

REPORT ON OIL ENGINE MACHINERY.

Sld. No. 32174
7we No. 95287

Received at London Office AUG 5 1937

NEWCASTLE-ON-TYNE

Date of writing Report 10 When handed in at Local Office 30/7/37 Port of Newcastle on Tyne
No. in Survey held at Newcastle on Tyne Date, First Survey 7/12/36 Last Survey 29/7/1937
Reg. Book. Number of Visits 53

on the ~~Triple~~ ^{Single} Screw vessel **RODSLEY TROMA** Tons { Gross Net

Built at Sunderland By whom built Wm Darford & Sons Ltd Yard No. 638 When built 1937
Engines made at Newcastle on Tyne By whom made Swan, Hunter & W. Richardson Ltd Engine No. 1550 When made 1937
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power 1800 Owners Port belonging to Bergen
Nom. Horse Power as per Rule 388 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
Trade for which vessel is intended Ocean going

IL ENGINES, &c. Type of Engines Opposed piston airless injection 2 or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 568 lb/sq in Diameter of cylinders 520 mm Length of stroke 200 mm No. of cylinders 3 No. of cranks 3-3 throws
Mean Indicated Pressure 88 lb

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 820 mm of Centre Crank. Is there a bearing between each crank three throws.
Revolutions per minute 115 Flywheel dia. 2240 mm Weight 4.3 tons Means of ignition Compression Kind of fuel used Heavy oil fuel
Crank Shaft, dia. of journals as per Rule 400 mm as fitted 410 mm Crank pin dia. 410 mm Crank Webs Mid. length breadth 580 mm shrunk Thickness parallel to axis 230 mm
Mid. length thickness 230 mm Thickness around eye-hole 190 mm

Flywheel Shaft, diameter as per Rule 400 mm as fitted 410 mm Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule 400 mm as fitted 410 mm
Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the tube screw shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule 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 shaft

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet
Method of reversing Engines Hand lever & Compressed air Is a governor or other arrangement fitted to prevent racing of the engine when disconnected Yes Means of lubrication
Thickness of cylinder liners 20 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

Cooling Water Pumps, No. 1-Sea Water & 1-Distilled water Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Bilge Pumps worked from the Main Engines, No. None 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

Ballast Pumps, No. and size Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1. Main engine driven, double acting 80 mm dia x 520 mm stroke
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. One double acting Diameter 1510 mm Stroke 520 mm Driven by main engine
Auxiliary Engines crank shafts, diameter as per Rule as fitted No. Position



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 19/11/36 Receivers Separate Fuel Tanks

Donkey Boilers General Pumping Arrangements Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements Elec. Welded Constr. Bedplate, Columns, Entablature, 25/2/37.
SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied One cylinder liner + jacket complete, 2 Piston heads complete.

1 Starting Air non-return valve complete, 1 upper + 1 lower piston rods.

1 Cylr relief valve complete, 2 fuel valve bodies + spindles.

1 Scavenge Pump suction + delivery valves.

1 each Top + bottom end bearings (centre + side) etc.

The foregoing is a correct description

SWAN, HUNTER & WILKINSON RICHARDSON, LTD.

G. J. Tweedy Manufacturer.

Dates of Survey while building: During progress of work in shops-- 1936 Dec. 7, 8. 1937 Jan. 20, 26. Feb. 18, 22, 24, 26. Mar. 1, 9, 12, 15, 17, 22, 25. Apr. 2, 7, 8, 12, 14, 19.
During erection on board vessel-- 20, 23, 26, 27, 28. May 3, 5, 6, 10, 11, 13, 19, 25, 28, 31. June 1, 3, 4, 8, 14, 16, 21. July 1, 2, 8, 13, 15, 22, 23, 27.
Total No. of visits 53.

Dates of Examination of principal parts—Cylinders 2nd 4th 14/37 Covers Pistons 8th 14/37 Rods 4th 16th 6/37 Connecting rods 8th 16th 6-37

Crank shaft 13/7/37 Flywheel shaft as crank shaft Thrust shaft as crank shaft Intermediate shafts Tube shaft

Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts 22nd 26th 7/37

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions

Crank shaft, Material S.M. Ingot Steel Identification Mark LL405 6838HA1 Flywheel shaft, Material as crank shaft Identification Mark as crank shaft

Thrust shaft, Material as crank shaft Identification Mark as crank shaft 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. Yes

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes

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.)

This engine has been constructed under special survey in accordance with the Society's Rules and approved plans, and the materials & workmanship are good.
The engine has been satisfactorily tested under full load on the test bed, and the Electric Welded Construction Bedplate, columns & Entablature afterwards examined and found in good condition.
It has been dispatched to Messrs Wm Doxford & Sons, Sunderland, for installation on board the vessel, after which it will be eligible in my opinion, for record + LMC (with date), Vol Eng., in the Register Book.

The amount of Entry Fee .. £ 5 : 0 :
4/5th Special ... £ 66 : 11 :
2nd class Electric Welded Construction ... £ 9 : 9 :
Travelling Expenses (if any) £ : :
When applied for, 4 AUG 1937
When received, 9 AUG 1937

A. Clatt
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 20 AUG 1937
Assigned See Old JE 32174



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

Rpt. 5e.
Date of writing
No. in Reg. Book.
Master
Boilers made
Owners
VERTICAL
Made at
tested by
No. of safe
enter the do
Range of te
drilled ar
rules
furnace—T
pressure of
crown plate
plates
Diameter of
External d
Working p
ring
Dates of Survey while building
GENERAL
The
sit
The
ra
un
Sur
Tra
Comm
Assig