

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 11-3-43. 5. When handed in at Local Office 4 MAY 1943. Port of HULL. Date, First Survey 22.9.42. Last Survey 18.4.1943.  
 No. in Survey held at HULL. Reg. Book (Number of Visits 60)  
 on the H.M. TRAWLER FERRING. Tons { Gross 392, Net 128 }  
 Built at SELBY. By whom built Cichane & Sons Ltd. Yard No. 1260. When built 1943.  
 Engines made at HULL. By whom made Amos & Smith Ltd. Engine No. 718. When made .  
 Boilers made at HULL. By whom made Amos & Smith Ltd. Boiler No. 718. When made .  
 Registered Horse Power . Owners Admiralty. Port belonging to .  
 Nom. Horse Power as per Rule 125. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.  
 Trade for which vessel is intended Government Service.

**GENERAL, &c.—Description of Engines** Triple Expansion. Revs. per minute 115.  
 Dia. of Cylinders 13 1/2", 24", 39". Length of Stroke 27". No. of Cylinders 3. No. of Cranks 3.  
 Crank shaft, dia. of journals as per Rule 7.65". Crank pin dia. 8". Crank webs Mid. length breadth — Thickness parallel to axis 5".  
 as fitted 8". Crank webs Mid. length thickness — shrunk Thickness around eye-hole 3 9/16".  
 Intermediate Shafts, diameter as per Rule 7.3". Thrust shaft, diameter at collars as per Rule 7.65".  
 as fitted 7 3/4". as fitted 8".  
 Main Shafts, diameter as per Rule 8.152". Is the { tube / screw } shaft fitted with a continuous liner { Yes. }  
 as fitted — as fitted 8 1/2".  
 Bronze Liners, thickness in way of bushes as per Rule 9/16". Thickness between bushes as per Rule 19/32". 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 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 2'-11 9/16".  
 Propeller, dia. 10'-3". Pitch 10'-9". No. of Blades 4. Material P.I. whether Moveable Solid. Total Developed Surface 39 1/2 sq. feet.  
 Main Engines, No. One Diameter 3". Stroke 15". Can one be overhauled while the other is at work (over).  
 Auxiliary Engines, No. One Diameter 3". Stroke 15". Can one be overhauled while the other is at work —.  
 Feed Pumps { No. and size One 6" x 4 1/2" x 6" Duplex } Pumps connected to the { No. and size 6" x 4 1/2" x 6" Duplex } 3" Ejector.  
 { How driven Independent Mean } Main Bilge Line { How driven Independent Mean }.  
 Bilge Pumps, No. and size None Lubricating Oil Pumps, including Spare Pump, No. and size None.  
 Are two independent means arranged for circulating water through the Oil Cooler None. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room 2 @ 2" Dia and One 3" Ejector (See below).  
 In Holds, &c. One @ 2" Dia in each of the following:—  
 Forward Ballast Space, Aft Ballast Space, Magazine, Magazine, Spirit Room.  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 6". Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 3" Steam Ejector.  
 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 Bilges.  
 Are all Sea Connections fitted direct on the skin of the ship Yes. Are they fitted with Valves or Cocks Yes.  
 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 —.  
 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 5.) Total Heating Surface of Boilers 1873.4.  
 Which Boilers are fitted with Forced Draft All. Which Boilers are fitted with Superheaters NONE.  
 No. and Description of Boilers One S.B. Working Pressure 210.28 lb/sq. in.  
 A REPORT ON MAIN BOILERS NOW FORWARDED? Yes.  
 A DONKEY BOILER FITTED? No. If so, is a report now forwarded? —.  
 Is the donkey boiler be used for domestic purposes only —.  
 Plans. Are approved plans forwarded herewith for Shafting 13-8-41 Main Boilers. 13-8-41 Auxiliary Boilers. None. Donkey Boilers. None.  
 Superheaters NONE. General Pumping Arrangements 16-6-41. Oil fuel Burning Piping Arrangements NONE.

### SPARE GEAR.

Is the spare gear required by the Rules been supplied Yes.  
 Is the principal additional spare gear supplied See attached list.

The foregoing is a correct description.  
 For AMOS & SMITH LTD.  
 A.L. Andrew  
 DIRECTOR



13-18-24-27  
 ch 3-6-8-10  
 No. of Visits 52

HERRING.

Dates of Survey while building  
 During progress of work in shops -- 1942. Sept 22, 26, 29. Oct 2, 7, 16, 24. Nov. 26, 29, 30. Dec. 2, 4, 7, 12, 18, 22, 29, 31.  
 1943 Jan 5, 7, 8, 14, 18. Feb. 26. Mar. 3, 9, 11, 13, 17, 18, 19, 24, 26, 30. Apr. 2, 10, 12, 18.  
 During erection on board vessel --- 1942 DEC 4, 18, 29. 1943 FEB 26. MAR 3, 5, 8, 9, 11, 13, 17, 18, 19, 24, 26, 30.  
 APR. 2, 10, 12, 18.  
 Total No. of visits 60.

Dates of Examination of principal parts—Cylinders 27/11/42. 30/11/42. 2/12/42. Slides 2-10-42. Covers 27/11/42. 30/11/42. 2/12/42.  
 Pistons 7-12-42. Piston Rods 26-9-42. Connecting rods 7/12/42.  
 Crank shaft 31-12-42. Thrust shaft 26-9-42. Intermediate shafts 7/10/42.  
 Tube shaft NONE. Screw shaft 29-9-42. Propeller 4-12-42. 18-12-42.  
 Stern tube 4-12-42. Engine and boiler seatings 26-2-43. Engines holding down bolts 8-3-43.  
 Completion of fitting sea connections 18-12-42.  
 Completion of pumping arrangements 24-3-43. Boilers fixed 5-3-43. Engines tried under steam 24-3-43. 12-4-43.  
 Main boiler safety valves adjusted 24-3-43. Thickness of adjusting washers P 13/32" S 3/8"  
 Crank shaft material F.1. Steel (15-31). Identification Mark 134.F.W. 2 3/4". Thrust shaft material F.1. Steel Identification Mark 161.F.W. 28  
 Intermediate shafts, material F.1. Steel Identification Marks 133.F.W. 1 5/8". Tube shaft, material NONE. Identification Mark ---  
 Screw shaft, material F.1. Steel. Identification Mark 160.F.W. 2 3/4". Steam Pipes, material Steel Test pressure 630 lb Date of Test 18-3-43  
 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 Ya. If so, state name of vessel H.M.T. GRAYLING.

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 The Machinery of the vessel has been constructed under special survey in accordance with approved plans, the Rules, Specification, and Admiralty requirements. of good materials and workmanship.  
 The Machinery has been fitted aboard under special survey and when tried in steam at as near full power as practicable in the basin was found satisfactory in every respect.

It is eligible, in our opinion, to have the records LMC 4,43. C.L. and the notation of T.3 by 13 1/2, 24, 39. — 27. 210 lbs 17. NPI 25. G.S. 50. H.S. 1873. F.D.

The amount of Entry Fee ... £ : :  
 Special ... £ 62 : - :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, MAY 1943  
 When received, 19

W.S. Shields & J. Stead  
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute TUES. 11 MAY 1943  
 Assigned + LMC 4.43  
 FD CH



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