

# REPORT ON OIL ENGINE MACHINERY.

No. 1197

10 MAR 1947

Received at London Office

Report made on Jan. 24th, 1947 When handed in at Local Office 1947 Port of Cleveland, Ohio.

Survey held at Grove City, Pa. Date, First Survey Oct. 3rd, 1946 Last Survey Jan. 4th, 1947

Number of Visits 9

Single }  
on the Twin } Screw vessel  
Triple }  
Quadruple }

Tons { Gross -  
Net -

By whom built - Yard No. - When built -

made at Grove City, Pa. By whom made Cooper-Bessemer Corp. Engine No. 3706 When made 1947

Boilers made at - By whom made - Boiler No. - When made -

Horse Power 425 Owners Bowring Bros., St. Johns, Newfoundland. Port belonging to -

Horse Power as per Rule 99 = MN. Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

for which Vessel is intended -

ENGINES, &c. Type of Engines Diesel, Propulsion, Direct Reversible, with sailing clutch. 2 or 4 stroke cycle 4 Single or double acting S

Working pressure in cylinders 600 lbs. 800 lbs. Diameter of cylinders 13" Length of stroke 16" No. of cylinders 6 No. of cranks 6

Indicated Pressure 87.5 lbs. 94 lbs. bearings, adjacent to the Crank, measured from inner edge to inner edge 14" Is there a bearing between each crank Yes

Revolutions per minute 325 Flywheel dia. 4'-5" Weight 2670 lbs. Means of ignition Solid Inj. Kind of fuel used Heavy Oil

Journal dia. of journals as per Rule 9" Crank pin dia. 9" Crank Webs Mid length breadth 12" Thickness parallel to axis -

Journal dia. of journals as fitted 9" Crank Webs Mid length thickness 3-11/16" Thickness around eye-hole -

Propeller Shaft, diameter as per Rule - as fitted 9" Intermediate Shafts, diameter as per Rule - as fitted - Thrust Shaft, diameter at collars as per Rule - as fitted 7.75"

Propeller Shaft, diameter as per Rule - as fitted - Screw Shaft, diameter as per Rule - as fitted - Is the tube screw shaft fitted with a continuous liner -

Liners, thickness in way of bushes as per Rule - as fitted - Thickness between bushes as per Rule - as fitted - Is the after end of the liner made watertight in the stern tube -

Does the liner 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 -

Are the liners 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 - Length of Bearing in Stern Bush next to and supporting propeller -

Number of blades - Material - whether Moveable - Total Developed Surface - sq. feet

Sliding Cam Shaft 15/16" (Comb. Sp.) Is a governor or other arrangement fitted to prevent racing of the engine when under load Yes Means of lubrication Overspeed & Operating Governor

Thickness of cylinder liners - Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or cooled by sea water

Is the exhaust led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine -

1-Fresh Water 125 GPM & 1-Sea Water 125 GPM. Is the sea suction provided with an efficient strainer which can be cleared within the vessel -

Pumps worked from the Main Engines, No. - Diameter - Stroke - Can one be overhauled while the other is at work -

Connections connected to the Main Bilge Line { No. and Size - How driven -

Is cooling water led to the bilges - If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements -

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 - 67.5 GPM

Are independent means arranged for circulating water through the Oil Cooler - Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size: - In Machinery Spaces - In Pump Room -

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size -

Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes - Are the Bilge Suctions in the Machinery Spaces easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges -

Sea Connections fitted direct on the skin of the ship - Are they fitted with Valves or Cocks -

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates - Are the Overboard Discharges above or below the deep water line -

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel - Are the Blow Off Cocks fitted with a spigot and brass covering plate -

How are they protected -

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 -

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 - Is the Shaft Tunnel watertight - Is it fitted with a watertight door - worked from -

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

Air Compressors, No. - No. of Stages - Diameters - Stroke - Driven by -

Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

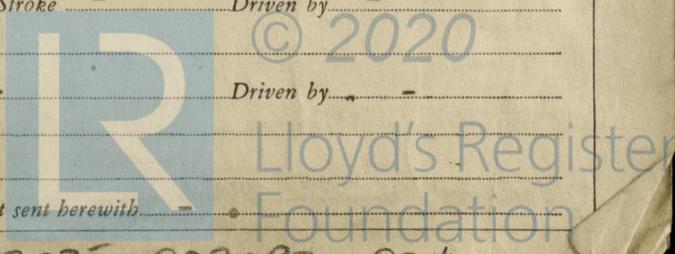
Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

Is provision made for first Charging the Air Receivers -

Engines crank shafts, diameter as per Rule - as fitted - No. - Position -

Have the Auxiliary Engines been constructed under special survey - Is a report sent herewith -

003075-003082-0014



AIR RECEIVERS:—Have they been made under survey. No State No. of Report or Certificate ABS 136 & 496

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 - by Rules - Actual -

Starting Air Receivers, No. 2 - Mfg. Scaife Co. Total cubic capacity - Internal diameter 29-1/2" thickness 3/8"

Seamless, lap welded or riveted longitudinal joint Brazed Material Copper Steel Range of tensile strength - Working pressure - by Rules - Actual -

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 Yes Receivers - Separate Fuel Tanks -  
(If not, state date of approval)

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 No

State the principal additional spare gear supplied

The foregoing is a correct description

Manufacturer.

During progress of work in shops - - Oct. 3; Nov. 14, 25, 26; Dec. 6, 19, 31; Jan. 3, 4, 1947.  
During erection on board vessel - - -  
Total No. of visits -

Examination of principal parts—Cylinders 10/3-12/6 Covers 10/3-12/6 Pistons 10/3-12/6 Rods - Connecting rods 10/3-12/6

12/6/46 Flywheel shaft - Thrust shaft 12/19/46 Intermediate shafts - Tube shaft -

Propeller - Stern tube - Engine seatings - Engines holding down bolts -

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

Material Forged Steel Identification Mark LLOYDS 684 Flywheel shaft, Material - Identification Mark -

Material Forged Steel Identification Mark ABS 7723-3 Intermediate shafts, Material - Identification Marks -

Clutch Material - Identification Mark - Screw shaft, Material - Identification Mark -

Marks on Air Receivers -

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 -

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo - If so, have the requirements of the Rules been complied with -

Is the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with -

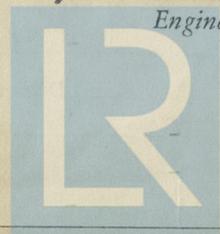
Is this machinery duplicate of a previous case Yes If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c. This engine was built under this Society's Special Survey, in accordance with the Rules and approved plans. On completion it was brake tested under full and intermediate loads, after which the engine was opened up and inspected. The material and workmanship are of good quality and all tests were satisfactory. Should the engine be installed, in compliance with the requirements of the Rules, in a vessel of this Society, the vessel, in my opinion, will be eligible for the notation \*LMC (with approval) in the Register Book.

The sailing clutch shaft and the starting air receivers were tested and inspected at the place of manufacture by the American Bureau of Shipping. They were visually examined at the engine building works by the undersigned, and found satisfactory. Copies of ABS test certificates are attached to this report.

The amount of Entry Fee ... £ \$200.00 : } When applied for,  
Special ... £ : : } 1/20/47  
Donkey Boiler Fee ... £ : : }  
Travelling Expenses (if any) £ \$ 42.00 : } When received,  
19

*J. Drummond*  
Engineer Surveyor to Lloyd's Register of Shipping



Lloyd's Register Foundation

Committee's Minute NEW YORK FEB 11 1947

Assigned Transmit to LMSM

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