

Rpt. 4.

No. 5830

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 25 NOV 1946 When handed in at Local Office 19 Port of HULL.
 No. in Survey held at HULL. Date, First Survey 18. 7. 46 Last Survey 15. 11. 1946
 Reg. Book (Number of Visits 13)
 on the Steam Trawler "ARCTIC PIONEER".
 Built at Hull By whom built Amos & Smith Ltd. Yard No. When built 1946
 Engines made at Hull By whom made Amos & Smith Ltd. Engine No. 793 When made 1946
 Boilers made at Hull By whom made Amos & Smith Ltd. Boiler No. When made 1946
 Registered Horse Power 171 Owners Boyd Line Ltd. Port belonging to
 Machinery Numeral 203 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 Trade for which vessel is intended Trawler & Ocean going service.

ENGINES, &c.—Description of Engines Triple expansion - steam reciprocating. Revs. per minute
 Dia. of Cylinders 14½", 24", 40" Length of Stroke 27" No. of Cylinders 3 No. of Cranks 3
 as per Rule approx. 8½" Mid. length breadth 1'3½" Thickness parallel to axis 5½"
 Crank shaft, dia. of journals 8½" Crank pin dia. 8½" Crank webs 5½" shrunk Thickness around eye-hole 3.5/8"
 as fitted 8½" Mid. length thickness 5½"
 Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule
 as fitted Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner
 as fitted Is the after end of the liner made watertight in the propeller boss
 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
 Propeller, dia. Pitch No. of Blades Material whether Moveable Total Developed Surface sq. feet
 Feed Pumps worked from the Main Engines, No. Two Diameter 2½" Stroke 15" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. Two Diameter 2½" Stroke 15" Can one be overhauled while the other is at work Yes
 Feed Pumps No. and size Pumps connected to the Main Bilge Line No. and size How driven
 Lubricating Oil Pumps, including Spare Pump, No. and size
 Ballast Pumps, No. and size Suctions, connected both to Main Bilge Pumps and Auxiliary
 Are two independent means arranged for circulating water through the Oil Cooler
 Bilge Pumps:—In Engine and Boiler Room In Holds, &c.
 In Pump Room

Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges.
 No. and size Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes
 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
 Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Overboard Discharges above or below the deep water line
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate
 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
 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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers 2415 + 1092 = 3507 ft².
 Which Boilers are fitted with Forced Draft Yes Which Boilers are fitted with Superheaters 1SB
 No. and Description of Boilers Working Pressure

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

If so, is a report now forwarded?

IS A DONKEY BOILER FITTED?

Can the donkey boiler be used for other than domestic purposes

PLANS. Are approved plans forwarded herewith for Shafting 17.5.46. Main Boilers Auxiliary Boilers Donkey Boilers
 (If not state date of approval)

Superheaters General Pumping Arrangements

Oil fuel Burning Piping Arrangements

SPARE GEAR.

Is the spare gear required by the Rules been supplied
 State the principal additional spare gear supplied

The foregoing is a correct description.

For AMOS & SMITH LTD.

Manufacturer.

W. C. Brown

DIRECTOR

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Lloyd's Register
Foundation

002577-002582-0087

Dates of Survey while building
During progress of work in shops - - { 1946 July 18, Aug 28, Sept 23, 25, 27, Oct 14, 11, 14, 16, 22, 24, Nov 12, 15.
During erection on board vessel - - - {
Total No. of visits 13

Dates of Examination of principal parts - Cylinders 23.9.46. Slides 23.9.46. Covers 23.9.46.
Pistons 25.9.46 Piston Rods 4.10.46. Connecting rods 4.10.46.
Crank shaft 27.9.46. Thrust shaft - Intermediate shafts -
Tube shaft - Screw shaft - Propeller -
Stern tube - Engine and boiler seatings - Engines holding down bolts -
Completion of fitting sea connections - Boilers fixed - Engines tried under steam -
Completion of pumping arrangements - Thickness of adjusting washers -
Main boiler safety valves adjusted Journals & Pins L.R. 703 FW 14.9.45.
Crank shaft material F.I Steel Identification Mark Coup. End. Thrust shaft material 190 Identification Mark -
Intermediate shafts, material - Identification Marks 8262 C.P. 23.5.46. Webs 191 & 2 B.H. 16.8.46. Identification Mark -
Screw shaft, material - Identification Mark - Tube shaft, material - Identification Mark -
Steam Pipes, material - Test pressure - Date of Test -
Is an installation fitted for burning oil fuel - 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..... No If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c.)
The main engines of this vessel have been built under Special Survey in accordance with the Secretary's letters, the approved plans and the Rules. The workmanship and materials are good. Engines have been dispatched to Messrs. Gray of West Hartlepool for installation in Steam Trawler "ARCTIC PIONEER" and are eligible in my opinion to be classed on completion of tests.

The amount of Entry Fee ... £ 24 : 6 - When applied for, 23 NOV 1946
Special ... £ : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : When received, 19

Date
Committee's Minute See minute on H/L 54366.

W. S. Shields
Engineer Surveyor to Lloyd's Register of Shipping.