

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 10 When handed in at Local Office 5 AUG 1936 Port of Sunderland  
 No. in. Survey held at Sunderland Date, First Survey 1st Apr '36 Last Survey 24 July 1936  
 Req. Book on the S.S. "SPRINGWOOD" (Number of Visits 58)  
 Built at Sunderland By whom built Messrs Shand Bros Ltd Yard No. 446 Tons Gross 1177 Net 657  
 Engines made at Sunderland By whom made NE & Y. Eng'g Co. Ltd Engine No. 2854 When built 1936  
 Boilers made at Sunderland By whom made NE & Y. Eng'g Co. Ltd Boiler No. 2854 When made 1936  
 Registered Horse Power Owners The Spungwell 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 Trawler

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 3/16"  
 as fitted 7 1/2" Mid. length thickness 4 3/16" shrunk Thickness around eye-hole 3 1/2" pin 4 1/16" journal  
 Intermediate Shafts, diameter as per Rule 7 1/2" Thrust shaft, diameter at collars as per Rule 7 5/8"  
 as fitted 7 1/2" Is the {tube} shaft fitted with a continuous liner {Yes  
 Tube Shafts, diameter as per Rule 8.066" as fitted 8 1/2" Is the {screw} shaft fitted with a continuous liner {Yes  
 as fitted 8 1/2" Is the after end of the liner made watertight in the  
 Bronze Liners, thickness in way of bushes as per Rule 541" as fitted 9/16" Thickness between bushes as per Rule 405" as fitted 1/2"  
 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  
 shaf ho If so, state type 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 Moveable 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 { No. and size One 7" x 5" x 12" Pumps connected to the { No. and size One 8 1/2" x 10" x 18"  
 Pumps { 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  
 Bilge Pumps;—In Engine and Boiler Room One of 4" dia 3" Two 2 1/2" dia CR Wings Two 2 1/2" dia BR wings  
 In Pump Room Two 3" dia Main hold In Holds, &c. Two 2 1/2" dia Four 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 turn l 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 No 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 retained for sister vessel.  
 PLANS. Are approved plans forwarded herewith for Shafting 3/5/36 Main Boilers 4/2/36 Auxiliary Boilers 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 bottom end bearings,  
 One set each of air pump, fuel donkey and circulating pump valves,  
 One safety valve spring, one main and one donkey check valves, 10  
 cylinder tubes and 12 frames, 10 boiler tubes, one set of thrust pads,  
 one set of rings 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, L<sup>d</sup>  
 FOR THE NORTH EASTERN MARINE ENGINEERING CO. L<sup>d</sup>

Anders J. Barry.  
 MANAGER

Manufacturer.



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Lloyd's Register  
 Foundation

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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  
 During progress of work in shops -- 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 HP 18/6/36 HP 20/6/36 Slides HP 22/6/36 LP 14/7/36 Covers 20/6/36  
 Pistons HP 6/6/36 HP 3/7/36 Piston Rods 13/7/36 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  
 Completion of pumping arrangements 24/7/36 Boilers fixed 14/7/36 Engines tried under steam 24/7/36  
 Main boiler safety valves adjusted 24/7/36 Thickness of adjusting washers P.F. 4" S.A. 3 1/8" No 2347  
 Crank shaft material S.H. Steel Identification Mark M.C. 2.7.36 Thrust shaft material S.H. Steel Identification Mark M.C. 1.7.36  
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark  
 Screw shaft, material M.C. 16.6.36 Identification Mark S.H. Steel Steam Pipes, material S.O. Steel Test pressure 600 lbs Date of Test 21.7.36  
 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.S.C. 7.36 and Tail shaft C.L. in the Register book

The amount of Entry Fee ... £ 3 : : When applied for, 24 JULY 1936  
 Special ... £ 29 : 15 : :  
 Donkey Boiler Fee ... £ : : : When received, 13.8.36  
 Travelling Expenses (if any) £ : : :  
 Committee's Minute 10E. 11 AUG 1936  
 Assigned + Lincs 7.36  
 J.D. CL