

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 6/2/1945 When handed in at Local Office 6/2/1945 Port of WEST HARTLEPOOL  
 No. in Survey held at WEST HARTLEPOOL Date, First Survey 24th May 1944 Last Survey 24th January 1945  
 Reg. Book 45105 (Number of Visits 63)  
 on the STEEL SCREW STEAMER "EMPIRE JAMAICA" Tons {Gross 3637.78  
 Net 2257.96  
 Built at WEST HARTLEPOOL By whom built WM GRAY & CO LTD Yard No. 1174 When built 1945  
 Engines made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG WORKS Engine No. 1174 When made 1945  
 Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG WORKS Boiler No. 1174 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 N Is Electric Light fitted YES  
 Trade for which vessel is intended OCEAN GOING

**ENGINES, &c.**—Description of Engines INVERTED TRIPLE EXPANSION Revs. per minute 85 ✓  
 Dia. of Cylinders 20 x 21 x 55 ✓ Length of Stroke 39 ✓ No. of Cylinders 3 ✓ No. of Cranks 3 ✓  
 Crank shaft, dia. of journals as per Rule 11.0 ✓ as fitted 11.4 ✓ Crank pin dia. 11.4 ✓ Crank webs Mid. length breadth 16 16 3/4 ✓ Thickness parallel to axis 6 3/8 ✓  
 as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Mid. length thickness 6 3/8 ✓ shrunk Thickness around eye-hole 4 7/8 ✓  
 Intermediate Shafts, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Thrust shaft, diameter at collars as per Rule 11.0 ✓  
 as per Rule \_\_\_\_\_ as fitted 11.4 ✓  
 Tube Shafts, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Screw Shaft, diameter as per Rule 11.74 ✓ Is the {tube screw} shaft fitted with a continuous liner { yes ✓  
 as per Rule \_\_\_\_\_ as fitted 12.4 ✓  
 Bronze Liners, thickness in way of bushes as per Rule 4.57 ✓ Thickness between bushes as per Rule 4.92 ✓ Is the after end of the liner made watertight in the  
 as fitted 4.6 ✓ as fitted 4.52 ✓ 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 15.3 ✓ 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 2.6 ✓ 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 2 1/2 ✓ 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. M.1. 2 @ 2 1/2" M.2. 2 @ 2 1/2" M.3. 2 @ 3" ✓  
M.4. 2 @ 2 1/2" CROSS BUNKER 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 yes ✓ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

**MAIN BOILERS, &c.**—(Letter for record S ✓) Total Heating Surface of Boilers 4526.6 ✓  
 Which Boilers are fitted with Forced Draft Both ✓ Which Boilers are fitted with Superheaters Both ✓  
 No. and Description of Boilers 2 Single ended tubular Working Pressure 200 lbs ✓  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes ✓  
 IS A DONKEY BOILER FITTED? \_\_\_\_\_ 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 16/21-9-43 Main Boilers 16-9-43 Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_  
 (If not state date of approval)  
 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

*J. H. G. James*  
 CENTRAL MANAGER

Manufacturer.



Dates of Survey while building:
   
 During progress of work in shops: 1944. May 24. June 17. 21. Aug 2. 4. 29. Sept 9. 11. 12. 14. 16. 19. 22. 27. 28. Oct 6. 9. 12. 15. 20. 23. 25. 27. 31. Nov 1. 4. 6. 9. 10. 14. 15. 16. 17. 18. 21. 22. 23. 27. 28. 29. Dec 1. 7. 20. 22. 27. 28. 1945. Jan 9. 13.
   
 During erection on board vessel: 1944. Oct 10. 24. Nov 7. 10. 22. 27. Dec 4. 7. 13. 14. 1945. Jan 11. 18. 19. 20. 24.
   
 Total No. of visits: 63

Dates of Examination of principal parts—Cylinders 21-6-44 - 27-10-44 Slides 27-10-44 Covers 27-10-44
   
 Pistons 27-10-44 Piston Rods 27-10-44 Connecting rods 27-10-44
   
 Crank shaft 9-9-44 - 23-10-44 Thrust shaft 27-10-44 - 14-11-44 Intermediate shafts -
   
 Tube shaft - Screw shaft 23-10-44 - 14-11-44 Propeller 14-11-44
   
 Stern tube 14-11-44 Engine and boiler seatings 7-11-44 Engines holding down bolts 7-12-44
   
 Completion of fitting sea connections 7-11-44

Completion of pumping arrangements 18-1-45 Boilers fixed 7-12-44 Engines tried under steam 20-1-45

Main boiler safety valves adjusted 18-1-45 Thickness of adjusting washers 3/8" 3/8" 3/8" 3/8"
   
 Crank shaft material Ingot steel Identification Mark N° 3805CP Thrust shaft material Ingot steel Identification Mark N° 3929CP
   
 Intermediate shafts, material - Identification Marks Tube shaft, material - Identification Mark

Screw shaft, material Ingot steel Identification Mark N° 3928CP Steam Pipes, material SD STEEL Test pressure 600 lbs Date of Test 22-11-44

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 ✓
   
 Is this machinery duplicate of a previous case Yes ✓ If so, state name of vessel SS EM. BERMUDA RPT N° 18605.

**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. It is recommended that the machinery of this vessel be classed in the Register Book LMC 1.45. 2SB(SK) FD CL. Fitted for oil fuel 1.45 F.P. above 150° F.

Certificate to be sent to

The amount of Entry Fee	£ 4 : 0 :	When applied for,
Special	£ 69 : 17 :	6/21 1945
SUPERVISION		
Donkey Boiler Fee	£ 17 : 9 :	When received,
Travelling Expenses (if any)	£ : :	19

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

Committee's Minute FRI. 16 FEB 1945

Assigned LMC 1.45 FD. C.L.  
 FITTED FOR OIL FUEL 1.45 FLASH POINT ABOVE 150° F.

