

REPORT ON OIL ENGINE MACHINERY.

No. 2006

Received at London Office.

of writing Report. 30th July 1943 When handed in at Local Office. 9th Aug. 1943 Port of MOBILE, ALABAMA

in Survey held at MOBILE Date, First Survey 8th January Last Survey 2nd July 1943 Number of Visits 56

Oil on the Twin Screw vessel "ST. JAMES" (ex "WILLIAM C. McTARNAHAN") Tons { Gross 7302 Net 5826

built at Mobile, Ala. By whom built Alabama D.D. & S.B. Co. Yard No 223 When built 1941

Engines made at Mt. Vernon, Ohio By whom made Cooper Bessemer Corp. Engine No. 2134-5 When made 1942

Monkey Boilers made at Boston, Mass. By whom made U.S. Navy Yard Boiler No. - When made 1943

Indicated Horse Power 1323 each engine Owners U.S. War Shipping Administration Port belonging to Wilmington, Del.

Net Horse Power as per Rule 374 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

made for which Vessel is intended Carrying petroleum in Bulk.

OIL ENGINES, &c. Type of Engines Heavy Oil Trunk Piston 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 650 lbs. Diameter of cylinders 15 1/2" Length of stroke 22" No. of cylinders 8 x 2 No. of cranks 8

Mean Indicated Pressure 127 lbs. Mean of bearings, adjacent to the Crank, measured from inner edge to inner edge 17" Is there a bearing between each crank yes

Revolutions per minute 277 Flywheel dia. 49" Weight 5,812 lbs. Means of ignition injection Kind of fuel used Diesel

Crank Shaft, Solid forged as per Rule 10" Crank pin dia. 11" Crank Webs Mid length breadth 17" Thickness parallel to axis -

Flywheel Shaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule - Thrust Shaft, diameter at collars as per Rule 7.25

Tube Shaft, diameter as fitted 9-3/4" Screw Shaft, diameter as fitted 9-13/16" Is the screw shaft fitted with a continuous liner two liners

Bronze Liners, thickness in way of bushes as per Rule approved as fitted 5/8" Thickness between bushes as per Rule approved as fitted 5/8"

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

Does 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 tight fit.

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 the tube

Shaft yes If so, state type Guthans Patent Length of Bearing in Stern Bush next to and supporting propeller 3'-1"

Propeller, dia. 8 ft. Pitch at 2'-8" No. of blades 4 Material bronze whether Moveable no Total Developed Surface 24.89 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 1-1/4" Are the cylinders fitted with safety valves. yes Are the exhaust pipes and silencers water cooled or lagged with

Non-conducting material yes 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. 4 (1 fresh & 1 sea water each engine) 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 - Stroke - Can one be overhauled while the other is at work. -

Pumps connected to the Main Bilge Line { No. and Size 1 - 400 G.P.M., 1 - 260 G.P.M. & 2 - 200 G.P.M. How driven Electric motor.

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 3 Cargo Pumps deep well type 6" suction Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 - 366 G.P.M.

Ballast Pumps, No. and size 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 1 - 5", 1 - 4", 5 - 3" In Pump Room 1 - 2"

Holds, &c. 1 - 3" Aft Peak 1 - 5" Fore Peak

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - 5", 1 - 4"

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

and 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. yes

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. below

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.

What pipes pass through the bunkers. bilge suction How are they protected. pipe tunnels

What pipes pass through the deep tanks. cargo pipe lines 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. - 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. -

Main Air Compressors, No. 2 No. of Stages 2 Diameters 5" x 2 1/2" Stroke 4" Driven by Main Eng. (clutch) 2-aux. engines

Auxiliary Air Compressors, No. 3 No. of stages 2 Diameter 6 1/2" x 2 1/2" Stroke 5 1/2" Driven by 1-elec. motor

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 4 1/2" x 4 1/2" Stroke 3 1/2" Driven by steam eng.

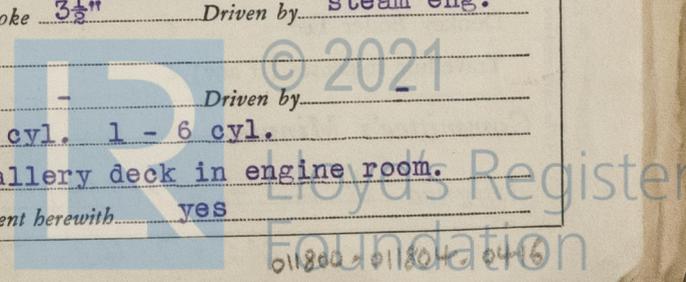
What provision is made for first Charging the Air Receivers. Steam driven compressor.

Revolving Air Pumps, No. - Diameter - Stroke - Driven by -

Auxiliary Engines crank shafts, diameter as per Rule 5.06 No. 2 - 8 cyl. 1 - 6 cyl.

as fitted 6-7/8" Position On gallery deck in engine room.

Have the Auxiliary Engines been constructed under special survey. no Is a report sent herewith. yes



AIR RECEIVERS:—Have they been made under survey Original Receivers State No. of Report or Certificate Mob. Rpt. No. 1809 pt.

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 small - no (see rpt. 9)
large - yes Is a drain fitted at the lowest part of each receiver yes

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. 3 Total cubic capacity 786.04 cu. ft. Internal diameter 1 - 17-3/4" thickness 13/16"
2 - 48" thickness 1"
Seamless, lap welded or riveted longitudinal joint 1 seamless Material steel Range of tensile strength - Working pressure - by Rules 1200 & 402 Actual 400 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 Operating deck winch and tank cleaning system.
PLANS. Are approved plans forwarded herewith for Shafting yes Receivers - Separate Fuel Tanks -
(If not, state date of approval)
Donkey Boilers yes General Pumping Arrangements - Pumping Arrangements in Machinery Space yes
Oil Fuel Burning Arrangements -

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes
State the principal additional spare gear supplied -

The foregoing is a correct description
ALABAMA DRY DOCK & SHIPBUILDING CO.

R. D. Rogers Assistant General Superintendent. Manufacturer.

Dates of Survey while building
During erection on board vessel - - -
Total No. of visits 56
Jan. 8, 11, 15, 19, 27, Feb. 2, 8, 10, 14, 16, 20, 22, 23, March 3, 10, 13, 23, 27,
April 1, 3, 5, 8, 13, 14, 16, 19, 20, 21, 23, 24, 28, May 3, 5, 8, 12, 13, 14, 18, 23, 27,
June 4, 5, 6, 8, 11, 12, 13, 15, 16, 18, 20, 27, 28, 29, 30, July 2, 1943.

Dates of Examination of principal parts—Cylinders 20/6/43 Covers 20/6/43 Pistons 20/6/43 Rods - Connecting rods 20/6/43
Crank shaft 20/6/43 Flywheel shaft 20/6/43 Tube shaft 20/6/43 Thrust shaft 20/6/43 Intermediate shafts - Tube shaft 13/4/43
Screw shaft 13/4/43 Propellers 3/4/43 Stern tube 16/2/43 Engine seatings 1/4/43 Engines holding down bolts 27/5/43
Completion of fitting sea connections 16/4/43 Completion of pumping arrangements 27/6/43 Engines tried under working conditions 29/6/43
Crank shaft, Material O.H. steel Identification Mark AB 121 Flywheel shaft, Material - Identification Mark -
Thrust shaft, Material O.H. steel Identification Mark AB 1825 & 1848 Intermediate shafts, Material - Identification Marks -
Tube shaft, Material O.H. steel Identification Mark Lloyds 1286-7 Screw shaft, Material O.H. steel Identification Mark Lloyds 1284-
Identification Marks on Air Receivers Original.

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 not desired.
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 machinery of this vessel has been built under the Special Survey of American Bureau of Shipping (certificate attached). The machinery has been fitted on board the vessel in accordance with the Rules and approved plans, examined so far as practicable during installation and afterwards tried under full working sea conditions with satisfactory results.

In my opinion the machinery of this vessel is in good and safe working condition and is eligible to be classed with records of LMC(R) 7,43 and notations N.E. 7,43, N.D.B. 7,43 and Tail Shafts Seen (New) C.L. 7,43.

The amount of Entry Fee ... £ : : } When applied for,
Special ... £210.00 : : } Aug. 13 1943
Donkey Boiler Fee ... £ : : }
Travelling Expenses (if any) £ : : } When received,
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R. D. Rogers
Engineer Surveyor to Lloyd's Register of Shipping.
Lloyd's Register Foundation

Committee's Minute NEW YORK AUG 18 1943
Assigned N.E. 42 FITTED 7, 43. NDB-7, 43. (110 LBS. PER sq)
LMC-7, 43. T.S.N. 7, 43.

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