bilge Pumps and Auxiliary
 pumps;—In Engine and Boiler Room 3 @ 3"
 up Room — In Holds, &c. Nº1 hold 2 @ 3" Nº2 hold 2 @ 3 1/2" Nº3 hold 2 @ 3 1/2" Nº4 hold 2 @ 3" Tunnel well 1 @ 2 1/2" all fitted at ends
 Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 size 1 @ 4 3/4" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes
 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
 Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks both
 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
 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
 Pipes pass through the bunkers forward hold suction How are they protected under timber boards
 pipes pass through the deep tanks — Have they been tested as per Rule —
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 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
 to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from bridge deck
 N BOILERS, &c.—(Letter for record (r)) Total Heating Surface of Boilers 6348
 forced Draft fitted yes No. and Description of Boilers 2 SB & 1 auxy Working Pressure 220 lbs
 1 REPORT ON MAIN BOILERS NOW FORWARDED? yes
 1 DONKEY BOILER FITTED? no If so, is a report now forwarded? —
 donkey boiler intended to be used for domestic purposes only —
 L.N.S. Are approved plans forwarded herewith for Shafting no Main Boilers yes Auxiliary Boilers yes Donkey Boilers —
 (If not state date of approval)
 eaters no General Pumping Arrangements no Oil fuel Burning Piping Arrangements —

SPARE GEAR.

Is spare gear required by the Rules been supplied yes
 the principal additional spare gear supplied one screw shaft and two cast-iron propeller blades.

The foregoing is a correct description,

For David Rowan & Co Ltd
 Arch. H. Grierson

Manufacturer.



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Lloyd's Register

405-0027

Dates of Survey while building

During progress of work in shops -- 1933 Feb: 22 Mar: 6, 13, 17, 23 Apr: 19 May: 8, 9, 11, 24, 29 June: 2, 6, 9, 15, 16, 31 July: 3, 31 Aug: 2, 8, 22, 24, 28 Sep: 7, 8, 12, 16, 18, 19, 20, 21, 22, 27, 28, 29 Oct: 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 17, 18, 19, 20, 23, 24, 25, 27, 30 Nov: 1, 3, 8, 9, 23

During erection on board vessel --

Total No. of visits 60

Dates of Examination of principal parts—Cylinders 29-9-33 Slides 21-9-33 Covers 22-9-33

Pistons 21-9-33 Piston Rods 3-10-33 Connecting rods 8-8-33

Crank shaft 22-9-33 Thrust shaft 29-9-33 Intermediate shafts 20-9-33

Tube shaft Tube shaft 28-9-33 & 3-10-33 Propeller 27-9-33

Stern tube 16-9-33 Engine and boiler seatings Engines holding down bolts 30-10-33

Completion of fitting sea connections

Completion of pumping arrangements 9-11-33 Boilers fixed 8-11-33 Engines tried under steam 23-11-33

Main boiler safety valves adjusted 9-11-33 Thickness of adjusting washers

Crank shaft material 7. Steel Identification Mark Thrust shaft material 7. Steel Identification Mark

Intermediate shafts, material 7. Steel Identification Marks Tube shaft, material Identification Mark

Screw shaft, material 9. Steel Identification Mark Steam Pipes, material Steel Test pressure 660 lb Date of Test 22-9-33

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 "Harbun" 96 Rm. No 539610

General Remarks (State quality of workmanship, opinions as to class, &c.

The materials and workmanship are good.

The machinery has been constructed under Special Survey and is eligible in my opinion for Classification and the record + L MC 11,33

27/11/33

The amount of Entry Fee ... £ 5 : : When applied for,

Special ... £ 91 : 12 : 27.11.1933

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 30.11.1933

Committee's Minute GLASGOW 28 NOV 1933

Assigned + L MC 11,33

S. C. Davis.

Engineer Surveyor to Lloyd's Register of Shipping.



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