

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

7 AUG 1936

Date of writing Report 19 When handed in at Local Office 5 AUG 1936 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 1st April '36 Last Survey 24 July 1936
 Req. Book on the S.S. "SPRINGWOOD" (Number of Visits 58)
 Built at Sunderland By whom built Messrs. Shaw & Sons Ltd Yard No. 446 Tons Gross 1177
Net 657 When built 1936
 Engines made at Sunderland By whom made N.E. & L. Eng'g Co. Ltd Engine No. 2854 When made 1936
 Boilers made at Sunderland By whom made N.E. & L. Eng'g Co. Ltd Boiler No. 2854 When made 1936
 Registered Horse Power 119 Owners The Spingwell Shipping Co Ltd Port belonging to London
 Nom. Horse Power as per Rule 119 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes
 Trade for which Vessel is intended Traffic

ENGINES, &c.—Description of Engines Triple Expansion (Poppet Valves on HP) Revs. per minute 105
 Dia. of Cylinders 13 1/2" x 23" x 38" Length of Stroke 27" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, d.a. of journals as per Rule 7 1/2" Crank pin dia. 7 7/8" Crank webs Mid. length breadth 13" Thickness parallel to axis 4 1/16"
as fitted 7 1/2" Crank webs Mid. length thickness 4 3/16" shrunk Thickness around eye-hole 3 1/16" in 4 1/16" journal
 Intermediate Shafts, diameter as per Rule 7.15" Thrust shaft, diameter at collars as per Rule 7.5"
as fitted none as fitted 7 7/8"
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 8.066" Is the tube shaft fitted with a continuous liner Yes
as fitted as fitted 8 1/2" screw
 Bronze Liners, thickness in way of bushes as per Rule .541" Thickness between bushes as per Rule .405" Is the after end of the liner made watertight in the
as fitted 9/16" as fitted 1/2" 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 no Is an approved Oil Gland or other appliance fitted at the after end of the tube
 If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 2-10"
 Propeller, dia. 11'-0" Pitch 10'-0" (mean) No. of Blades 4 Material C.I. whether Movable fixed Total Developed Surface 47.5 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 1/4" Stroke 15" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 1/4" Stroke 15" Can one be overhauled while the other is at work Yes
 Feed Pumps No. and size One 7" x 5" x 12" Pumps connected to the No. and size One 8 1/2" x 10" x 18"
How driven Steam Main Bilge Line How driven Steam
 Ballast Pumps, No. and size One 8 1/2" x 10" x 18" Lubricating Oil Pumps, including Spare Pump, No. and size
 Are two independent means arranged for circulating water through the Oil Cooler Two 3" dia. CR Wings Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room One of 4" Will 3" Two 2 1/2" dia. CR Wings Two 2 1/2" dia. B.R. wings
 In Pump Room Two 3" dia. Main hold In Holds, &c. Two 2 1/2" dia. Fore hold

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 4" dia Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size One 3 1/2" 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 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 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 — 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 none Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 1820 sq
 Is Forced Draft fitted Yes No. and Description of Boilers Two cylindrical S.E. Working Pressure 200 lbs/sq"
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? —
 Is the donkey boiler intended to be used for domestic purposes only —
 PLANS. Are approved plans forwarded herewith for Shafting Plans retained for sister vessel. Main Boilers 3/5/36 Auxiliary Boilers 4/2/36 Donkey Boilers —
 (If not state date of approval)
 Superheaters None General Pumping Arrangements 7/5/36 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 C.I. propeller, one set of top and bottom nut bearings, one set each of air pump, fuel donkey and circulating pumps valves, one safety valve spring, one main and one donkey check valves, 10 condenser tubes and 12 frames, 10 boiler tubes, one set of thrust pads, one set of wings and springs for HP piston.
For Poppet Valve gear. — One valve, one spindle and bush and 2 Cam rollers.

The foregoing is a correct description,
 FOR THE NORTH EASTERN MARINE ENGINEERS, L^{td}

Anders J. Barry
 MANAGER

Manufacturer.



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 Foundation

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NOTE.—The words which do not apply should be marked.

1936. Apr. 1, 3, 8, 9, 14, 20, 22, 27. May 1, 4, 5, 6, 7, 11, 13, 14, 15, 18, 19, 21, 22, 25, 26, 27, 29. June 2, 4, 5, 9, 10, 12, 13, 15, 16, 17, 18, 19, 22, 23, 26, 29, 30. July 1, 2, 3, 6, 7, 9, 10, 11, 13, 14, 15, 17, 20, 21, 23, 24.

Dates of Survey while building: During erection on board vessel - - -

Total No. of visits **58**

Dates of Examination of principal parts - Cylinders LP 22/6/36, MP 18/6/36, HP 20/6/36. Slides LP 14/7/36, MP 22/6/36. Covers 24/6/36.

Pistons LP 20/6/36, MP 6/4/36, HP 3/4/36. Piston Rods 13/4/36. Connecting rods 13/7/36.

Crank shaft 2/7/36. Thrust shaft 1/7/36. Intermediate shafts -

Tube shaft - Screw shaft 16/6/36. Propeller 16/6/36.

Stern tube 15/6/36. Engine and boiler seatings 9/7/36. Engines holding down bolts 20/7/36.

Completion of fitting sea connections 15/6/36. Boilers fixed 14/7/36. Engines tried under steam 24/7/36.

Completion of pumping arrangements 24/7/36. Thickness of adjusting washers P.F. 1/32", S.A. 3/16".

Main boiler safety valves adjusted 24/7/36. Identification Mark M.C. 2.7.36. Thrust shaft material S.O. Steel. Identification Mark M.C. 1.7.36.

Crank shaft material S.H. Steel. Identification Mark - Tube shaft, material - Identification Mark -

Intermediate shafts, material - Identification Marks - Steam Pipes, material S.O. Steel. Test pressure 600 lbs. Date of Test 21.7.36.

Screw shaft, material M.C. 16.6.36. Identification Mark S.H. Steel.

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 Yes. If so, state name of vessel "SPRINGWEAR"

General Remarks (State quality of workmanship, opinions as to class, &c. The Engines and Boilers of this vessel have been built under special survey in accordance with the Society's Rules and the materials and workmanship are good. The machinery has been securely fitted on board the vessel and tested under working conditions. The Machinery of this vessel, as now seen, is in a good and efficient condition and eligible, in my opinion, to have the notation +L.M.C. 7.36 and Tail shaft C.L. in the Register book.

SUNDERLAND.

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

The amount of Entry Fee ... £ 3 : : When applied for, 24 JULY 1936

Special ... £ 29 : 15 : : When received, 13.8.36

Donkey Boiler Fee ... £ : : : 14/8

Travelling Expenses (if any) £ : : : 14/8

M. Caldwell & J. H. Kason -
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 11 AUG 1936

Assigned + L.M.C. 7.36
J.D., C.L.

