

REPORT ON OIL ENGINE MACHINERY.

No. 1372

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Writing Report Aug. 23 1949 When handed in at Local Office 19 Port of Cleveland, Ohio

Survey held at Milwaukee, Wisconsin Date, First Survey May 19 Last Survey July 7 1949

Book. **M.S. BAHIA THETIS** Argentine Vessel - Main Propulsion Engines Number of Visits 8

at Halifax, N.S. By whom built Halifax Shipyards Ltd. Yard No. 18 When built -
Lines made at Milwaukee, Wis. By whom made Nordberg Mfg. Co. TSM-2155 When made 1949
Boilers made at - By whom made - Engine No. TSM-2156
Horse Power 1875 each Owners Argentine Government Port belonging to -
Horse Power as per Rule 838 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -
Use for which Vessel is intended -

MAIN ENGINES, &c. Type of Engines Trunk piston, solid injection 2 or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 800 psi positive scavenge
Indicated Pressure 88 psi Diameter of cylinders 21.5" Length of stroke 29" No. of cylinders 5 No. of cranks 5 + 1 scav.
Pitch of bearings, adjacent to the Crank, measured from inner edge to inner edge 26.25"
Revolutions per minute 225 Flywheel dia 76" Weight 97000 lbs Means of ignition Compression Is there a bearing between each crank yes
Crankshaft { Solid forged as per Rule - Kind of fuel used Diesel
Semi built dia. of journals as fitted 14.75" Crank pin dia 14.75" Crank Webs Mid length breadth 19.125" Thickness parallel to axis -
All built as fitted 14.75" Mid length thickness 6.875" Thickness around eyehole -
Crankshaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule - Thrust Shaft, diameter at collars as fitted 9.625"
Screw Shaft, diameter as per Rule - as fitted - Is the {tube} shaft fitted with a continuous liner {
as fitted - as fitted - as fitted -

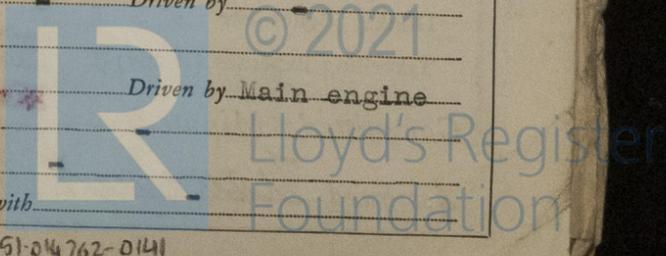
Size Liners, thickness in way of bushes as per Rule - Thickness between bushes as per Rule - Is the after end of the liner made watertight in the
cylinder boss - If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -
The liner does not fit 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 no 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
If so, state type - Length of Bearing in Stern Bush next to and supporting propeller -

Propeller, dia. - Pitch - Rotating No. of blades - Material - whether Moveable - Total Developed Surface - sq. feet
Method of reversing Engines Camshaft Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication
Pressure Thickness of cylinder liners 875" Min Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with
conducting material - If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine -
Lubricating Water Pumps, No. - Is the sea suction provided with an efficient strainer which can be cleared within the vessel -
Auxiliary Pumps worked from the Main Engines, No. - Diameter - Stroke - Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line { No. and Size -
How driven -
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 -
Auxiliary Pumps, No. and size - Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size -
Two 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 -
Holds, &c. -

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size -
All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes - Are the Bilge Suctions in the Machinery Spaces
from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges -
All 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 -
Do the pipes pass through the bunkers - How are they protected -
Do the pipes pass through the deep tanks - Have they been tested as per Rule -

All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times -
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 - Is the Shaft Tunnel watertight - Is it fitted with a watertight door - worked from -
If the vessel is a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -
Auxiliary Air Compressors, No. - No. of Stages - Diameters - Stroke - Driven by -
Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
All Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
Provision is made for first Charging the Air Receivers -
Engining Air Pumps, No. (1) double acting Diameter 53.5" Stroke 16.5" Driven by Main engine
Auxiliary Engines crank shafts, diameter as per Rule - No. - Position -
as fitted - Is a report sent herewith -



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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 by Rules Actual

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material 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 Clv. Rpt. 1308 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 To Rule Requirements

State the principal additional spare gear supplied See attached list Clv. Rpt. 1308

TORSIDGRAPH RECORDS REQUIRED

The foregoing is a correct description

Dates of Survey while building { During progress of work in shops -- May 19, 25 June 1, 7, 22, 25, 28, July 7, 1949
During erection on board vessel --
Total No. of visits 8

Dates of Examination of principal parts—Cylinders 19.5.49 Covers 19.5.49 Pistons 25.5.49 Rods 19.5.49
Crank shaft 19.5.49 Flywheel shaft 22.6.49 Thrust shaft 19.5.49 Intermediate shafts 28.6.49 Tube shaft 21.6.49
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

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

Crank shaft, Material OH Steel For Identification Mark Lloyds 5867 Flywheel shaft, Material Identification Mark

Thrust shaft, Material OH Steel For Identification Mark Lloyds 5884 Intermediate shafts, Material Identification Marks

Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

Identification Marks on Air Receivers

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

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

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

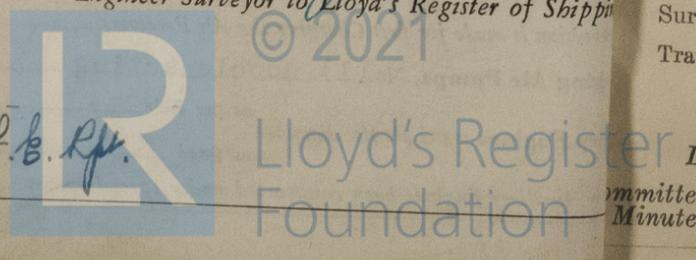
Is this machinery duplicate of a previous case Yes If so, state name of vessel Halifax Hulls Nos. 16, 17

General Remarks (State quality of workmanship, opinions as to class, &c. These main propulsion engines and thrust b were constructed under Special Survey and to approved plans in accordance with the Rules of this Society. The materials were tested by the Society's Surveyors and the workmanship found good. two engines were, on completion, shipped partly dismantled to the Halifax Shipyards Ltd., Halifax N.S., for installation aboard a vessel building there to the classification requirements of this Society. It is recommended that the vessel be assigned the record of + L.M.C. (with date) when these main engines have been installed on board and tested under working conditions, all to the satisfaction of the Society's Surveyors.

The amount of Entry Fee ... \$ 1,143.00 :
Special ... £ :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) \$ 280.00 :
When applied for, Nov. 7 1949
When received, NOV 16 1949

R. F. Haagenen
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute
Assigned Transmit to ... See minute on S.B. Rpt.



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