

REPORT ON OIL ENGINE MACHINERY.

No. 936

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2 on the Twin Triple Screw vessel "MOANA"
 at Stockholm By whom built Södra Varflets Aktie By whom made Atlas C. Yard No. When built 1919
 nes made at Stockholm By whom made Engine No. 50084 When made 1926
 ey Boilers made at By whom made Boiler No. When made
 e Horse Power 500 each Owners W. B. Leeds. Port belonging to New York
 . Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
 le for which vessel is intended Yachting.

ENGINES, &c. Type of Engines Air Injection 2 or 4 stroke cycle 2 Single or double acting single
 um pressure in cylinders 550 lbs. Diameter of cylinders 15 7/8" Length of stroke 28 1/4" No. of cylinders 4 No. of cranks 4
 of bearings, adjacent to the Crank, measured from inner edge to inner edge 23 3/4" Is there a bearing between each crank Yes.
 tions per minute 135 Flywheel dia. 68 1/4" Weight 7 tons. Means of ignition Compression Kind of fuel used Diesel oil
 k Shaft, dia. of journals as per Rule 10 1/4" Crank pin dia. 10 1/4" Crank Webs Mid. length breadth 22 1/16" Kind of fuel used Diesel oil
 as fitted 10 1/4" Mid. length thickness shrunk Thickness parallel to axis 5 15/16" Thickness around eyehole Solid
 eel Shaft, diameter as per Rule 10 1/4" Intermediate Shafts, diameter as per Rule 1 1/16" Thrust Shaft, diameter at collars as per Rule
 as fitted 10 1/4" as fitted 1 1/16" as fitted 8 3/8" at end
 Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 1 13/16" Is the shaft fitted with a continuous liner No
 as fitted Is the after end of the liner made watertight in the
 e 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 none as fitted Is the after end of the liner made watertight in the
 er boss Oil gland. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes.
 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 Yes.
 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 Compression gland Length of Bearing in Stern Bush next to and supporting propeller 3 1/4"
 11.3" Pitch 8 3/8" No. of blades 4 Material Bronze whether Moveable Solid Total Developed Surface sq. feet
 d of reversing Engines Direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes. Means of lubrication
 Thickness of cylinder liners none Are the cylinders fitted with safety valves Yes. Are the exhaust pipes and silencers water cooled or lagged with
 ducting 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 through the
 g Water Pumps, No. 4 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes.
 Pumps worked from the Main Engines, No. each engine Diameter 4 3/4" Stroke 6" Can one be overhauled while the other is at work Yes.
 s connected to the Main Bilge Line No. and Size 4- 9.88 x 6.88 x 9.88 steam 1 1/2 x 4 1/2 x 10 steam 1- Electric - 2 on main engine
 How driven 1 steam: 1 Elect: 2 on main engines.
 st Pumps, No. and size 3- 9.88 x 6.88 x 9.88 1 1/2 x 4 x 10 Lubricating Oil Pumps, including Spare Pump, No. and size 1 steam 2.9 x 1.77 x 2.9
 1/2 x 4 x 10 4 dependent 1 1/2 x 8"
 o independent means arranged for circulating water through the Oil Cooler Yes. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 , No. and size:—In Machinery Spaces Four 5" - 1 1/4" - 2" - 2 1/2" In Pump Room
 ds, &c. 5" x 1 1/2" x 2" - 2 1/2"

endent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2- 9.88 x 6.88 x 9.88 - 1 1/2 x 4 1/2 x 10 3" x 5" ports.
 the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes. Are the Bilge Suctions in the Machinery Spaces
 n easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes.
 Sea Connections fitted direct on the skin of the ship Yes. Are they fitted with Valves or Cocks Yes.
 y fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes. Are the Overboard Discharges above or below the deep water line above
 y 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 Yes.
 ipes pass through the bunkers none How are they protected
 ipes pass through the deep tanks none Have they been tested as per Rule
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes.
 rrangement 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
 ment to another Yes. Is the Shaft Tunnel watertight Yes. Is it fitted with a watertight door Yes. worked from deck level
 od vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
 Air Compressors, No. one each engine No. of stages 3 Diameters 13-11 1/2-3 1/4 Stroke 13 1/16 Driven by Main Engine
 ary Air Compressors, No. one No. of stages 2 Diameters 11-10 1/2 Stroke 11 1/16 Driven by Steam
 Auxiliary Air Compressors, No. one No. of stages 1 Diameters 11-10 1/2 Stroke 11 1/16 Driven by Belt from diesel engine
 izing Air Pumps, No. 2 on each engine Diameter 25 1/2 Stroke 28 1/4 Driven by main engine
 ary Engines crank shafts, diameter as per Rule 25 1/2 Stroke 28 1/4 Position IF DIESEL AUXILIARY FILL IN
 as fitted IF DIESEL AUXILIARY FILL IN

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes.
 e internal surfaces of the receivers be examined and cleaned Yes. Is a drain fitted at the lowest part of each receiver Yes.
 Pressure Air Receivers, No. 102 Cubic capacity of each 10.5 Internal diameter 11 5/8" thickness .885
 s, lap welded or riveted longitudinal joint seamless Material Steel Range of tensile strength Working pressure by Rules FILL IN
 g Air Receivers, No. 3 (11' 1" LONG) Total cubic capacity 77.92 Internal diameter 39" 17 3/4" thickness .885 Actual 900 lbs.
 s, lap welded or riveted longitudinal joint seamless Material Steel Range of tensile strength Working pressure by Rules FILL IN
 Actual 145 lbs.

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

YES FORWARD

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

no

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

NON-PLANS AVAILABLE

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

2 main bearings for main engine
1 Crank pin brass complete for main engine.
1 Crank pin brass complete for main engine air compressor
1 Crank pin brass complete for scavenger pump
1 main engine cylinder + piston complete
1 main engine piston

The foregoing is a correct description.

Manufacturer.

| Dates of Survey | During progress of work in shops | During erection on board vessel | Total No. of visits |
|-----------------|----------------------------------|---------------------------------|---------------------|
| | Feb. 18 & 27 | Mar. 25 | Jun 6-11 |
| | July 18-22 | Aug 10-16 | |

| Dates of Examination of principal parts | Cylinders | Covers | Pistons | Rods | Connecting rods |
|---|----------------|------------------------------------|---------------------|--|-----------------|
| 21st Feb. | 21st Feb. | 21st Feb. | 21st Feb. | 21st Feb. | 21st Feb. |
| Crank shaft | Flywheel shaft | Thrust shaft | Intermediate shafts | Tube shaft | |
| 21st Feb. | 21st Feb. | 21st Feb. | 21st Feb. | 21st Feb. | |
| Screw shaft | Propeller | Stern tube | Engine seatings | Engines holding down bolts | |
| 18th Aug. | 18th Aug. | 18th Aug. | 21st Feb. | 21st Feb. | |
| Completion of fitting sea connections | 18th Aug. | Completion of pumping arrangements | 21st July | Engines tried under working conditions | 12 Aug. |
| Crank shaft, Material | Steel | Identification Mark | ✓ | Flywheel shaft, Material | Steel |
| Thrust shaft, Material | Steel | Identification Mark | ✓ | Intermediate shafts, Material | Steel |
| Tube shaft, Material | Steel | Identification Mark | ✓ | Screw shaft, Material | Steel |

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

No

If so, have the requirements of the Rules been complied with

Not desired

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 machinery of this vessel, as now seen, is in condition, eligible, in my opinion, to be classed LMC with date: Vessel placed in dry dock, sea propellers + their fastenings examined & put in good condition. Tail shafts drawn, examined & found in good condition. The main + auxiliary engines opened up + all cylinders, pistons, valves + valve gear, connecting rods their top + end brasses, crosshead guides, pumps, clutches, reversing gear, cranks, thrust + intermediate shafts examined + or put in good condition. Air receiver examined internally + found in good condition tested to working pressure. Fuel storage tanks examined together with all fittings + connections + tested to working pressure on deck. Pumping arrangement examined + found in good condition. Machinery tested under working conditions. Donkey boiler, opened up + examined internally + externally to 180 lbs hydrostatic pressure + found tight. Safety valve adjusted under steam to 120 lbs. The machinery of this vessel, as now seen, is in good condition, eligible, in my opinion to be classed LMC with date.

| The amount of Entry Fee | £ | 20.00 | When applied for, |
|------------------------------|---|--------|-------------------|
| Special | £ | 380.00 | 22 Aug 1938 |
| Donkey Boiler Fee | £ | 10 | |
| Travelling Expenses (if any) | £ | ✓ | 29th Aug 1938 |

Committee's Minute NEW YORK MAR 20 1940

Assigned Transmit to London

I. Hugh Byr.

Engineer Surveyor to Lloyd's Register of Shipping



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