

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office SEP 24 1938

Date of writing Report 23 SEP 1938 When handed in at Local Office 23 SEP 1938 Port of SUNDERLAND  
 No. in Survey held at SUNDERLAND Date, First Survey 27 Apr Last Survey 9 Sep 1938  
 Reg. Book. on the S/S Joseph Swan (Number of Visits 48) Tons { Gross 1571 Net 913  
 Built at Sunderland By whom built A.P. Austin & Son, Ltd Yard No. 350 When built 1938  
 Engines made at do By whom made A.S. Marine Eng. Co. (1918) Ltd Engine No. 2917 When made 1938  
 Boilers made at do By whom made do Boiler No. 2917 When made 1938  
 Registered Horse Power Owners London Power & Sd Port belonging to London  
 Nom. Horse Power as per Rule 193 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", 27 1/2", 46" Length of Stroke 33" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule appl. as fitted 9 1/2" Crank pin dia. 9 1/2" Crank webs Mid. length breadth — Thickness parallel to axis 5 3/4"  
 as fitted 9 1/2" Crank webs Mid. length thickness — shrunk Thickness around eye-hole 6" diam  
 Intermediate Shafts, diameter as per Rule — as fitted — Thrust shaft, diameter at collars as per Rule appl. as fitted 9 7/8"  
 Tube Shafts, diameter as per Rule — as fitted — Screw Shaft, diameter as per Rule appl. as fitted 10 1/4" Is the { tube } shaft fitted with a continuous liner { screw } yes  
 Bronze Liners, thickness in way of bushes as per Rule appl. as fitted 5/8" Thickness between bushes as per Rule appl. as fitted 9/16" 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 shaft no If so, state type as for sister vessel Length of Bearing in Stern Bush next to and supporting propeller 3 1/2"  
 Propeller, dia 13 1/3" Pitch 11" - 4 3/4" No. of Blades 4 Material Orange whether Moveable fixed Total Developed Surface 58 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 1 1/2 - 4 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 1 1/2 - 4 1/2" Can one be overhauled while the other is at work yes  
 Feed Pumps { No. and size 1. 6" x 4 1/4" x 6" Main Bilge Line { No. and size 1. 9" x 11" x 10" How driven Steam How driven —  
 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. Bilge Rm. 1 @ 2 1/2" dia.  
 In Pump Room — In Holds, &c. 2 @ 2 1/2" dia. in Fore hold. 2 @ 3" dia in After hold.  
 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. 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 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 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 hold suction How are they protected heavy timber  
 What pipes pass through the deep tanks not hold suction Have they been tested as per Rule yes  
 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  
 Which Boilers are fitted with Forced Draft Main Which Boilers are fitted with Superheaters none  
 No. and Description of Boilers 1. Cylindrical Multitubular 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  
 Can the donkey boiler be used for domestic purposes only —  
**PLANS.** Are approved plans forwarded herewith for Shafting 20/8/37 Main Boilers yes Auxiliary Boilers — Donkey Boilers yes  
 Superheaters — General Pumping Arrangements yes 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 6 condenser tubes & 50 journals.

The foregoing is a correct description.

THE NORTH EASTERN MARINE ENGINEERING CO. (1930) LTD.

G. H. Hubert Manufacturer.  
RESIDENT MANAGER.



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Lloyd's Register Foundation

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1938 Apr. 27, 29, by day 5, 6, 10, 17, 18, 19, 23, 30, 31. June 1, 2, 8, 10, 14, 15, 16, 17, 20, 21, 23, 24, 25, 27, 29, 30. July 1, 4, 5, 6, 14, 15, 19, 20, 22, 23. Aug. 11, 12, 15, 16, 19, 23, 24, 25, 26. Sep. 9.

Dates of Survey while building

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of visits 48

Dates of Examination of principal parts - Cylinders 14, 21, 23/6/38 Slides 15/7/38 Covers 15/7/38

Pistons 20/6/38 Piston Rods 4/7/38 Connecting rods 30/6/38

Crank shaft 29/6/38 Thrust shaft 22/7/38 Intermediate shafts -

Tube shaft - Screw shaft 22/7/38 Propeller 23/7/38

Stern tube 22/7/38 Engine and boiler seatings 22/7/38 Engines holding down bolts 23/8/38

Completion of fitting sea connections 22/7/38

Completion of pumping arrangements 9/9/38 Boilers fixed 23/8/38 Engines tried under steam 26/8/38

Main boiler safety valves adjusted 26/8/38 Thickness of adjusting washers 4/6"

Crank shaft material steel Identification Mark 391 Thrust shaft material steel Identification Mark 389

Intermediate shafts, material - Identification Marks - Tube shaft, material - Identification Mark -

Screw shaft, material steel Identification Mark 390 Steam Pipes, material steel Test pressure 600 lbs Date of Test 25/8/38

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 yes If so, state name of vessel "Leonard Pierce"

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

NOTATION + L.M.C. 9.38.

L. P. Howard  
 A. E. Munro  
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : : When applied for,  
 Special ... £ 48 : 5 : 13 SEP. 1938  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) £ : : 28/9/38

Committee's Minute FRI 30 SEP 1938  
 Assigned + L.M.C. 9.38  
 F.D. C.L.

SUNDERLAND.

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

