

Rpt. 4.

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 12 SEP 1944

30 OCT 1944

Date of writing Report 19 When handed in at Local Office 11 SEP 1944 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey July 27 Last Survey Aug 30 1944
 Reg. Book (Number of Visits 15)
 on the EMPIRE SUSAN Tons {Gross Net
 Built at Newcastle By whom built Clelands (Successors) Ltd Yard No. 71 When built 1944
 Engines made at Iron By whom made Ailsa S B Co Ltd Engine No. 193 When made 1943
 Boilers made at West Hartlepool By whom made Central Marine Eng Works Boiler No R 370 When made 1944
 Registered Horse Power Owners Port belonging to
 Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes. Is Electric Light fitted.
 Trade for which vessel is intended.

ENGINES, &c.—Description of Engines See Glasgow Report No 67575 Revs. per minute —
 Dia. of Cylinders Length of Stroke No. of Cylinders No. of Cranks
 Crank shaft, dia. of journals as per Rule — Crank pin dia. — Crank webs Mid. length breadth — Thickness parallel to axis —
 as fitted — Mid. length thickness — shrunk Thickness around eye-hole —
 Intermediate Shafts, diameter as per Rule 8.375" 8.443 for 21516 Thrust shaft, diameter at collars as per Rule 8.794" 8.865 for 21516
 as fitted 8.75" as fitted 9.25" ✓
 Tube Shafts, diameter as per Rule — Screw Shaft, diameter as per Rule 9.68" 9.748 for 21516 Is the {tube screw} shaft fitted with a continuous liner {No ✓
 as fitted — as fitted 11" ✓
 Bronze Liners, thickness in way of bushes as per Rule — Thickness between bushes as per Rule — Is the after end of the liner made watertight in the
 as fitted — as fitted — 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
 at Yes ✓ If so, state type Newark No 1 Length of Bearing in Stern Bush next to and supporting propeller 3'-6" ✓
 Propeller, dia. 10'-10 1/2" Pitch 10'-10 1/2" No. of Blades 4 Material CI whether Moveable No Total Developed Surface 43 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 1-7" x 5" x 8" ✓ Pumps connected to the {No. and size 1-7" x 7" x 8" ✓
 {How driven Steam Main Bilge Line {How driven Steam
 Ballast Pumps, No. and size 1-7" x 7" x 8" 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 Eng room 2'-2 1/2" dia ✓ Boiler 1-2 1/2" dia ✓
 In Pump Room In Holds, &c. Forward Compartment 1-2 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 4 BR 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 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 Yes or fabricated steel boxes 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 to tunnel Is it fitted with a watertight door. — worked from. —

MAIN BOILERS, &c.—(Letter for record S ✓) Total Heating Surface of Boilers 3090 # ✓
 Which Boilers are fitted with Forced Draft Main ✓ Which Boilers are fitted with Superheaters.
 No. and Description of Boilers One Single Ended Multitubular Working Pressure 215 lbs/0" ✓
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes (West Hartlepool Report No 18539)
 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 11/8/43 Main Boilers. — Auxiliary Boilers. — Donkey Boilers. —
 (If not state date of approval)
 Superheaters. — General Pumping Arrangements 21-10-43 16 5 43 - 10-5-44 Oil fuel Burning Piping Arrangements 20-12-43
 amaded SPARE GEAR.
 Has the spare gear required by the Rules been supplied. Spare gear not checked.
 State the principal additional spare gear supplied.

The foregoing is a correct description.

JOHN DICKINSON & SONS LTD. Manufacturers.

RESIDENT MANAGER



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Dates of Survey while building
 During progress of work in shops - - 1944. *Mch. 1, Apr. 24, June 30, July 10, 17, 24, 26, 31, Aug. 1, 4, 8, 14, 17, 22, 30*
 During erection on board vessel - - -
 Total No. of visits 15

Dates of Examination of principal parts—Cylinders — Slides — Covers —
 Pistons — Piston Rods — Connecting rods —
 Crank shaft — Thrust shaft 30/6/44 Intermediate shafts 30/6/44
 Tube shaft — Screw shaft 24/4/44 Propeller 17/7/44(NWC) 24/4/44
 Stern tube 12/7/44 (NWC) 1/3/44 Engine and boiler seatings 8/8/44 Engines holding down bolts 22/8/44
 Completion of fitting sea connections 17/7/44(NWC) —
 Completion of pumping arrangements — Boilers fixed 22/8/44 Engines tried under steam —
 Main boiler safety valves adjusted — Thickness of adjusting washers —
 Crank shaft material — Identification Mark — Thrust shaft material *forged Ingot steel* Identification Mark *Lloyds 57 T9 30/6/44*
 Intermediate shafts, material *forged Ingot steel* Identification Marks *Lloyds 55 T9 30/6/44* Tube shaft, material — Identification Mark —
 Screw shaft, material *forged Ingot steel* Identification Mark *Lloyds 58 T9 24/4/44* Steam Pipes, material *Steel* Test pressure 630 lbs 10" Date of Test *10/7/44 22/8/44*
 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 —
 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 *yes* If so, state name of vessel *EMPIRE JULIA*

General Remarks (State quality of workmanship, opinions as to class, &c.)
This machinery mentioned in Glasgow Report N° 67575 + Boiler mentioned in West Hartlepool Report 18539 has been efficiently secured on board in accordance with approved plans. Pipe work has been partly fitted & will be completed on the Tyne also Main Boiler safety valves to be adjusted. Vessel has now proceeded to the River Tyne in tow for completion of work & for the engines to be tried under working conditions. Newcastle Surveyors notified. The machinery is in our opinion eligible for the NOTATION \otimes LMC with date when completed. Fitted to burn Oil Fuel (FP above 150°F) when section 20 of the rules are complied with.

The above items have now been completed See New Rpt. J.W. Walker.

J. Griev & L. H. ...

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : : : When applied for,
 Special Specification ... £ 9 : 11 : : 1 SEP 1944
 Donkey Boiler Fee ... £ 2 : 7 : :
 Travelling Expenses (if any) £ : : : : When received, 19

Committee's Minute ... FRI. 3 NOV 1944

Assigned ... *see minute*
by J.W. Walker

SUNDERLAND.

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

