

REPORT ON OIL ENGINE MACHINERY.

No. 83983

Received at London Office 28 MAR 1929

Date of writing Report

19

When handed in at Local Office

26.3.29 Port of

NEWCASTLE-ON-TYNE

Date, First Survey 18 July 1928 Last Survey 15 March 1929

Number of Visits 71.

No. in Survey held at
Reg. Book.Single
on the Twin
Triple

Screw vessel

"Thurland Castle"

Tons { Gross
Net

Built at

Birkenhead

By whom built

Cammell Laird & Co

Yard No.

946

When built

1929

Engines made at

Wallsend-on-Tyne

By whom made

North Eastern Marine Engine Co Ltd

Engine No.

26823

When made

1929

Boilers made at

By whom made

Boiler No.

When made

Indicated Horse Power

4200

Owners

Port belonging to

Net Horse Power as per Rule

953

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Grade for which vessel is intended

L ENGINES, &c.

Type of Engines

North Eastern Workshop type

2 or 4 stroke cycle

Single or double acting S.A.

Maximum pressure in cylinders

500 lbs

Diameter of cylinders

430 mm

Length of stroke

1500 mm

No. of cylinders

12

No. of cranks

12

Position of bearings, adjacent to the Crank, measured from inner edge to inner edge

980 mm

Is there a bearing between each crank

yes

Revolutions per minute

110

Flywheel dia.

2590 mm

Weight

4.36

Means of ignition

Compression

Kind of fuel used

Dil fuel F.P. above 150° F.

Crank Shaft, dia. of journals

as per Rule

465 mm

Crank pin dia.

480 mm

Crank Webs

Mid. length breadth

932 mm

Thickness parallel to axis

290 mm

Flywheel Shaft, diameter

as per Rule

465 mm

Intermediate Shafts, diameter

as per Rule

12.52"

Thrust Shaft, diameter at collars

as per Rule

13.14"

as fitted

13 3/4"

Screw Shaft, diameter

as per Rule

480 mm

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

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 Compressed Air Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched yes Means of lubrication

Is 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. 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 120 mm Stroke 450 mm Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line No. and Size How driven 4 off as above 2 on main engines 160 mm x 450 mm Str.

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 yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

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 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 they each fitted with a Discharge Valve always accessible on the plating of the vessel

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

compartment to another

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. Two No. of stages Three Diameters 140 x (620-530) Stroke 500 mm Driven by Main Engines

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

Is there a drain arrangement fitted at the lowest part of each receiver

High Pressure Air Receivers, No. Four Cubic capacity of each 8.15 cu ft Internal diameter 15 3/4" thickness 5/8"

Seamless, lap welded or riveted longitudinal joint Material Steel Range of tensile strength 28-32 Working pressure by Rules 1090 lbs.

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

002762 - 002769 - 0152 Foundation

Lloyd's Register

IS A DONKEY BOILER FITTED?

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval)

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

In accordance with & in excess of Rule requirements as given in Blue print enclosed herewith.

The foregoing is a correct description

THE NORTH LONDON ENGINEERING CO., LTD.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1928 JULY 18, 23, 31, AUG. 7, 14, 22, 28, 29, SEP. 3, 4, 12, 21, 24, 28, OCT. 2, 3, 5, 10, 11, 12, 15, 17, 23, 24, 25, 26, 27, 30, 31, NOV. 5, 6, 7, 9, 12, 13, 14, 16, 21, 22, 23, 26, 27, 29, 30, DEC. 4, 5, 6, 10, 11, 18, 19, 28, 31, 1929 JAN. 15, 18, 23, 24, 30, FEB. 1, 8, 15, 19, 20, 21, 25, 27, 28, MAR. 5, 6, 11, 15.
Total No. of visits 71.

Dates of Examination of principal parts -- Cylinders 28-8-28, BEAM 3-10-28 to 5-12-28, 13-11-28, 4-12-28, 19-10-28, 19-10-28, 24-11-28, 3-10-28, 24-11-28
Crank shaft 1-11-28, 28-12-28, Flywheel shaft 1-12-28, 28-12-28, Thrust shaft 30-1-29, 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

Crank shaft, Material 0.4 Steel, Identification Mark 2682 W.B. 2683 W.B., Flywheel shaft, Material 0.4 Steel, Identification Mark 2682-2683 W.B.

Thrust shaft, Material 0.4 Steel, Identification Mark 3384 H.K., 3386 H.K., 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

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

Is this machinery duplicate of a previous case yes If so, state name of vessel M.S. "Manchester Castle"

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines have been built under Special Survey. Materials & workmanship good. Hydraulic tests satisfactory. They have been shipped to Birkenhead for installation in the vessel. The Liverpool Surveyors have been notified.

The amount of Entry Fee ... £ 6 : 0 0 : When applied for, 27 MAR 1929
Special ... £ 98 : 2 4 :
Donkey Boiler Fee ... £ ✓ :
Travelling Expenses (if any) £ ✓ :

When received, Lon Lk to Pool 12/4/29

Committee's Minute

Assigned

William Bates

Engineer Surveyor to Lloyd's Register of Shipping.



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