

Rpt. 4.

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 19 1945 When handed in at Local Office MAY 1945 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 14 Dec 44 Last Survey 3 May 1945
 Reg. Book 22498 on the S/S "Empire Pacific" (Number of Visits 16) Tons { Gross 984 Net 380
 Built at Burntisland By whom built Burntisland S.B. Co. L^{td} Yard No. 298 When built 1945
 Engines made at Sunderland By whom made G. Clark (1938) L^{td} Engine No. 1344 When made 1945
 Boilers made at Sunderland By whom made G. Clark (1938) L^{td} Boiler No. 1344 When made 1945
 Registered Horse Power 162 Owners Ministry of War Transport Port belonging to Burntisland
 Nom. Horse Power as per Rule 162 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes
 Trade for which vessel is intended Ocean-going

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 3
 Dia. of Cylinders 13 1/2 - 22 3/4 - 38 Length of Stroke 24 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals 4.504 as per Rule 4 7/8 as fitted Crank pin dia. 4 1/8 Mid. length breadth 13 Crank webs 4 13/16 Thickness parallel to axis 4 13/16 shrunk Thickness around eye 4 3/16
 Intermediate Shafts, diameter 4.15 as per Rule 4 1/4 as fitted Thrust shaft, diameter at collars 4.507 as per Rule 4 1/8 as fitted
 Tube Shafts, diameter 8.23 as per Rule 8 1/2 as fitted Is the tube shaft fitted with a continuous liner no liner

Bronze Liners, thickness in way of bushes Yes as per Rule Thickness between bushes Yes as per Rule 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 —
 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 Yes If so, state type Newark Length of Bearing in Stern Bush next to and supporting propeller 3'-2"

Propeller, dia. 9'-0" Pitch 8'-10" No. of Blades 4 Material Bronze whether Moveable No Total Developed Surface 32.6 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. — Diameter — Stroke — Can one be overhauled while the other is at work —
 Feed Pumps { No. and size Two 8" x 6" x 15" How driven Steam Pumps connected to the Main Bilge Line { No. and size — How driven —
 Ballast Pumps, No. and size Two 4" x 8" x 10" 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 — In Pump Room — In Holds, &c. —

Main Water Circulating Pump Direct Bilge Suctions, No. and size — Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size —
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes —
 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 —
 Are all Sea Connections fitted direct on the skin of the ship — Are they fitted with Valves or Cocks —
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates — Are the Overboard Discharges above or below the deep water line —
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel — Are the Blow Off Cocks fitted with a spigot and brass covering plate —
 What Pipes pass through the bunkers — How are they protected —
 What pipes pass through the deep tanks — 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 —
 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 — Is the Shaft Tunnel watertight — Is it fitted with a watertight door — worked from —

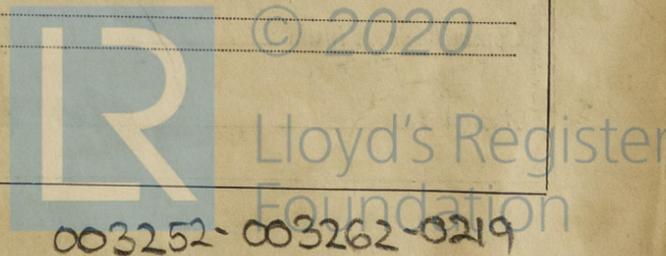
MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2490 sq
 Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters —
 No. and Description of Boilers 2 SB. Working Pressure 200 lb/sq
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY 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 — Main Boilers 18/11/44 Auxiliary Boilers — Donkey Boilers —
 Superheaters — General Pumping Arrangements 14/1/45 Oil fuel Burning Piping Arrangements 29/3/45

SPARE GEAR. Has the spare gear required by the Rules been supplied Yes (as per specification) "A" type SEAC. Coaster.
 State the principal additional spare gear supplied —

The foregoing is a correct description.

Arch. J. Barry Manufacturer.



1944 Dec 14, 1945 Jan 2, 3, 8, 22, 23, 26 Feb 1, 6, 9, 12, 14, 16, 20, 22, 26, 27. *Mch 1, 2, 5, 7, 9*
 During progress of work in shops - - - 13, 15, 16, 19, 20, 21, 22, 27, 28. *Apr 4, 5, 9, 10, 11, 17, 23, 24, 25, 26, 27. May 2, 3*
 Dates of Survey while building - - -
 During erection on board vessel - - -
 Total No. of visits 46

Dates of Examination of principal parts - Cylinders *H.P. 9/3/45 M.P. 2/3/45 L.P. 26/2/45* Slides *5/4/45* Covers *As Cyls.*
 Pistons *5/3/45* Piston Rods *5/3/45* Connecting rods *16/3/45*
 Crank shaft *1/3/45* Thrust shaft *5/3/45* Intermediate shafts *3/5/45*
 Tube shaft - Screw shaft *5/3/45* Propeller *(sent direct to Buratisland from makers.)*
 Stern tube *2/5/45* Engine and boiler seatings - Engines holding down bolts -
 Completion of fitting sea connections - Boilers fixed - Engines tried under steam -
 Completion of pumping arrangements - Thickness of adjusting washers -
 Main boiler safety valves adjusted - *N° 1374 WHF* Thrust shaft material *Ingot Steel* Identification Mark *N° 4340 WHF*
 Crank shaft material *Ingot Steel* Identification Mark *1/3/45* Tube shaft, material - Identification Mark -
 Intermediate shafts, material *Ingot Steel* Identification Marks *N° 4416 WHF* Test pressure - Date of Test -
 Screw shaft, material *Ingot Steel* Identification Mark *N° 4339 WHF* Steam Pipes, material *Steel* Is the flash point of the oil to be used over 150° F. -
 Is an installation fitted for burning oil fuel -
 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 - 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..... If so, state name of vessel *(B Type SEAC. Coaster.)*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been built under Special Survey in accordance with the approved plans, Specification & the rules of the Society. The material & workmanship are good. It has been despatched to Buratisland for installation on board the vessel. On the satisfactory completion of this, together with the fulfilment of the outstanding requirements of the Specification, the machinery will be eligible in my opinion to have notation *2 SB (FD)* (with date) T.S. (O.G.) 2 SB (FD) fitted to burn oil fuel (with date)*

Certificate to be sent to SUNDERLAND.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)
 The amount of Entry Fee ... £ 3 : :
 4/5 Special ... £ 32 : 8 :
 4/5 Specification ... £ 8 : 2 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 4 MAY 1945
 When received, 19

H. St. Grass
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute ... *FRI, 21 SEP 1945*
 Assigned ... *see H. Rpt*

