

REPORT ON OIL ENGINE MACHINERY.

No. 11875

NOV 16 1937

Received at London Office

12/11/37 Port of Trieste

When handed in at Local Office

Survey held at Monfalcone Date, First Survey July 19 Last Survey Oct 30 1937

Number of Visits Eighteen

397 on the Single *"Cellina"* Tons { Gross 6080
Triple Net 3757

Quadruple

uilt at Trieste By whom built Stab. Tecnico Yard No. 746 When built 1926

Engines made at Turin By whom made FIAT. S. G. M. Engine No. 2404 When made 1937

Boilers made at Glasgow By whom made Cochran & Co. Ltd. Boiler No. 9253 When made 1925

ake Horse Power 4550 Owners Italia S. G. di Nav. Port belonging to Trieste

om. Horse Power as per Rule 1328 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

rade for which vessel is intended Ocean 25-30 45-6

ENGINES, &c. Type of Engines FIAT DL 646 (Solid inject.) 2 or 4 stroke cycle 2 Single or double acting 6 double

Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 640 mm Length of stroke 1160 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 5.13 kg/cm² Mean Eff. Press. 4.27 kg/cm²

an of bearings, adjacent to the Crank, measured from inner edge to inner edge 92.8 mm Is there a bearing between each crank yes

olutions per minute 115-130 Flywheel dia. 2 x Weight 60000 kgm Means of ignition Compr. Kind of fuel used Diesel Oil

ank Shaft, dia. of journals as per Rule 439.9 mm Crank pin dia. 450 mm Crank Webs Mid. length breadth — shrunk Thickness parallel to axis 290 mm
as fitted 450 mm Mid. length thickness — Thickness around eye-hole 292 1/2 "

Wheel Shaft, diameter as per Rule — Intermediate Shafts, diameter as per Rule 336.3 mm Thrust Shaft, diameter at collars as per Rule 353 mm
as fitted — as fitted 366 as fitted 450 "

be Shaft, diameter as per Rule — Screw Shaft, diameter as per Rule 368.6 mm Is the { tube } shaft fitted with a continuous liner { yes
as fitted — as fitted 405 " { screw }

onze Liners, thickness in way of bushes as per Rule 18.8 mm Thickness between bushes as per rule 14.1 mm Is the after end of the liner made watertight in the
as fitted 20 " as fitted 18 "

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 one length

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 —

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

ft no If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 1600 mm

opeller, dia. 4650 mm Pitch 4060 mm No. of blades 4 Material Bronze whether Moveable no Total Developed Surface 8.9 sq. m.

ethod of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

Thickness of cylinder liners upper 48.25 lower 40.75 Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

n-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 —

ooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

lge Pumps worked from the Main Engines, No. 1 Diameter 225 mm Stroke 130 mm Can one be overhauled while the other is at work —

umps connected to the Main Bilge Line No. and Size one 50 T/h; Two independent 40 T/h; One Ballast 200 T/h
How driven one by Main Eng. Three by Electric motors

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

rangements —

allast Pumps, No. and size 1a 200 T/h, 1a 40 T/h Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2a 150 T each

re two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

umps, No. and size: — In Machinery Spaces 5a 3 1/4" and 2a 3 1/2" Two from Cofferdam a 3 1/4" In Pump Room —

Holds, &c. Original arrangement plus one 2" suction from the new Cofferdam at p. 32, 36

ndependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2a 3 1/4" and 1a 7"

re all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces

d from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

re all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks yes valves

re 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

re 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

hat pipes pass through the bunkers none How are they protected —

hat pipes pass through the deep tanks suction of the Off. Tank Have they been tested as per Rule yes

re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

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

partment to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Deck above

f a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork —

lain Air Compressors, No. none No. of stages — Diameters — Stroke — Driven by —

Original 3 one each No. of stages 3 Diameters 322x288x79 Stroke 220 Driven by 2 Cyl. Diesel Eng

uxiliary Air Compressors, No. 3 Aux. Eng. No. of stages 2 Diameters 80x32 Stroke 140 Driven by hand

Original 1 No. of stages 2 Diameters 80x32 Stroke 140 Driven by Main Eng.

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 80x32 Stroke 140 Driven by Main Eng.

evenging Air Pumps, No. 2 double Acting with 3 cylinders in tandem Diameter 880 mm Stroke 850 mm Driven by Main Eng.

uxiliary Engines crank shafts, diameter as per Rule 161 1/2 old No. 2 new, 3 old (original) 162 " Position New: one each side in E.T.
as fitted 110 " Old: one starb, two Port in E.T.

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *as originally approved*

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 *-*

Starting Air Receivers, No. *2 Original* Total cubic capacity *30 m³* Internal diameter *1953 mm* thickness *26 1/2 mm*

Seamless, lap welded or riveted longitudinal joint *intd* Material *steel* Range of tensile strength *44-50 kg* Working pressure *26 1/2 kg*

IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *yes*

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

PLANS. Are approved plans forwarded herewith for Shafting *yes* Receivers *original* Separate Fuel Tanks *25.3.37*

Donkey Boilers *see Gmca Rpt.* General Pumping Arrangements *original* Pumping Arrangements in Machinery Space *12.6.36*

Oil Fuel Burning Arrangements *-*

SPARE GEAR.

DUAL CLASS

Has the spare gear required by the Rules been supplied *yes except the parts noted below*

State the principal additional spare gear supplied *none*

One set of piston rings for one piston. One complete cylinder liner. One set of rubber rings for liner joints. One complete crank pin bearing. One set of top and bottom bearings. One set of pins of each hand for one pair of Michell Thrust block.

It is stated all these parts will be found on board of Gmca where the vessel is now proceeding. Surveyors advised.

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building { During progress of work in shops-- { *Please see Gmca Report No 14966*
During erection on board vessel-- { *1937 July 19, 21, Aug 21, 22, 28, Sep 14, 14, 15, 20, 21, 24, 27 Oct 19, 18, 21, 30*
Total No. of visits *eighteen*

Dates of Examination of principal parts—Cylinders *14.9.37* Covers *14.9.37* Pistons *14.9.37* Rods *14.9.37* Connecting rods *14.9.37*

Crank shaft *15.9.37* Flywheel shaft *-* Thrust shaft *15.9.37* Intermediate shafts *4.9.37* Tube shaft *-*

Screw shaft *22.8.37* Propeller *11.6.37* Stern tube *22.8.37* Engine seatings *28.8.37* Engines holding down bolts *16.9.37*

Completion of fitting sea connections *19.7.37* Completion of pumping arrangements *24.9.37* Engines tried under working conditions *9.10.37*

Crank shaft, Material *steel* Identification Mark *9547PK6.3.26* Flywheel shaft, Material *-* Identification Mark *-*

Thrust shaft, Material *steel* Identification Mark *403HB 23.6.26* Intermediate shafts, Material *steel* Identification Marks *683, 22.9.36-627, 710, 684, 685, 686*

Tube shaft, Material *-* Identification Mark *-* Screw shaft, Material *steel* Identification Mark *13122 MB21.5*

Is the flash point of the oil to be used over 150° F. *yes* *50272 A.477 ASM6.1*

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

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 *M/S Tella*

General Remarks (State quality of workmanship, opinions as to class, etc. *Please see also Gmca Report 14966*

The machinery of this vessel has been constructed at Turin and special survey and fitted on board at Monegasque in place of the original B&W heavy oil eng. New engine parts have been made in accordance with the Rules and approved plans. The pumping arrangement in machinery space and piping arrangement for other various services have been adapted to the exigency of new engines and have been made in accordance with the Rules and Section letters. The machinery has been tested under working condition and found to be in order and in my opinion is eligible to have the notation of + NE 10.37 subject to the spare gear being completed.

The amount of Entry Fee .. £ : When applied for, *13/11/37*

1/5 Special ... £ *25 16-* : When received, *29/11/37*

Donkey Boiler Fee ... £ : *29/11/37*

Travelling Expenses (if any) *see* £ *790-* : *29/11/37*

Sunday ... £ *200-* : *29/11/37*

Committee's Minute

Assigned

Certificate (if required) to be sent to Survey Office

(The Surveyors are requested not to write on or below the space for Committee's Minute.)