

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

25 MAR 1937

Received at London Office

30 MAR 1937

Date of writing Report 19 When handed in at Local Office 19 Port of HULL

No. in Survey held at Hull Date, First Survey 29th Dec. 1936 Last Survey 19th March 1937
 Reg. Book. 67243 on the Steam Trawler "ARCTIC PIONEER" (Number of Visits 27) Gross 501.17 Tons
 Net 188.99

Built at Selby By whom built Bochane & Sons Ltd Yard No. 1171 When built 1931-3

Engines made at Hull By whom made S. D. Holmes & Co., Ltd Engine No. 1521 When made 1937

Boilers made at Hull By whom made S. D. Holmes & Co., Ltd Boiler No. 1521 When made 1937

Registered Horse Power 132 Owners Boyd Line Ltd Port belonging to Hull

Nom. Horse Power as per Rule 132 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended Fishing

ENGINES, &c.—Description of Engines Reciprocating Triple Expansion Revs. per minute 3

Dia. of Cylinders 14 1/2" - 24" - 40" Length of Stroke 27" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals 8.106" as per Rule 8.106" Crank pin dia. 8 1/4" Crank webs Mid. length breadth 15 3/8" Thickness parallel to axis 5 1/4"
 as fitted 8.25" Mid. length thickness 5 1/4" shrunk Thickness around eye-hole 3 3/8"

Intermediate Shafts, diameter as per Rule 7.72" Thrust shaft, diameter at collars as per Rule 8.106"
 as fitted 7 3/8" as fitted 8 1/4"

Tube Shafts, diameter as per Rule 8.595" Is the { tube } shaft fitted with a continuous liner { Yes }
 as fitted 8 3/4" { screw }

Bronze Liners, thickness in way of bushes as per Rule 5.577" Thickness between bushes as per Rule 4.183" Is the after end of the liner made watertight in the
 as fitted 9 1/2" 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 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 40"

Propeller, dia. 10'6" Pitch 11'-0" No. of Blades 4 Material Cast iron whether Moveable No Total Developed Surface 41.5 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size One 6" x 3 1/2" x 6" Duplex & One 7" x 5" x 6" Duplex Pumps connected to the { No. and size One 7" x 5" x 6" Duplex & One 3" Ejector }
 How driven Steam Main Bilge Line How driven Steam

Ballast Pumps, No. and size 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 2 at 2" diameter In Holds, &c. 5 at 2" diameter

In Pump Room

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 4 3/4" dia Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size One 3" Ejector 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 Forward suction How are they protected Wood casings

What pipes pass through the deep tanks 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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record "3") Total Heating Surface of Boilers 2415 square feet

Is Forced Draft fitted No No. and Description of Boilers One Single Ended Return Tank Working Pressure 220 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 Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers Yes
 (If not state date of approval)

Superheaters Yes 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

- One set of air pump valves.
- One safety valve spring
- One main & donkey check valve
- One set of valves for Duplex & Blow-off Pumps.
- One main engine feed pump plungers.
- One impeller shaft for centrifugal pump.
- One bottom water gauge pipe
- One spare feed pipe
- One main engine eccentric strap.

The foregoing is a correct description,
 FOR CHARLES D. HOLMES & CO., LTD.
[Signature]

Manufacturer.



1m.382. T. NOTE—The words when no not apply

During progress of work in shops -- 1936: - Dec. 29-31.
 Dates of Survey while building {
 During erection on board vessel - - - 1937: - Jan 4-11-13-22-29 Feb. 1-3-10-15-22-24-25-26.
 Mar 1-3-4-6-9-12-13-13-16-17-19-19.
 Total No. of visits 27.

Dates of Examination of principal parts—Cylinders 22.2.37 Slides 25.2.37 Covers 25.2.37.
 Pistons 25.2.37. Piston Rods 22.2.37 Connecting rods 22.2.37.
 Crank shaft 22.2.37 Thrust shaft 26.2.37 Intermediate shafts 22.2.37.
 Tube shaft " Screw shaft 29.12.36 31.12.36 Propeller 31.12.36
 Stern tube 4.1.37 Engine and boiler seatings 13.1.37 Engines holding down bolts 9.3.37.
 Completion of fitting sea connections 13.1.37.
 Completion of pumping arrangements 19.3.37 Boilers fired 9.3.37 Engines tried under steam 19.3.37.
 Main boiler safety valves adjusted 19.3.37 Thickness of adjusting washers F = 9/8" R = 5/16" SUPERHEATER = 9/16"
 Crank shaft material Steel Identification Mark 1055 Thrust shaft material Steel Identification Mark 1055
 Intermediate shafts, material Steel Identification Marks 1055 Tube shaft, material " Identification Mark "
 Screw shaft, material Steel Identification Mark 1055 Steam Pipes, material A.S. Steel Test pressure 660 lb/p Date of Test 16.3.37.
 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 "Arctic Explorer"

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been built under Special Survey, the materials & workmanship being sound and good.
 It has been satisfactorily fitted on board, tried under steam and found good.
 It is eligible in my opinion to have record of + L.M.C. 3,37 CL Lpt.

The amount of Entry Fee ... £ 3 : 0 : When applied for,
 Special ... £ 38 : 0 : 25 MAR 1937
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 7.4.37 8/4

Committee's Minute FRI 2 APR 1937.
 Assigned + Linc 3.37 Lpt CL



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