

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 11375
14 SEP 1936

Please see also Amsterdam Report No 13723

Received at London Office

Date of writing Report 8/9/36 When handed in at Local Office 11/9/36 Port of Trieste

No. in Survey held at Monfalcone Date, First Survey May 11 Last Survey Sep 3 1936
Reg. Book. 84182 on the Single Motor vessel Solarium Number of Visits 6239
Twin Triple Quadruple Screw, Net 3651

Built at Monfalcone By whom built Cantieri Riun. dell'Adri. Yard No. 1136 When built 1936
Engines made at Amsterdam By whom made N.V. Werkspoor Engine No. 656 When made 1936
Donkey Boilers made at Newcastle By whom made R.W. Hawthorn Leslie & Co. Boiler No. 9790 When made 1935
Brake Horse Power 2800 Owners Anglo-Saxon Petroleum Co. Port belonging to London
Nom. Horse Power as per Rule 377 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
Trade for which vessel is intended 259/16 55/16

OIL ENGINES, &c.—Type of Engines Werkspoor liners injection 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 700 lbs Diameter of cylinders 650 mm Length of stroke 1400 mm No. of cylinders 6 No. of cranks 6
Mean Indicated Pressure 120 "

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 834 mm Is there a bearing between each crank yes
Revolutions per minute 110 Flywheel dia 2260 mm Weight 6000 Kg. Means of ignition Compress Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule app. Crank pin dia. 460 mm Crank Webs Mid. length breadth 870 mm Thickness parallel to axis —
as fitted 460 mm Mid. length thickness 290 mm shrunk Thickness around eyehole —

Flywheel Shaft, diameter as per Rule app. Intermediate Shafts, diameter as fitted 350 mm Thrust Shaft, diameter at collars as per Rule app.
as fitted 340 mm as fitted 340 mm

Tube Shaft, diameter as per Rule — Screw Shaft, diameter as fitted 370 mm Is the tube screw shaft fitted with a continuous liner yes
as fitted —

Bronze Liners, thickness in way of bushes as per Rule app. Thickness between bushes as fitted 15 mm Is the after end of the liner made watertight in the
as fitted 19 1/2 mm 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 1480 mm
Propeller, dia 4270 mm Pitch 3500 mm No. of blades 4 Material S.M.S. whether Moveable no Total Developed Surface 62 sq. feet

Method of reversing Engines by air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication
forced thickness of cylinder liners 55 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. 2 Salt 2 fresh Water sea suction provided with an efficient strainer which can be cleared within the vessel yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter rotative Stroke 35 T/h Can one be overhauled while the other is at work yes
Pumps connected to the Main Bilge Line No. and Size 2 rotative 35 T/h each. One general service 8" x 8" x 10"
How driven main Motors steam driven

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 —

Ballast Pumps, No. and size One 8" x 8" x 10" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 rotative 40 T/h
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 3 a 3 1/2" — 1 a 3 1/2" in each C.P. Cofferdam In Pump Room Centr. 2 a 3"
In Holds, &c. Deep Tank top 3 a 2" — Peak top 2 a 2" Forward Cofferdam Aft 2 a 3"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One a 5"
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 with cast steel necks 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 Suction for Cofferdam at fr. 43-44 how are they protected oil fuel burner
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. 2 No. of stages 2 Diameters 206 x 1847 Stroke 160 mm Driven by One by Steam One by Diesel Oil

Small Auxiliary Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —
Scavenging Air Pumps, No. none Diameter — Stroke — Driven by —

Auxiliary Engines crank shafts, diameter as per Rule Grease see Report at. No. 2 generators 1 Diesel Starb. forward
as fitted polished for Aux. Diesel Position 2 Compensators 1 Diesel Port Aft
1 Diesel Forward

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* at *400* Total cubic capacity *800 cf* Internal diameter *1495 mm* thickness *2.1 mm*

Seamless, lap welded or riveted longitudinal joint *riveted* Material *PM S* Range of tensile strength *30-34 T* Working pressure by Rules *approved* Actual *350 lbs*

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 *Amst. Rep 13723* Receivers *9.4.35* Separate Fuel Tanks *24.7.36*

Donkey Boilers *Amst. Rep 92836* General Pumping Arrangements *1.11.35* Pumping Arrangements in Machinery Space *1.11.35*

Oil Fuel Burning Arrangements — SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*. See complete list attached

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 -- *See Amsterdam Report No 13723*
During erection on board vessel -- *May 11, June 8, 9, 11, 20, July 13, 20, 23, 28, Aug 11, 19, 21, 26, 27, 28, 29, 31, Sep 1, 2, 3*
Total No. of visits *20*

See 3780 Amsterdam Rep 13723
Dates of Examination of principal parts—Cylinders *20.7.36* Covers *20.7.36* Pistons *20.7.36* Rods *20.7.36* Connecting rods *20.7.36*

Crank shaft *23.7.36* Flywheel shaft *23.7.36* Thrust shaft *27.7.36* Intermediate shafts *23.7.36* Tube shaft
Screw shaft *9.6.36* Propeller *11.6.36* Stern tube *9.6.36* Engine seatings *13.7.36* Engines holding down bolts

Completion of fitting sea connections *20.6.36* Completion of pumping arrangements *2.9.36* Engines tried under working conditions *31.8.36*

Crank shaft, Material *PM S* Identification Mark *4486 GA 11.35* Flywheel shaft, Material *PM S* Identification Mark *4487 GA 11.35*

Thrust shaft, Material *PM S* Identification Mark *1696 HPB 30.10.35* Intermediate shafts, Material *PM S* Identification Marks *1634 HPB 30.10.35*

Tube shaft, Material — Identification Mark — Screw shaft, Material *PM S* Identification Mark *1694 HPB 30.10.35*

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 *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 *yes* If so, state name of vessel *M.V. Ona Amst. Rep 13658*

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

The machinery of this vessel has been constructed under the
close survey at Amsterdam and satisfactorily fitted on
board at Monfalcone. The pumping arrangement, the
donkey boiler and the oil fuel arrangements have been
fitted in accordance with the Rules and approved plans.
The machinery has been tested under full working
condition and found to be in order and in my opi-
nion is eligible to have the word of + LMC 9.36
Secretary letter dated 28 July 1936

The Fore Peak Tank is not intended for carriage of Oil Fuel and the
pumping arrangement has been amended as per enclosed sketch.

The amount of Entry Fee .. £ : : When applied for,
1/5 Special ... £ 1509- : : 8/9/ 1936
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ 1019- : : 12.10.36
Holiday fee £ 200- : :
Committee's Minute FRI. 18 SEP 1936

Assigned + LMC 9.36
S.B. 180 lb
C.L. oil Engines.

R. Sparre
Engineer Surveyor
Lloyd's Register of Shipping.



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

Specs Office