

REPORT ON OIL ENGINE MACHINERY.

No 18

Received at London Office 22 DEC 1941

Date of writing Report

When handed in at Local Office

Port of NOTTINGHAM.

No. in Survey held at LINCOLN.

Date, First Survey 15.7.41.

Last Survey 9.12.1941

Rep. Book.

Number of Visits 12.

 on the Single Triple Quadruple
 Screw vessel

PORT MADOC

Tons: Gross
Net

Built at LISBON.

By whom built COMPANHIA UNIAO FABRIL.

Yard No. 113 When built 1941.

Engines made at LINCOLN.

By whom made RUSTON & HORNSBY LTD.

Engine No. 206511 When made 1941

Donkey Boilers made at ✓

By whom made ✓

Boiler No. ✓ When made ✓

Brake Horse Power 560

Owners LOCH. FISHING CO [DIRECTOR OF NAVY CONTRACTS] belonging to ✓

Nom. Horse Power as per Rule 107

Is Refrigerating Machinery fitted for cargo purposes ✓

Is Electric Light fitted YES

Trade for which vessel is intended ✓

OIL ENGINES, &c. Type of Engines VERTICAL SOLID INJECTION. TVGBM. " or 4 stroke cycle 4 Single or double acting SINGLE.

Maximum pressure in cylinders 675 LB. ✓ Diameter of cylinders 12 1/2" ✓ Length of stroke 15" ✓ No. of cylinders 7. ✓ No. of cranks 7. ✓

Mean Indicated Pressure 100.5 LB. ✓

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 13 13/16" ✓ Is there a bearing between each crank YES.

Revolutions per minute 430 ✓ Flywheel dia. 51" ✓ Weight 37 cwt. ✓ Means of ignition COMPRESSION Kind of fuel used HEAVY OIL.

Crank Shaft. Solid forged dia. of journals as per Rule APPD 4.8.39. 9" ✓ Crank pin dia. 7" ✓ Crank Webs Mid. length breadth 12" ✓ Mid. length thickness 3 15/16" ✓ Thickness parallel to axis ✓ Thickness around eyehole ✓

Flywheel Shaft, diameter as per Rule as fitted ✓ Intermediate Shafts, diameter as per Rule APPD 7.2.41 6 1/8" ✓ Thrust Shaft, diameter at collars as per Rule as fitted ✓

Tube Shaft, diameter as per Rule as fitted ✓ Screw Shaft, diameter as per Rule APPD 7.2.41 7 1/8" ✓ Is the screw shaft fitted with a continuous liner No. ✓

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. If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. 8'3" Pitch 8'-1" No. of blades 3 Material MANG. BRONZE whether Movable No. Total Developed Surface 26 sq. feet

Method of reversing Engines REVERSE & REDUCTION a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of lubrication

FORCED Thickness of cylinder liners 1" GEAR. ✓ Are the cylinders fitted with safety valves YES ✓ Are the exhaust pipes and silencers water cooled or lagged with non-conducting material YES

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. 1 PLUNGER PUMP 4 3/4 x 4 3/4" Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Bilge Pumps worked from the Main Engines, No. 1 Diameter 4 3/4" Stroke 4 3/4" Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line No. and Size 1-2 1/2" No. 5. TRUSLOVE "CONQUEST" G.S. & BILGE PUMP - 20 TON/HR. How driven 4 VROZ AUX. ENG.

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 1/2" RUSTON GEAR PUMP. 1 1/2" DRYSDALE HORSE OIL PUMP. FOR GEARS 1 1/2" RUSTON GEAR PUMP. SPARE: 2-2" HAMNORTHY ROTOFOL PUMPS

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 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 strain-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. 1 ✓ No. of stages 1 ✓ Diameters 3" ✓ Stroke 3 1/2" ✓ Driven by BELT FROM MAIN ENG.

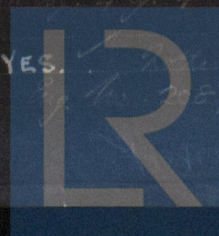
Small Auxiliary Air Compressors, No. 1 ✓ No. of stages 2 ✓ Diameters 3 3/4", 1 1/8" ✓ Stroke 3 1/4" ✓ Driven by CLUTCH - 4 VROZ, ENG.

What provision is made for first Charging the Air Receivers 4 VROZ ENG. 13 HAND STARTING.

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

Auxiliary Engines crank shafts, diameter as per Rule APPD 17.5.40 3" ✓ J 3 5/8" ✓ Position ✓

Have the Auxiliary Engines been constructed under special survey YES ✓ Is a report sent herewith YES.

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AIR RECEIVERS:— Have they been made under survey..... YES

Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES

Can the internal surfaces of the receivers be examined and cleaned. YES

Injection Air Receivers, No. ✓ Cubic capacity of each ✓

Seamless, lap welded or riveted longitudinal joint ✓ Material ✓

Starting Air Receivers, No. 2 Total cubic capacity 46.8 CU. FT.

Seamless, lap welded or riveted longitudinal joint SEAMLESS Material S.M. STEEL

State No. of Report or Certificate C 527, C 528

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

Internal diameter ✓ thickness ✓

Range of tensile strength ✓ Working pressure by Rules ✓

Internal diameter 2'-6" thickness 3/8"

Range of tensile strength 26-30 Working pressure by Rules APPD. 5.5.38

Working pressure Actual 300 LB.

IS A DONKEY BOILER FITTED? ✓

Is the donkey boiler intended to be used for domestic purposes only ✓

PLANS. Are approved plans forwarded herewith for Shafing

(If not, state date of approval)

Receivers 5.5.38

Separate Fuel Tanks

Donkey Boilers ✓

General Pumping Arrangements ✓

Pumping Arrangements in Machinery Space ✓

Oil Fuel Burning Arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied YES

State the principal additional spare gear supplied

TO ADMIRALTY REQUIREMENTS.

Ruston & Hornsby, Limited.

The foregoing is a correct description.

B. Coyne

Manufacturer.

Oil & Gas Engine Dept.

15.7.41 To 9.12.41 VISITS. 12.

Dates of Survey while building

During progress of work in shops--

During erection on board vessel--

Total No. of visits

Dates of Examination of principal parts—Cylinders

Covers

Pistons

Rods ✓

Connecting rods

Crank shaft ✓ Flywheel shaft ✓

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 SHOP TRIALS

Crank shaft, Material S.M. STEEL

Identification Mark 229 25.4.41

Flywheel shaft, Material ✓

Identification Mark ✓

Thrust shaft, Material ✓

Identification Mark ✓

Intermediate shafts, Material S.M. STEEL

Identification Marks 6006 10.10.41

Tube shaft, Material ✓

Identification Mark ✓

Screw shaft, Material S.M. STEEL

Identification Mark 5999 10.10.41

Identification Marks on Air Receivers

B 2826

B 2827

LLOYD'S TEST

600 LB./SQ. IN.

W.P. 300 LB./SQ. IN.

J.B. A.J.

J.B. A.J.

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 ✓

Description of fire extinguishing apparatus fitted ✓

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 YES

If so, state name of vessel YARD No. 107.

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

This engine has been built under Special Survey in accordance with the approved plans and the Society's Rules. The materials and workmanship are good. Shop trials carried out at the maker's works were satisfactory. The engine has been despatched to Lisbon for installation in the vessel.

The amount of Entry Fee .. £

Special £

Donkey Boiler Fee £

Travelling Expenses (if any) £

When applied for,

19

When received,

19

Committee's Minute

Assigned

J. N. Buchanan

Engineer Surveyor to Lloyd's Register of Shipping.



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