

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

15 MAR 1933

Date of writing Report Mar 3rd 1933 When handed in at Local Office LIVERPOOL Port of LIVERPOOL

No. in Survey held at Birkenhead Date, First Survey 18th July 1932 Last Survey 23rd Feb 1933

Reg. Book 91113 on the S. S. Bidston (Number of Visits 98) Tons { Gross 437 Net 179

Built at Birkenhead By whom built Messrs Cammell Laird & Co Yard No. 988 When built 1933

Engines made at Birkenhead By whom made Cammell Laird & Co Engine No. 988 When made 1933

Boilers made at Birkenhead By whom made Cammell Laird & Co Boiler No. 988 When made 1933

Registered Horse Power 194 Owners Municipal Corp of Birkenhead Port belonging to Liverpool

Nom. Horse Power as per Rule 194 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes

Trade for which Vessel is intended Ferry Service

ENGINES, &c.—Description of Engines Twin screw vertical triple expansion Revs. per minute 130

Dia. of Cylinders 15 1/2, 24, 28 1/2 Length of Stroke 18" No. of Cylinders two sets of 4 No. of Cranks 4 each engine

Crank shaft, dia. of journals as per Rule 6 3/8 Crank pin dia. 7" Crank webs Mid. length breadth 8" Thickness parallel to axis 1"

Intermediate Shafts, diameter as per Rule 7 5/8 as fitted 7" Thrust shaft, diameter at collars as per Rule 6 3/8 as fitted 7"

Tube Shafts, diameter as per Rule 6 3/8 as fitted 7" Is the { screw } shaft fitted with a continuous liner { no }

Bronze Liners, thickness in way of bushes as per Rule 1/8" Thickness between bushes as per Rule 1/8" 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

Propeller, dia. 7'6" Pitch 12'0" No. of Blades 3 Material Cast Iron whether Moveable no Total Developed Surface 27 sq. feet

Feed Pumps worked from the Main Engines, No. none Diameter 4" Stroke 5" Can one be overhauled while the other is at work

Bilge Pumps worked from the Main Engines, No. two Diameter 4" Stroke 5" Can one be overhauled while the other is at work

Feed Pumps { No. and size two - 6x8 1/2 x 18 stroke / How driven steam } Pumps connected to the Main Bilge Line { No. and size one - 6x5 1/2 x 15 stroke / How driven steam }

Ballast Pumps, No. and size none 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 4 - 2 1/2" dia In Pump Room In Holds, &c. Hold 1 - 2" dia; forepeak 1 - 2" dia; aft peak 1 - 2" dia

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 - 6" dia Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - 3" dia

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 mid-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 none How are they protected Yes

What pipes pass through the deep tanks none Have they been tested as per Rule Yes

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 Yes

MAIN BOILERS, &c.—(Letter for record 3) Total Heating Surface of Boilers 36000 sq ft

Is Forced Draft fitted no No. and Description of Boilers 2 Cylindrical direct tanks Working Pressure 180 lbs

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? Yes

Is the donkey boiler intended to be used for domestic purposes only Yes

PLANS. Are approved plans forwarded herewith for Shafting 28/6/32 Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers Yes

Superheaters General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied Two propellers, two stern bushes, two pairs connect rods, two condenser tubes, 100 ferrules, one spare armature for dynamo, other items as per spare gear list attached.

The foregoing is a correct description,
FOR AND ON BEHALF OF
CAMMELL LAIRD & CO. LIMITED.
J. H. Laird

Manufacturer.

SECRETARY



005080-005095-0150

July 18, 21, 22, 26, 28 Aug 3, 5, 9, 11, 12, 16, 19, 22, 26, 28, 29, 31 Sept 8, 16, 20, 21, 22, 23, 26, 27, 28 Oct 3, 4, 7, 10, 11
 12, 14, 17, 18, 19, 20, 21, 25, 26, 27, 28, 31 Nov 1, 2, 3, 4, 7, 8, 9, 10, 11, 14, 16, 17, 18, 24, 25, 28, 29, 30 Dec 1, 5, 6, 8, 9, 12, 14, 15, 19, 20, 21
 22, 23, 28, 29, 30 Jan 3, 4, 5, 6, 7, 9, 10, 11, 12, 16, 17, 19, 20, 25, 30 Feb 1, 3, 6, 10, 16, 23

Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - - -
 Total No. of visits 98

Dates of Examination of principal parts - Cylinders 3/10/32 7/10/32 14/10/32 11/11/32 8/12/32 Slides 8/12/32 Covers 7/10/32 29/11/32
 Pistons 3/10/32 8/12/32 Piston Rods 3/10/32 17/11/32 Connecting rods 7/10/32 17/11/32 20/10/32
 Crank shaft 27/9/32 Thrust shaft 3/10/32 15/10/32 26/10/32 Intermediate shafts 23/10/32 3/11/32 10/11/32 20/10/32
 Tube shaft Screw shaft 12/10/32 4/11/32 28/11/32 Propellers 8/10/32 23/10/32
 Stern tube 3/10/32 29/11/32 3/1/33 Engine and boiler seatings 3/1/33 Engines holding down bolts 2/2/33
 Completion of fitting sea connections 6/1/33 Boilers fixed 17/1/33 Engines tried under steam 23/2/33 13/32
 Completion of pumping arrangements 16/2/33 Thickness of adjusting washers Part for 7/16; stat for 13/32
 Main boiler safety valves adjusted 16/2/33 Crank shaft material steel Identification Mark 495, 496 Thrust shaft material steel Identification Mark 1265
 Intermediate shafts, material steel Identification Marks 465 Tube shaft, material steel Identification Mark
 Screw shaft, material steel Identification Mark 490, 474 Steam Pipes, material Copper Test pressure 360 lbs Date of Test 25/1/33
 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 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 No If so, state name of vessel S.S. 'Thurston'

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The Machinery of this vessel has been constructed under special survey, in accordance with the Rules and the approved plans. It has been examined under full working conditions during official trial, and found satisfactory, and is eligible in my opinion for classification in Register's book with record of + LMC 2.33

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, 14 MAR. 1933
 Special ... £ 48 : 10 : 0
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When received, 24-3-1933
 Committee's Minute LIVERPOOL 14 MAR. 1933
 Assigned + LMC - 2.33. O.C. Elec. Light. J.R.
 J. Milton
 Engineer Surveyor to Lloyd's Register of Shipping.



Certificate to be sent to the Surveyors as requested not to write on or below the space for Committee's Minute.