

List

Rpt. 4.

No. 18650

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 14/5/1945 When handed in at Local Office 16/5/1945 Port of WEST HARTLEPOOL
 No. in Survey held at WEST HARTLEPOOL Date, First Survey 22/2/44 Last Survey 5/5/1945
 Reg. Book (Number of Visits 56)
 on the STEEL SCREW STEAMER "EMPIRE CAICOS" Tons {Gross 3535
 Net 2259
 Built at WEST HARTLEPOOL By whom built WM GRAY & CO LTD Yard No. 1179 When built 1945
 Engines made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG WORKS Engine No. 1179 When made 1945
 Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG WORKS Boiler No. 1179 When made 1945
 Registered Horse Power Owners MINISTRY OF WAR TRANSPORT Port belonging to WEST HARTLEPOOL
 Nom. Horse Power as per Rule 299 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted Yes
 Trade for which vessel is intended OCEAN GOING.

ENGINES, &c.—Description of Engines INVERTED TRIPE EXPANSION Revs. per minute 85
 Dia. of Cylinders 20" x 31" x 55" Length of Stroke 39" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 11.0" Crank pin dia. 11 1/4" Crank webs Mid. length breadth 16" Thickness parallel to axis 6 3/8"
 as fitted 11 1/4" Mid. length thickness 6 3/8" shrunk Thickness around eye-hole 4 7/8"
 Intermediate Shafts, diameter as per Rule 11.0" Thrust shaft, diameter at collars as fitted 11 1/4"
 Tube Shafts, diameter as fitted 11 1/4" Screw Shaft, diameter as per Rule 11.74" as fitted 12 1/4" Is the {tube screw} shaft fitted with a continuous liner { Yes }

Bronze Liners, thickness in way of bushes as per Rule .651" Thickness between bushes as per Rule .492" Is the after end of the liner made watertight in the
 as fitted 1 1/16" as fitted 1 7/32"
 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
 at NO If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 4-3 3/8"

Propeller, dia. 15-3" Pitch 13-3" No. of Blades 4 Material CAST IRON whether Moveable NO Total Developed Surface 67 sq. feet

Feed Pumps worked from the Main Engines, No. — 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 26" Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size 2 @ 8" x 6" x 15" SINGLEX Pumps connected to the Main Bilge Line { No. and size 2 @ 4 1/2" x 26" | 1 @ 10" x 11" x 10" | 1 @ 6" x 6 1/2" x 6" DUPLEX
 How driven INDEPENDENT STEAM How driven MAIN ENGINE | INDEPENDENT STEAM

Ballast Pumps, No. and size 1 @ 10" x 11" x 10" 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 @ 3" 1 @ 4" OIL BILGE 2 @ 2"
 In Pump Room 1 @ 2" In Holds, &c. N°1. 2 @ 2 1/2" N°2. 2 @ 2 1/2" N°3. 2 @ 3"
N°4. 2 @ 2 1/2" CROSS BUNKER 2 @ 2" COFFER DAMS 2 @ 2"

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 @ 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 On remains 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 Below
 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 —
 What pipes pass through the deep tanks None 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 None Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2526 sq
 Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters Both

No. and Description of Boilers 2 single ended dual tubular Working Pressure 200 lbs sq
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? NO If so, is a report now forwarded? —

Can the donkey boiler be used for domestic purposes only —

PLANS. Are approved plans forwarded herewith for Shafting 16/9/43 Main Boilers 16/9/43 Auxiliary Boilers — Donkey Boilers —
 (If not state date of approval) 22/2/45

Superheaters — General Pumping Arrangements — Oil fuel Burning Piping Arrangements 13/11/43

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes
 State the principal additional spare gear supplied —

The foregoing is a correct description.
 FOR THE CENTRAL MARINE ENGINE WORKS

(M. Eng. & Co. Ltd.)
 J.H. Seaman
 GENERAL MANAGER.

Manufacturer.



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 Foundation
 004718 - 004726 - 0085

Dates of Survey while building
 During progress of work in shops -- { 1944 Aug. 22, Sept. 20, Oct. 26, Nov. 9, 17, Dec. 19, 20, 1945 Jan. 4, 6, 8, 9, 10, 11, 30, 31, Feb. 12, 13, 14, 15, 16, 17, 19, 20, 21, 28, March 1, 2, 3, 7, 9, 13, 14, 15, 19, 23, 26, 28, 30, April 9, 12, 13 }
 During erection on board vessel --- { 1945 Feb. 7, 27, March 12, 13, 22, April 5, 12, 17, May 1, 2, 5 }
 Total No. of visits 56

Dates of Examination of principal parts—Cylinders 6-1-45 - 19-2-45, Slides 16-2-45, Covers 16-2-45
 Pistons 16-2-45, Piston Rods 16-2-45, Connecting rods 16-2-45
 Crank shaft 26-1-45 - 16-2-45, Thrust shaft 11-1-45 - 16-2-45, Intermediate shafts —
 Tube shaft —, Screw shaft 6-1-45 - 7-3-45, Propeller 7-3-45
 Stern tube 7-3-45, Engine and boiler seatings 27-2-45, Engines holding down bolts 22-3-45
 Completion of fitting sea connections 27-2-45
 Completion of pumping arrangements 1-5-45, Boilers fixed 22-3-45, Engines tried under steam 2-5-45
 Main boiler safety valves adjusted 1-5-45, Thickness of adjusting washers —
 Crank shaft material Steel, Identification Mark N° 4244 CP, Thrust shaft material Steel, Identification Mark N° 4299 CP
 Intermediate shafts, material —, Identification Marks —, Tube shaft, material —, Identification Mark —
 Screw shaft, material Steel, Identification Mark N° 4300 CP, Steam Pipes, material SP Steel, Test pressure 600 lbs, Date of Test 13-4-45

Is an installation fitted for burning oil fuel Yes, Is the flash point of the oil to be used over 150° F. Yes
 Have the requirements of the Rules for the use of oil as fuel been complied with Yes
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Yes, If so, have the requirements of the Rules been complied with Yes
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with No
 Is this machinery duplicate of a previous case Yes, If so, state name of vessel SS EM. BARBADOS RPTN° 18638

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines and boilers of this vessel have been built under special survey and in accordance with the approved plans and specification. The workmanship and materials have been found good. Upon completion they were examined under full working conditions and found satisfactory. The M.P. cylinder has been satisfactorily repaired as approved by letter E. 1-12-44. It is recommended that the machinery of this vessel be classed in the Register Book as LMC 5.45, 2SB (SP) F.D. C.L. Fitted for Oil Fuel 5.45, FP. above 150° F.

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

The amount of Entry Fee	£ 4 : 0 :	When applied for, <u>16/5/1945</u>
Special	£ 69 : 17 :	
SUPERVISION	£ 17 : 9 :	When received, <u>19</u>
Donkey Boiler Fee	£ : : :	
Travelling Expenses (if any)	£ : : :	

Arthur W. Oxford
 Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 25 MAY 1945

Committee's Minute

Assigned + LMC 5.45

FITTED FOR OIL FUEL. 5.45 FLASH POINT ABOVE 150° F. F.D. C.L. SpH

