

REPORT ON OIL ENGINE MACHINERY.

No. 19694

Received at London Office

29 MAY 1936
JUL 1936

Date of writing Report 1st May 1936 When handed in at Local Office

Port of Grimsby

No. in Survey held at Lincoln

Date, First Survey 3rd October 1935 Last Survey 30th April 1936

Single on the Twin Triple Quadruple Screw vessel

M/S *Arctura* Newcastle Swan Hunter & Wigham Richardson, Ltd. Tons Gross Net

Built at Glasgow

By whom built Lithgows Yard No. 880 When built 1936

Engines made at Lincoln

By whom made Ruston & Hornsby, Ltd. Engine No. 178297 When made 1936

Donkey Boilers made at

By whom made Boiler No. When made

Brake Horse Power 60

Owners Anglo Saxon Petroleum Co. Port belonging to London

Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended [One Engine - Type 3VCRZ]

Maximum pressure in cylinders 700 lbs. Diameter of cylinders 8" Length of stroke 10 3/4" No. of cylinders 3. No. of cranks 3.

Revolutions per minute 450 Flywheel dia. 3'-4" Weight 19 cwt. Means of ignition Compression Kind of fuel used Crude oil.

Crank Shaft, dia. of journals as approved. Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 8" Thickness parallel to axis

Flywheel Shaft, diameter as approved. Intermediate Shafts, diameter as per Rule. Thrust Shaft, diameter at collars as per Rule.

Stern Tube Shaft, diameter as per Rule. Screw Shaft, diameter as per Rule. Is the tube screw shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule. Thickness between bushes as per Rule. 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

Is 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

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

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

Method of reversing Engines. Is a governor or other arrangement fitted to prevent racing of the engine when declutched. Means of lubrication

Thickness of cylinder liners 3/4". Are the cylinders fitted with safety valves. Are the exhaust pipes and silencers water cooled or lagged with

Non-conducting material water. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Cooling Water Pumps, No. one. Are special arrangements made for dealing with cooling water if discharged into bilges

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size How driven Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one geared

Ballast Pumps, No. and size. Two independent means arranged for circulating water through the Oil Cooler. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

In Pump Room. Holds, etc. Independent Power Pump Direct Suctions to the Engine 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 Spaces

Are they fitted with Valves or Cocks. Are all Sea Connections fitted direct on the skin of the ship

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform 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

How are they protected. Have they been tested as per Rule. What pipes pass through the bunkers

What pipes pass through the deep tanks. 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

Department to another. Is the Shaft Tunnel watertight. Is it fitted with a watertight door. worked from

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Exhausting Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule. Position

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule. Is a drain fitted at the lowest part of each receiver

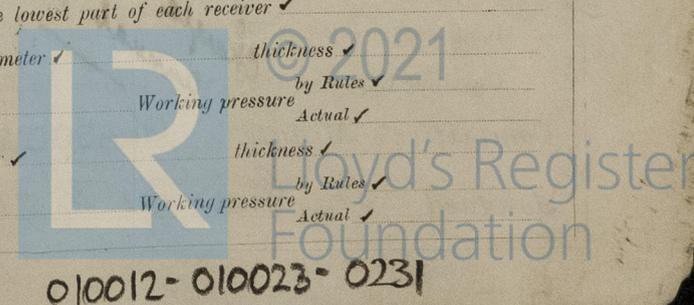
Are the internal surfaces of the receivers be examined and cleaned. Cubic capacity of each Internal diameter thickness

High Pressure Air Receivers, No. Material Range of tensile strength Working pressure by Rules Actual

Unless, lap welded or riveted longitudinal joint. Total cubic capacity Internal diameter thickness

Working Air Receivers, No. Material Range of tensile strength Working pressure by Rules Actual

Unless, lap welded or riveted longitudinal joint. Foundation



010012-010023-0231

IS A DONKEY BOILER FITTED? /

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 7.9.36.
(If not, state date of approval)

Receivers ✓

Separate Tanks ✓

Donkey Boilers ✓

General Pumping Arrangements ✓

Oil Fuel Burning Arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes.

State the principal additional spare gear supplied ✓

Kuston & Hornsby, Limited.

The foregoing is a correct description.

R. Onions 30/4/36 Manufacturer.

Dates of Survey while building: During progress of work in shops - 1935 Oct 3, 17, 24, 28, 31, Nov 7, 11, 19, 28, 1936 Jan 8, Feb 13, 26, 27, Mar 2, 12, 16, 19, 23, 26, 30, Apr 2, 6, 16, 23, 27, 30. During erection on board vessel - Total No. of visits 26.

Dates of Examination of principal parts - Cylinders 27.2.36 Covers 24.2.36. Pistons 13.2.36. Rods ✓ Connecting rods 28.11.36

Crank shaft 8.1.36. Flywheel shaft 8.1.36. Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓

Screw shaft ✓ Propeller ✓ Stern tube ✓ Engine seatings ✓ Engines holding down bolts ✓

Completion of filling sea connections ✓ Completion of pumping arrangements ✓ Engines tried under working conditions 24.36.

Crank shaft, Material Sm. steel Identification Mark No 3229C. Flywheel shaft, Material Sm. steel Identification Mark No 3229C.

Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material ✓ Identification Marks ✓

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material ✓ Identification Mark ✓

Is the flash point of the oil to be used over 150° F. ✓

Have the requirements of the Rules for oil fuel pipes and tank fittings 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 Grimsey report No 18653, 3/4" Inchan

Is this machinery duplicate of a previous case yes. If so, state name of vessel Same type. Now 3 instead of 5 cylinders

General Remarks (State quality of workmanship, opinions as to class, &c.) The workmanship + materials are good.

The engine has been built under Special Survey in accordance with the Rules + Approved plan. Running trials were carried out at the maker's works under brake load with satisfactory results.

The engine has been built to the order of Messrs Peter Brotherhood, Ltd., Peterborough, for Messrs J. G. Kincaid + Co., of Greenock.

Now securely fitted on board Swan Hunter's 1519

Fitted in Swan Hunter's 1519

Request form attached Guss rps. No 19687.

227/P/IV.5651-36/IV.2

Table with columns for 'The amount of Entry Fee', 'Special', 'Donkey Boiler Fee', 'Travelling Expenses (if any)', and 'When applied for'.

Committee's Minute GLASGOW 28 JUL 1936

Assigned See Guss. Rpt. No. 20189

H. L. Lidditch, Engineer Surveyor to Lloyd's Register of Shipping.



Vertical text on the left margin: (The Surveyors are requested not to write on or below the space for Committee's Minute.)