

REPORT ON OIL ENGINE MACHINERY.

No. 9640

15 JUL 1932

Date of writing Report 19 When handed in at Local Office 11th July 1932 Port of TRIESTE
 Date, First Survey 14th October 1931 Last Survey 6th July 1932
 Number of Visits 40

No. in Survey held at 42078 on the *Manfalcone* Reg. Book. *Manfalcone*
 Single Twin Triple Quadruple } Screw vessel *R. L. Hague*
 Tons } Gross 12425
 Net 7096

Built at *Manfalcone* By whom built *Cantieri Riuniti dell'Adriatico* Yard No. 249 When built 1932
 Engines made at *Turin* By whom made *Fiat* Fiat. Gr. Mot. Engine No. 1801 When made 1932
 Donkey Boilers made at *Newcastle* By whom made *R. & F. Hawthorn Leslie & Co. Ltd* Boiler No. 9548 When made 1932
 Brake Horse Power 450 0 1162 Owners *Mario Tarkenton Theresi* Port belonging to *Sanzig*
 Nom. Horse Power as per Rule 7167 Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *yes*
 Trade for which vessel is intended *carrying Petroleum in Bulk*

LL ENGINES, &c. Type of Engines *Fiat LS 606* *Slide Injection* 2 or 4 stroke cycle 2 Single or double acting *single*
 Maximum pressure in cylinders *H9 kg* Diameter of cylinders *600 mm* Length of stroke *1100 mm* No. of cylinders *6 x 2* No. of cranks *6 x 2*
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *820 mm* Is there a bearing between each crank *yes*
 Revolutions per minute *120* Flywheel dia. *2560 mm* Weight *7600 kg* Means of ignition *Compress.* Kind of fuel used *Diesel Oil*
 Crank Shaft, dia. of journals as per Rule *377 mm* as fitted *400* Crank pin dia. *400 mm* Crank Webs Mid. length breadth *550 mm* Thickness parallel to axis *-*
 Flywheel Shaft, diameter as per Rule *377 mm* as fitted *400* Intermediate Shafts, diameter as per Rule *273 mm* as fitted *315* Thrust Shaft, diameter at collars as per Rule *287 mm* as fitted *400*
 Tube Shaft, diameter as per Rule *-* as fitted *-* Screw Shaft, diameter as per Rule *305 mm* as fitted *398* Is the tube shaft fitted with a continuous liner *yes*
 Bronze Liners, thickness in way of bushes as per Rule *17 mm* as fitted *23 1/2 & 22 1/2* Thickness between bushes as per rule *13 mm* as fitted *18* Is the after end of the liner made watertight in the

propeller boss *yes* 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 *no* If so, state type *-* Length of Bearing in Stern Bush next to and supporting propeller *1971 mm*

Propeller, dia. *H250 mm* Pitch *3720 mm* No. of blades *3* Material *Orange* whether Moveable *yes* Total Developed Surface *4.39* sq. m
 Method of reversing Engines *Direct* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubrication *forced*
 Thickness of cylinder liners *53 1/2 mm* Are the cylinders fitted with safety valves *yes* Are the exhaust pipes and silencers water cooled or lagged with non-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. *Two* *3 Panels 215 x 200* As the sea suction provided with an efficient strainer which can be cleared within the vessel *yes*
 What special arrangements are made for dealing with cooling water if discharged into bilges *discharge overboard*
 Bilge Pumps worked from the Main Engines, No. *2* Diameter *215 mm* Stroke *200 mm* Can one be overhauled while the other is at work *yes*
 Pumps connected to the Main Bilge Line No. and Size *2 180 x 210 230 x 180* in Main pump space *1 320 x 220* in Forward pump space *1 320 x 220*
 How driven *Steam* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *Two 170 x 200* in M.C. *525*

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 *6 at 3 1/2"*; *lofted under Eng. 6 at 2"*; *Boiler space 1 at 3"* In Pump Room *3 at 3 1/4"*
 In Holds, &c. *2 at 3"*; *Chain locker 1 at 3"*; *Pore Peak 1 at 3"*; *Forward Pump space 1 at 3"*
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *To Bilge Pump 1 at 125 mm* To Cond. Lin. Pump *1 at 200 mm*

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *yes* 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 *yes*
 Are all Sea Connections fitted direct on the skin of the ship *yes* Are they fitted with Valves or Cocks *valves & cocks*
 Are they 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*
 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 *yes*

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 *yes*

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 *yes* Is the Shaft Tunnel watertight *none* 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. *none* No. of stages *-* Diameters *-* Stroke *-* Driven by *-*
 Auxiliary Air Compressors, No. *One* No. of stages *Two* Diameters *310 x 270 mm* Stroke *350 mm* Driven by *Steam Eng.*
 Small Auxiliary Air Compressors, No. *One* No. of stages *Two* Diameters *180 x 160 mm* Stroke *160* Driven by *Steam Eng.*
 Scavenging Air Pumps, No. *One on each Eng.* Diameter *2 Cyl. Tandem 920* Stroke *980 mm* Driven by *Main Eng.*

Auxiliary Engines crank shafts, diameter as per Rule *-* as fitted *-* Position *-*
 AIR RECEIVERS:—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* Is a drain fitted at the lowest part of each receiver *yes*
 High Pressure Air Receivers, No. *None* 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. *Two* Total cubic capacity *17800 litres* Internal diameter *1949 mm* thickness *25 mm*
 Seamless, lap welded or riveted longitudinal joint *welded* Material *SPM P* Range of tensile strength *47-53 kg* Working pressure by Rules *24.62 kg* Actual *24.5*
 010355-010361-0190

IS A DONKEY BOILER FITTED? ^{2 Cylindrical and 2 Clarkson waste heat boilers} If so, is a report now forwarded? ^{yes Newcastle Rep. No 8818 for Cyl. Boilers}

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

PLANS. Are approved plans forwarded herewith for Shafting ^{28.7.31} Receivers ^{16.6.31} Separate Tanks ^{1.7.31}
 Donkey Boilers General Pumping Arrangements ^{3.7 & 14.7.31} Oil Fuel Burning Arrangements ^{16.7.31 & 28.6.32}

SPARE GEAR.

Has the spare gear required by the Rules been supplied ^{yes}

State the principal additional spare gear supplied ^{One propeller Box. 4 Propeller blades. 1 Propeller shaft. One Piston complete with rod etc. 2 piston heads. 1 Cylinder liner. 1 Cylinder cover. One fuel pump complete. One bottom end bearing complete set of valves for one cylinder cover. 10 Telescopic pipes. 2 sets of top end bearings. One set of main bearings. Various spare pieces for fuel pumps, cam shafts, lubricating arrangement etc. One set of main bearing for compressor, one set of bottom end bearing. One complete compressor piston. One compressor cylinder & suction & delivery valve. One cylinder cover. 2 complete set of valves of various sizes. One complete set of pads for thrust block. Complete spare of valves, springs etc. for each pump or other Aux. Eng. on board.}

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } ^{Please see Jersey Report No 12429} ^{1931 Dec 19, 1932 Jan 19, 23, Feb 8, 17, Mar 1, Apr 5, May 7}
 { During erection on board vessel -- } ^{1931 Oct 14, Nov 24, 30 Dec 10, 1932 Jan 8, 13, 16, 18, 26, Feb 4, 17, Apr 14, 16, 18, May 3, 9, 12, 18, 25 June 3, 6, 8, 10, 13, 17, 21, 24, 27 July 1, 4, 7}
 Total No. of visits ^{forty two}

Dates of Examination of principal parts—Cylinders ^{16.4 & 12.5.32} Covers ^{16.4 & 12.5.32} Pistons ^{16.4 & 12.5.32} Rods ^{16.4 & 12.5.32} Connecting rods ^{16.4 & 12.5.32}

Crank shaft ^{14.4 & 3.5.32} Flywheel shaft ^{14.4 & 3.5.32} Thrust shaft ^{14.4 & 3.5.32} Intermediate shafts ^{26.1.32} Tube shaft —

Screw shaft ^{13.1.32} Propeller ^{16.1.32} Stern tube ^{13 & 16.1.32} Engine seatings ^{30.11.31} Engines holding down bolts ^{3.5.32 & 12.5.32}

Completion of fitting sea connections ^{13.1.32} Completion of pumping arrangements ^{6.6.32} Engines tried under working conditions ^{27-7.32}

Crank shaft, Material ^{S.M.S.} Identification Mark ^{4034 MK 13.2.31} Flywheel shaft, Material ^{S.M.S.} Identification Mark ^{see thrust}

Thrust shaft, Material ^{S.M.S.} Identification Mark ^{4035 MK 13.2.31} Intermediate shafts, Material ^{S.M.S.} Identification Marks ^{491-492 MK 13.10.31}

Tube shaft, Material — Identification Mark ^{4057 JL 31.3.31} Screw shaft, Material ^{Steel} Identification Mark ^{2524 FK 17.9}

Is the flash point of the oil to be used over 150° F. ^{yes} Spare ^{2531 FK 30.9}

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 ^{Tanker} 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 ^{no} If so, state name of vessel —

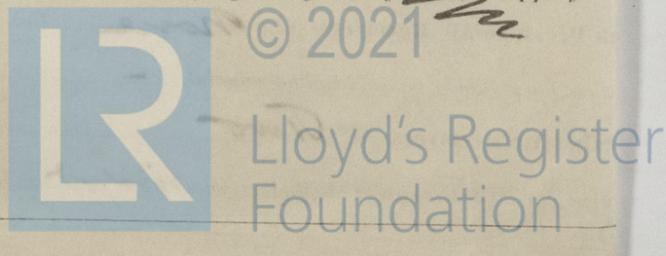
General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed under special survey at Turin and fitted on board at Marseilles. It has been examined during erection and tested satisfactorily in working condition and in my opinion is eligible to have the notation of + L M C 7.32

The two Clarkson Boilers have been satisfactorily fitted on board and their safety valves were adjusted to blow at 100 lbs. (See Jersey Rep. No 17944)

The amount of Entry Fee .. £	:	:	When applied for,
Special .. £ 25	:	16	5
Installation .. £	:	1	0
Donkey Boiler Fee .. £	:	9	0
Travelling Expenses (if any) .. £	:	8	0
2 sa. sh. Rpt			

R. H. Sparrow
 Engineer Surveyor to Lloyd's Register of Shipping.



Committee's Minute

TUE. 19 JUL 1932

Assigned

CERTIFICATE WRITTEN

+ L. M. C. 7.32
 2 S.B. (a) 200 lb.
 2 S.B. (b) 180 lb.

Oil Eng.
 C. L.

the owners.

Certificate (if required) to be sent to the owners.

H. G. date