

REPORT ON OIL ENGINE MACHINERY.

No. 6794

Date of writing Report 28.2.1948 When handed in at Local Office 19 Port of Stockholm
 No. in Survey held at Västerå Date, First Survey 15.4.47 Last Survey 12.2.1948
 Reg. Book. Single on the ~~Double~~ Screw vessel m.s. "TURÖY" ex "Ironbound"
 Built at - By whom built - Yard No. 44 MMS No. - When built -
 Engines made at Lincoln, England By whom made Ruston & Hornsby Ltd. Engine No. 207335 When made 1941
 Donkey Boilers made at - By whom made - Boiler No. - When made -
 Brake Horse Power 480 ✓ Owners L. Myrebøe A/S (L. Myrebøe, Mgr.) Port belonging to Bergen, Norway
 Nom. Horse Power as per Rule 93 90 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended General

IL ENGINES, &c. Type of Engines Heavy oil trunk piston 2 or 4 stroke cycle 4 ✓ Single or double acting single
 Maximum pressure in cylinders 49.2 kg/cm² ✓ Diameter of cylinders 10 1/2" 10 1/4" ✓ Length of stroke 14 1/2" ✓ No. of cylinders 8 No. of cranks 8 ✓
 Mean Indicated Pressure 7 - - - - - Is there a bearing between each crank Yes ✓
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 316 mm ✓
 Revolutions per minute Eng. 500 ✓ prop. 333 ✓ Flywheel dia. 1080 mm Weight 1294 kgs. Means of ignition Compression Kind of fuel used Diesel oil
 Crank Shaft, { Solid forged as per Rule dia. of journals as fitted 203 mm ✓ Crank pin dia. 158.5 mm ✓ Crank Webs Mid. length breadth 280 mm ✓ Mid. length thickness 87 mm ✓ Thickness parallel to axis - Thickness around eye hole -
 Flywheel Shaft, diameter as per Rule as fitted 203 mm Intermediate Shafts, diameter as per Rule as fitted 138 mm Thrust Shaft, diameter at collars as per Rule as fitted 158 mm ✓
 Tube Shaft, diameter as per Rule as fitted - Screw Shaft, diameter as per Rule as fitted 216 mm 145 mm at top of cone 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 -
 If so, state type - Length of Bearing in Stern Bush next to and supporting propeller 930 mm ✓
 Propeller, dia. 1810 mm Pitch 1780 2 off 2 No. of blades 3 Material bronze whether Moveable No Total Developed Surface - sq. feet
 Method of reversing Engines reversing gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes ✓ Means of lubrication forced
 Thickness of cylinder liners 18 mm Are the cylinders fitted with safety valves No ✓ Are the exhaust pipes and silencers water cooled or lagged with conducting material lagged 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. 2 ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes ✓
 Pumps worked from the Main Engines, No. one Diameter 120 mm Stroke 140 mm Can one be overhauled while the other is at work -
 Pumps connected to the Main Bilge Line { No. and Size one 125 l/m (piston), one 375 l/m (centrifugal self priming), one 375 l/m (cog wheel) ✓
 How driven by main motor, starb. aux. motor and el. motor resp.
 Is the cooling water led to the bilges No ✓ If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements -
 Main Pumps, No. and size one, 375 l/m Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 gear wheel 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 one 2 1/2" ✓ In Pump Room -
 Holds, &c. one 2 1/2" ✓ Dependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size two 2 1/2" ✓
 Are all the Bilge Suction pipes in Holds ~~and Machinery Spaces~~ fitted with strum-boxes Yes ✓ Are the Bilge Suctions in the Machinery Spaces No, will be dealt with at Bergen.
 Are 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 Yes ✓ Are they fitted with Valves or Cocks valves ✓
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates No ✓ Are the Overboard Discharges above or below the deep water line above ✓
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate -
 Do pipes pass through the bunkers - How are they protected -
 Do 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 bilge boxes~~ accessible at all times Yes ✓
 Is 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 Yes ✓ Is the Shaft Tunnel watertight - Is it fitted with a watertight door - worked from -
 Is a good vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -
 Air Compressors, No. two ✓ No. of stages 1 off 48 - 90 mm Stroke 70 mm Driven by el. motor/Starb. aux. diesel.
 Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
 Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
 Is provision made for first Charging the Air Receivers Starb. aux. motor can be started by hand.
 Charging Air Pumps, No. - Diameter - Stroke - Driven by -
 Auxiliary Engines crank shafts, diameter as per Rule as fitted 82.5 and 60 mm No. 2 Position one on each side in eng. room.
 Have the Auxiliary Engines been constructed under special survey No Is a report sent herewith Yes

See note at end of report.

To be replaced at Bergen.

003290-003297-0126 1/2

AIR RECEIVERS: — Have they been made under survey? ☐ No ☒ Yes State No. of Report or Certificate -

Is each receiver, which can be isolated, fitted with a safety valve as per Rule? ☒ Yes ☐ No Is a drain fitted at the lowest part of each receiver? ☒ Yes ☐ No

Can the internal surfaces of the receivers be examined and cleaned? ☒ Yes ☐ No

Injection 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. 2 Total cubic capacity 600 l Internal diameter 488 mm thickness 11 mm

Seamless, lap welded or riveted longitudinal joint riveted Material steel Range of tensile strength - Working pressure by Rules - Actual 20 kg/cm²

IS A DONKEY BOILER FITTED? ☐ No ☒ Yes 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 25.8.47 Receivers 12.11.47. Separate Fuel Tanks 11.7.47

(If not, state date of approval)

Donkey Boilers - General Pumping Arrangements 13.1.48 Pumping Arrangements in Machinery Space 13.1.48

Oil Fuel Burning Arrangements -

Has the spare gear required by the Rules been supplied? ☒ No. To be checked by the Bergen Surveyor.

State the principal additional spare gear supplied

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - -

Total No. of visits 14

Dates of Examination of principal parts—Cylinders 5.11.47. **Covers** 5.11.47. **Pistons** 5.11.47. **Rods** - **Connecting rods** 5.11.47.

Crank shaft 5.11.47. **Flywheel shaft** 30.12.47 **Thrust shaft** 30.12.47 **Intermediate shaft** 12.2.48. **Tube shaft** -

Screw shaft 15.10.47 **Propeller** 15.10.47 **Stern tube** 10.10.47 **Engine seatings** 15.10.47 **Engines holding down bolts** 31.1.48.

Completion of fitting sea connections 15.10.47 **Completion of pumping arrangements** - **Engines tried under working conditions** 12.2.48.

Crank shaft, Material Steel **Identification Mark** LLOYD'S 92 **Flywheel shaft, Material** Steel **Identification Mark** -

Thrust shaft, Material steel, brinell 184 **Identification Mark** - **Intermediate shafts, Material** steel, brinell 170 **Identification Marks** -

Tube shaft, Material - **Identification Mark** - **Screw shaft, Material** steel **Identification Mark** -

Identification Marks on Air Receivers LLOYD'S TEST 33.5 KG. WORK. PR. 20 KG IL 2.12.47.

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

Description of fire extinguishing apparatus fitted one water hose and 3 chemical fire extinguishers in eng. room.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ☐ No ☒ Yes 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 ☒ No If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery, which was not built under Special Survey, has been installed in this vessel replacing the old steam engine. The original propeller - and intermediate shafts have been turned down to suit the new machinery. The main and aux. engines, the port air compressor, both starting air receivers and the starting air pipes have been opened up, examined and hydraulically tested, with satisfactory results. The bilge and ballast pumping arrangements and the electric installation examined and tested and the whole machinery tested under working conditions during trial trip. I am of opinion that the machinery will be eligible to be classed LMC 2.48, NE made 1941, refitted 1948, when the survey has been completed as below, it being stated that this will be done at Bergen to which port the vessel has proceeded. The Bergen Surveyor has been advised.

(1) The bilge and ballast piping to be altered to comply with Rule requirements (muff couplings to be replaced by flanges, straight tail pipes to be fitted in engine room from mudboxes at height of platform).

(2) Bilge cog wheel pump to be replaced by a self priming pump of approved type.

(3) Starting air pipes of 33 mm outside diameter to be replaced by new pipes of approved material (tensile strength of existing pipes 61.2 kg/mm²).

(4) Hydraulic tests of starboard air compressor to be carried out and the compressor to be examined under working conditions.

(5) Chemical fire extinguishers of approved type to be fitted in engine room.

(6) Spare parts to be brought up to the Rule requirements.

(7) Safety valves to be fitted to the cylinders of the main engine.

In addition, the torsional vibration characteristics to be submitted and approved.

Please, see also reports on the electrical installations and aux. diesel engines forwarded herewith.

The amount of Entry Fee .. £ : : When applied for, 28.2.48

Special Late and Sunday fees Kr. 530:- : : When received, 19

Donkey Boiler Fee .. £ : : : 19

Travelling Expenses (if any) Kr. 300:- : : : 19

Committee's Minute

Assigned

*See note at end of report.

** To be checked by Bergen Surveyor.

Rpt. 9a.

Port of

Stockholm

Continuation of Report No. 6794

dated 28th February, 1948,

on the

machinery of the m.s. "TURÖY".

NOTE:-

The following particulars are not available:-

The type of oil gland fitted. (It is suggested that the screwshaft should be drawn for examination after 2 years in service when it can be seen whether the oil gland is of approved type and the vessel eligible for the notation OG.).

Total developed surface of propeller.

Pitch of propeller.

Diameters and stroke of starboard air compressor.

Identification marks on tail shaft. These were stated by the Shipyard to be "BC.T.5563 ERM 19.2.42. OF 608 H.424" but had been removed when turning the shaft in the lathe before being verified by me.

J.W. Lajer.

(Contd.)

Engineer Surveyor to Lloyd's Register of Shipping.



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