

REPORT ON OIL ENGINE MACHINERY.

No. 19187
-9 JAN 1935

Received at London Office 30 JAN 1935

Date of writing Report 4th Jan 1935 When handed in at Local Office 8th Jan 1935 Port of Grimsey
 No. in Survey held at Lincoln Date, First Survey 2nd July 1934 Last Survey 3rd Jan 1935
 Reg. Book. Number of Visits 32

on the Single Twin Triple Quadruple Screw vessel T/S TARDONA Tons Gross 4286
Net 1849

Built at Glasgow By whom built A. Stephens & Sons, Ltd. Yard No. 543 When built 1934

Engines made at ✓ By whom made ✓ Engine No. ✓ When made ✓

Oliver, Tinton made at Lincoln By whom made Ruston & Hornsby, Ltd. Eng. No. 173485 When made 1934

Brake Horse Power 52 Owners ✓ Port belonging to ✓

Nom. Horse Power as per Rule 8.5 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

Trade for which vessel is intended ✓ Type of Engine 3 v a 2

OIL ENGINES, &c.—Type of Engines Airless Injection, Cold starting 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 800 lb. Diameter of cylinders 5 3/8" Length of stroke 8" No. of cylinders 3 No. of cranks 3

Mean Indicated Pressure 80 lb. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6 3/16" Is there a bearing between each crank yes

Revolutions per minute 1000 Flywheel dia. 26" Weight 630 lbs. Means of ignition ✓ Kind of fuel used ✓

Crank Shaft, dia. of journals as approved 3 3/8" Crank pin dia. 3 1/4" Crank Webs Mid. length breadth 5 1/8" Thickness parallel to axis ✓
as fitted 3 3/8" Mid. length thickness 1 7/16" shrunk Thickness around eyehole ✓

Flywheel Shaft, diameter as approved 3 3/8" Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted 3 3/8" as fitted as fitted

Abse Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube ✓ shaft fitted with a continuous liner ✓
as fitted as fitted as fitted

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
as fitted as fitted

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

shaft ✓ 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

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

forced Thickness of cylinder liners 1/2" Are the cylinders fitted with safety valves yes 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 ✓

Cooling Water Pumps, No. one centrifugal Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

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

Is the cooling water led to the bilges ✓ If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements ✓ Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one, geared

Ballast Pumps, 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, No. and size:—In Machinery Spaces ✓ In Pump Room ✓

In Holds, &c. ✓ 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

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 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 ✓

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 ✓

If 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 ✓

Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule

as fitted

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule ✓

Can the internal surfaces of the receivers be examined and cleaned ✓

Is a drain fitted at the lowest part of each receiver ✓

High Pressure Air Receivers, No. ✓

Cubic capacity of each ✓

Internal diameter ✓

thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓

Material ✓

Range of tensile strength ✓

Working pressure by Rules ✓

Actual ✓

Starting Air Receivers, No. ✓

Total cubic capacity ✓

Internal diameter ✓

thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓

Material ✓

Range of tensile strength ✓

Working pressure by Rules ✓

Actual ✓

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 7.7.32.
(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 ✓

Request form attached

The foregoing is a correct description,
Ruston & Hornsby, Limited,

R. Onions 5/1/35 Manufacturer.

Dates of Survey while building
During progress of work in shops-- 1934 Jul 2.5.9.12.16.19.23 Aug 7.9.13.27.30 Sep 3.10.17.20.24.27 Oct 1.4.8.11.15.18.22.29 Nov 30 Dec 13.17.20.31 1935 Jan 3
During erection on board vessel---
Total No. of visits 32.

Dates of Examination of principal parts—Cylinders 20.9.34. Covers 30.9.34. Pistons 11.10.34. Rods ✓ Connecting rods 1.11.34.
Crank shaft 27.8.34. Flywheel shaft 27.8.34. Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓
Screw shaft ✓ Propeller ✓ Stern tube ✓ Engine seatings ✓ Engines holding down bolts ✓

Completion of fitting sea connections ✓ Completion of pumping arrangements ✓ Engines tried under working conditions 17.12.34.
Crank shaft, Material Sm. steel Identification Mark Nº 3197A. Flywheel shaft, Material Sm. steel Identification Mark 3197.
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 ✓

Is this machinery duplicate of a previous case ✓ If so, state name of vessel ✓

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 plans.
Running trials were carried out at the Maker's works with satisfactory results.

The engine has been despatched to Glasgow to be fitted on board the vessel.

The amount of Entry Fee .. £ : :
Special £ 9: 0 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 1: 10 :
When applied for, 12/1/1935
When received, 6.3 1935

Committee's Minute

GLASGOW

20 JAN 1935

Assigned See Gls. Rpt. No 55344

A. L. Silditch
Engineer Surveyor to Lloyd's Register of Shipping.

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Foundation