

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 24 SEP 1942

Date of writing Report 19 When handed in at Local Office 22 SEP 1942 Port of SUNDERLAND.

No. in Survey held at SUNDERLAND. Date, First Survey Apr 13 Last Survey Sep. 15 1942
Reg. Book. on the FIRE DOG (Number of Visits 49) Gross Tons 1557 Net 879

Built at Sunderland By whom built H. Austin & Son, Ltd. Yard No. 364 When built 1942

Engines made at do. By whom made H. E. Mac. Eng. Co. (1938), Engine No. 4019 When made 1942

Boilers made at do. By whom made do. Boiler No. do. When made do.

Registered Horse Power Owners Gas Light & Coke Co. Ltd Port belonging to London

Nom. Horse Power as per Rule 196 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which Vessel is intended Coal

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute
Dia. of Cylinders 16 1/2", 24 1/2", 47" Length of Stroke 33" No. of Cylinders 3 No. of Cranks 3
Crank shaft, dia. of journals as per Rule 9.19" Crank pin dia. 9 1/2" Crank webs Mid. length breadth — Thickness parallel to axis 5 3/4" as fitted 9 1/2" Mid. length thickness — Thickness around eye-hole 5" x 4 3/4"

Intermediate Shafts, diameter as per Rule 8.75" Thrust shaft, diameter at collars as per Rule 9.19" as fitted 9 1/2" x 9 1/8"

Tube Shafts, diameter as per Rule — Screw Shaft, diameter as per Rule 9.85" Is the tube shaft fitted with a continuous liner yes as fitted 10 1/4"

Bronze Liners, thickness in way of bushes as per Rule 19.1/32" Thickness between bushes as per Rule 14.3/32" Is the after end of the liner made watertight in the propeller boss yes as fitted 20/32" as fitted 18/32"

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 shaft no If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 3'-5"

Propeller, dia. 13'-2" Pitch 13'-3" No. of Blades 4 Material C.I. whether Movable not Total Developed Surface 61 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work yes

Feed Pumps No. and size, 6" x 4 1/4" x 6" Pumps connected to the Main Bilge Line No. and size 1, 9" x 11" x 10" & 1, 6" x 4 1/4" x 6" How driven Steam

Ballast Pumps, No. and size 1, 9" x 11" 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 Eng. Rm. 1 @ 2 1/2" dia., Blr. Rm. 1 @ 2 1/2" dia.
In Pump Room In Holds, &c. No. 1. 1 @ 3 1/2" dia.; No. 2. 2 @ 3" dia.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 5" dia. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 4" dia. & 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 Are they fitted with Valves or Corks 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 both

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 — 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 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 — Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2952 sq. ft.
Is Forced Draft fitted yes No. and Description of Boilers One, Single ended Working Pressure 200 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes
IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? yes

Is the donkey boiler intended to be used for domestic purposes only no

PLANS. Are approved plans forwarded herewith for Shafting 2.9.41 Main Boilers 8.9.41. Auxiliary Boilers — Donkey Boilers —
(If not state date of approval)
Superheaters — General Pumping Arrangements 27.10.41 Oil fuel Burning Piping Arrangements —

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes

State the principal additional spare gear supplied One cast-iron propeller.

1942. April 13, 20, 27, 28. May 6, 7, 8, 12, 19, 28. June 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 14, 17, 18
 19. 22, 23, 24, 25, 26, 27, 29. July 1, 2, 3, 6, 7, 8, 11, 16, 21, 22, 24. Aug 6, 11, 13, 14, 21. Sep. 8, 15.

During progress of work in shops ---
 During erection on board vessel ---
 Total No. of visits 49

Dates of Examination of principal parts—Cylinders 11, 13, 17 / 6/42 Slides 26/6/42 Covers 17/6/42
 Pistons 1/7/42 Piston Rods 24/6/42 Connecting rods 29/6/42
 Crank shaft 22/6/42 Thrust shaft 8/7/42 Intermediate shafts ---
 Tube shaft --- Screw shaft 8/7/42 Propeller 8/7/42
 Stern tube 8/7/42 Engine and boiler seatings 27/6/42 Engines holding down bolts 22/7/42
 Completion of fitting sea connections 2/7/42
 Completion of pumping arrangements 8/9/42 Boilers fired 21/8/42 Engines tried under steam 21/8/42 & 15/9/42
 Main boiler safety valves adjusted 15/9/42 Thickness of adjusting washers 7/16"
 Crank shaft material *Steel* Identification Mark 7334 Thrust shaft material *steel* Identification Mark 7313
 Intermediate shafts, material --- Identification Marks --- Tube shaft, material --- Identification Mark ---
 Screw shaft, material *steel* Identification Mark 7312 Steam Pipes, material *steel* Test pressure 600 Date of Test 6-8-42
 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 *not required*
 Is this machinery duplicate of a previous case *no* If so, state name of vessel ---

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 the approved plans, Secretary's letters and the requirements of the Rules. Workmanship and materials are good. The machinery has been efficiently fitted on board and tried under working conditions with satisfactory results and is eligible, in my opinion, for the

NOTATION + L.M.C. 9.42, C.L., I.S.B. 200 lbs., D.B. 105 F.D.

L.R. Home

The amount of Entry Fee ... £ 3 : : When applied for.
 Special ... £ 49 : 0 : 22 SEP 1942
 Donkey Boiler Fee ... £ : : When received.
 Travelling Expenses (if any) £ : : 19

Committee's Minute **FRI 9 OCT 1942**
 Assigned *L.M.C. 9.42*
J.D. Ch.



SUNCELAND. Certificate to be sent to

The Surveys are requested not to write on or below the space for Committee's Minute.