

## REPORT ON OIL ENGINE MACHINERY.

No. 675

Received at London Office 25 JUL 1949

Date of writing Report 21/7 1949 When handed in at Local Office 19 Port of Hamburg  
 Date, First Survey 27/4/49 Last Survey 14/7 1949  
 Number of Visits 12  
 Survey held at Hamburg  
 Tons Gross 2503.35 Net 1711.08  
 Single on the Twin Triple Quadruple  
 Built at Bremen By whom built Pot. H. V. Scheepswaerft  
 Engines made at Bremen By whom made Bremer Vulkan  
 Donkey Boilers made at Bremen By whom made M.O.W.T.  
 Brake Horse Power 3050 ✓ Owners M.O.W.T.  
 Nom. Horse Power as per Rule 973.3  
 Trade for which vessel is intended 979 MW Not known  
 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

IL ENGINES, &c. — Type of Engines MAN D52 60/90 4 stroke cycle 2 ✓ Single or double acting Double  
 Maximum pressure in cylinders 45 Kg/cm<sup>2</sup> Diameter of cylinders 2378 mm Length of stroke 357/6 mm No. of cylinders 5 ✓ No. of cranks 5 ✓  
 Mean Indicated Pressure 5.3 Kg/cm<sup>2</sup> Is there a bearing between each crank yes  
 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 3350 mm 6/12/48 Company Kind of fuel used Diesel oil  
 Revolutions per minute 130 ✓ Flywheel dia. 2100 mm Weight 3400 Kg Means of ignition yes  
 Crank Shaft, Solid forged dia. of journals as per Rule 420 mm Crank pin dia. 420 mm Crank webs 560 mm Thickness parallel to axis 235 mm  
 Flywheel Shaft, diameter as fitted 300 mm Intermediate Shafts, diameter as fitted 291 mm Thrust Shaft, diameter at collars as fitted 390 mm  
 Tube Shaft, diameter as fitted 333 mm Is the (tube) shaft fitted with a continuous liner no ✓  
 Bronze Liners, thickness in way of bushes as fitted Thickness between bushes as fitted 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 yes  
 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 yes  
 If two liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after end of tube shaft yes  
 Propeller, dia. 4200 mm Pitch 13750 mm No. of blades 4 Material Bronze whether moveable no Total developed surface 63.55 sq. feet  
 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 40 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 yes  
 Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes  
 Bilge Pumps worked from the Main Engines, No. none Diameter none Stroke none Can one be overhauled while the other is at work yes  
 Pumps connected to the Main Bilge Line No. and size Ballast 100 m<sup>3</sup>/hr G.S. 21 m<sup>3</sup>/hr Bilge 30/36 m<sup>3</sup>/hr  
 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 one j.c. driven 30 m<sup>3</sup>/hr one stand by 30 m<sup>3</sup>/hr  
 Ballast Pumps, No. and size one 100 m<sup>3</sup>/hr Power Driven Lubricating Oil Pumps, including spare pump, No. and size one stand by 30 m<sup>3</sup>/hr  
 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 2 (4) — 82.5 mm. one In pump room one  
 In holds, &c. Hold I — two 82.5 mm. Hold II — two 82.5 mm. Hold III — five 82.5 mm. one — stand by side to Ballast pump 113 mm. also 2 @ 82.5 & G.S. pump  
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size one — stand by side to Ballast pump 113 mm. also 2 @ 82.5 & G.S. pump  
 Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction 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 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 none How are they protected yes  
 What pipes pass through the deep tanks none Have they been tested as per Rule yes  
 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 yes Is it fitted with a watertight door yes worked from above bulkhead  
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes  
 Main Air Compressors, No. none No. of stages none diameters none stroke none driven by aux Diesel  
 Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 250/100 mm stroke 220 mm driven by engine  
 Small Auxiliary Air Compressors, No. one No. of stages one diameters 45 mm stroke 70 mm driven by hand  
 What provision is made for first charging the air receivers 2 cylinders in tandem diameter 1200 mm stroke 770 mm driven by 2021 engine  
 Scavenging Air Pumps, No. one as per Rule No. position three on port side of C.R.  
 Auxiliary Engines crank shafts, diameter as fitted No. 1 — 130 mm No. 2 — 130 mm No. 3 — 150 mm Is a report sent herewith no  
 Have the auxiliary engines been constructed under special survey no

005292 - 0060 082500



AIR RECEIVERS:—Have they been made under survey.....

State No. of report or certificate.....

Is each receiver, which can be isolated, fitted with a safety valve as per Rule.....

Can the internal surfaces of the receivers be examined and cleaned.....

Is a drain fitted at the lowest part of each receiver.....

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.....

Starting Air Receivers, No.....

Total cubic capacity.....

Internal diameter.....

thickness.....

Seamless, lap welded or riveted longitudinal joint.....

Material.....

Range of tensile strength.....

Working pressure.....

IS A DONKEY BOILER FITTED.....

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.....

(If not, state date of approval).....

Receivers.....

Separate fuel tanks.....

Donkey boilers.....

General pumping arrangements.....

Pumping arrangements in machinery space.....

Oil fuel burning arrangements.....

### SPARE GEAR.

Has the spare gear required by the Rules been supplied.....

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.....

Dates of examination of principal parts—Cylinders..... Covers..... Pistons..... Rods..... Connecting rods.....

Crank shaft..... Flywheel shaft..... Thrust shaft..... Intermediate shafts..... Tube shaft.....

Screw shaft..... Propeller..... Stern tube..... Engine seatings..... Engine holding down bolts.....

Completion of fitting sea connections..... Completion of pumping arrangements..... Engines tried under working conditions.....

Crank shaft, material..... Identification mark..... Flywheel shaft, material..... Identification mark.....

Thrust shaft, material..... Identification mark..... Intermediate shafts, material..... Identification marks.....

Tube shaft, material..... Identification mark..... Screw shaft, material..... Identification mark.....

Identification marks on air receivers.....

Working Press. 30Kg/cm<sup>2</sup> Tested 45Kg/cm<sup>2</sup> No 8525BM. 5.G.L.1943 Part receiver - Brown Vulcan

No 210 Capacity 6300 litres Working Press. 30Kg/cm<sup>2</sup> Tested 45Kg/cm<sup>2</sup> No 8526BM 5. G.L. 1943.

Is the flash point of the oil to be used over 150°F.....

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with.....

Description of fire extinguishing apparatus fitted.....

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo.....

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 main auxiliary machinery of this vessel has

been examined throughout & all parts have been found

to be in an efficient condition & have been

examined under working conditions & found satisfactory.

It is submitted that the vessel's machinery is eligible

in my opinion to be classed with this Society with

notation of L.M.C 7.49 & record of screw shaft (G.L.) seen 12.48

T.V.C app<sup>d</sup> 26/7/49 for 130 rpm

LMC

The amount of Entry Fee ... £ 72 : —

Special ... £ : : When applied for 19

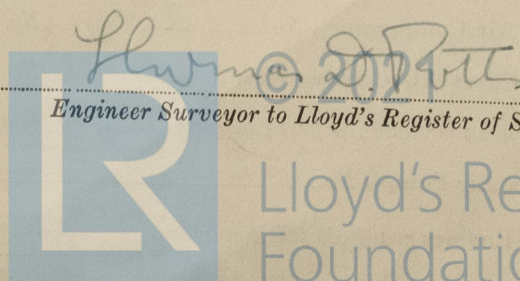
Donkey Boiler Fee... £ : : When received 19

Travelling Expenses (if any) £ 7 : 10 : :

Committee's Minute FRI. 29 JUL 1949

Assigned LMC 7.49

5 (G.L.) 12.48



Lloyd's Register  
Foundation