

Rpt. 4.

No.

102296

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

26 AUG 1944

Date of writing Report 19 When handed in at Local Office 21. 8. 1944 Port of NEWCASTLE-ON-TYNE
No. in Survey held at South Shields Date, First Survey (1943) Oct 4th Last Survey Aug 10th 1944
Reg. Book 89307 on the S.S. EMPIRE MOULMEIN
Built at S. Shields By whom built J. Readhead & Sons Ltd Yard No. 540 When built 1944
Engines made at South Shields By whom made J. Readhead & Sons Ltd Engine No. 540 When made 1944
Boilers made at Sunderland By whom made W. & A. Selway Boiler No. 1020 When made 1944
Registered Horse Power Owners Ministry of War Transport Port belonging to S. Shields
Nom. Horse Power as per Rule 542 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
Trade for which vessel is intended Refrigerated General Cargo

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 76
Dia. of Cylinders 24" x 39" x 70" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
Crank shaft, dia. of journals as per Rule 14" Crank pin dia. 14 3/4" Mid. length breadth 22" Thickness parallel to axis 9"
as fitted 14 1/4" Crank webs shrunk Mid. length thickness 9" Thickness around eye-hole 6 3/8"
Intermediate Shafts, diameter as per Rule 13.33" Thrust shaft, diameter at collars as per Rule 14"
as fitted 13 5/8" as fitted 14 1/2"
Tube Shafts, diameter as per Rule 14.95" Is the {tube} shaft fitted with a continuous liner { Yes
as fitted 15 1/4" as fitted 15 1/4" as fitted 15 1/4"
Bronze Liners, thickness in way of bushes as per Rule .765" Thickness between bushes as per Rule .812" 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 ✓ If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller 5'-1" ✓
Propeller, dia. 18'-2" Pitch 16'-6" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 110 sq. feet
Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work ✓
Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work ✓
Feed Pumps { No. and size (2) 8" x 10 1/2" x 22" (1) 7" x 9 1/2" x 21" Pumps connected to the { No. and size (1) 10 1/2" x 13" x 24" (1) 7" x 9 1/2" x 21"
How driven Steam Main Bilge Line How driven Steam
Ballast Pumps, No. and size (1) 10 1/2" x 13" x 24" (1) 7" x 9 1/2" x 21" 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 4-3 dia ✓ In Holds, &c. N°1 hold 2-3 dia N°2 hold 2-3 dia N°3 hold 2-3 dia
In Pump Room ✓ N°4 hold 2-3 dia N°5 hold 2-3 dia Tunnel well 1-2 1/2" dia ✓
Main Water Circulating Pump Direct Bilge Suctions, No. and size One 9" dia ✓ Independent Power Pump Direct Suctions to the Engine Room Bilges,
No. and size One 5" 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 ✓ Are they fitted with Valves or Cocks Ball ✓
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 Bilge ✓ How are they protected Wood casings ✓
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 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 No ✓ worked from ✓

MAIN BOILERS, &c.—(Letter for record S ✓) Total Heating Surface of Boilers 7974 sq. ft ✓
Which Boilers are fitted with Forced Draft Main & Aux ✓ Which Boilers are fitted with Superheaters Pat. Shield ✓
No. and Description of Boilers 2 Main 1 Aux S.E.M. ✓ Working Pressure 220 lbs ✓
IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes (B.C.) ✓ British Corporation Certificate
IS A DONKEY BOILER FITTED? Yes ✓ If so, is a report now forwarded? Yes ✓
Can the donkey boiler be used for domestic purposes only ✓
PLANS. Are approved plans forwarded herewith for Shafting 18-1-43 Main Boilers ✓ Auxiliary Boilers ✓ Donkey Boilers ✓
(If not state date of approval)
Superheaters ✓ General Pumping Arrangements 23-12-43 Oil fuel Burning Piping Arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied ✓ Yes in accordance with specification.
State the principal additional spare gear supplied

The foregoing is a correct description.

For JOHN READHEAD & SONS, LTD.

H.M. Coatsworth.

Manufacturer.

Director.



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00237-00247 F106

During progress of work in shops - - (1943) Oct. 4, 15, 27 Nov. 5, 9, 15, 16, 17, 19, 22, 28 Dec. 3, 6, 7, 8, 17, 23, 24, 28, 29, 30, 31 (1944) Jan. 4, 5, 6, 7, 10, 11, 12, 14, 17, 19, 20, 21, 25, 26, 27, 31 Feb. 1, 2, 3, 7, 8, 9, 10, 11, 14, 15, 17, 18, 21, 22, 28 Mar. 1, 3, 6, 8, 9, 10, 14, 15, 16, 17, 20, 24, 28, 29, 30 Apr. 6, 13, 18, 24, 25, 26, 27 May 2, 4, 8, 9, 11, 15, 22, 24, 25, 30 June 2, 6, 8, 9, 10, 12, 15, 19, 20, 21, 22, 26, 27, 29, 30 July 3, 6, 7, 11, 12, 13, July 14, 17, 18, 19, 20, 21, 31 Aug. 2, 3, 4, 8, 9, 10

Dates of Survey while building

During erection on board vessel - -

Total No. of visits 119

Dates of Examination of principal parts - Cylinders 26-4-44 Slides 9-5-44 Covers 26-4-44

Pistons 9-5-44 Piston Rods 10-6-44 Connecting rods 10-6-44

Crank shaft 19-1-44 Thrust shaft 12-7-44 Intermediate shafts 12-7-44

Tube shaft ✓ Screw shaft 30-5-44 Propeller 30-5-44

Stern tube 22-5-44 Engine and boiler seatings 29-6-44 Engines holding down bolts 7-7-44

Completion of fitting sea connections 8-6-44 11-7-44

Completion of pumping arrangements 19-7-44 Boilers fixed 6-7-44 Engines tried under steam 12-7-44

Main boiler safety valves adjusted 4-8-44 Thickness of adjusting washers P/S 1/16" C/S 1/32" S/P 1/2"

Crank shaft material S.M. Steel Identification Mark 8253 Thrust shaft material S.M. Steel Identification Mark 8591

Intermediate shafts, material S.M. Steel Identification Marks 8575 8576 8579 8577 8580 Tube shaft, material ✓ Identification Mark 26-4-44

Screw shaft, material S.M. Steel Identification Mark 8574 Steam Pipes, material S.M. Steel Test pressure 660 lb Date of Test 26-7-29-1

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 ✓ 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 PICKWICK

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed under special survey in accordance with rule requirements & approved plans. Materials & workmanship are good. The machinery was satisfactorily tested on running trials & in my opinion is eligible for classification with records of +L.M.C.B. 44. F.D.C.L. 25 B (S.F.) 1 Aug 3 S.B.

The amount of Entry Fee £ 6-0-0 When applied for, 22 AUG 1944

3/5 Special £ 76-11-6

Donkey Boiler Fee £ ✓ : ✓ : When received, 19

Travelling Expenses (if any) £ ✓ : ✓ : 19

J. H. Matthews
Engineer Surveyor to Lloyd's Register of Shipping.

WED. 6 SEP 1944

Committee's Minute

Assigned

LMC *8.44
2 SB (S.F.) & 1 Aux SB
220 lb 20%



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