

REPORT ON OIL ENGINE MACHINERY.

No. 16438

OCT 13 1938.

Date of writing Report 3rd October 1938 When handed in at Local Office 4th October 1938 Port of Middlesbrough
No. in Survey held at Haverton Hill on Tees Date, First Survey 8th December 1937 Last Survey 30th September 1938
Reg. Book. 89965 Single on the Tees Triple Screw vessel "SAN. DELFINO" Number of Visits 20

Tons { Gross 8072.04
Net 4770.63

Built at Haverton Hill on Tees By whom built Furness S&Co Ltd. Yard No. 283 When built 1938
Engines made at Hawcath on Tyne By whom made Hawthorn Leslie & Co Ltd Engine No. 3941 When made 1938
Donkey Boilers made at " By whom made " Boiler No. 3941 When made 1938
Brake Horse Power 3500 Owners Bayle Gil & Shipping Co Ltd. Port belonging to London
Nom. Horse Power as per Rule 502 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
Trade for which vessel is intended Carrying Petroleum in bulk.

OIL ENGINES, &c.—Type of Engines

2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank
Revolutions per minute Flywheel dia. Weight Means of ignition Kind of fuel used

Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth Thickness parallel to axis
Mid. length thickness shrunk Thickness around eye-hole

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

Tube 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 {

Bronze 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

propeller boss 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 Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication

Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with

non-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

Cooling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge 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

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size

Are 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 1 P & S Ford 3 1/2" 1 after well 3 1/2" 1 for 1st & aft cofferdam each 2 1/2"

In Holds, &c. P & S Chain locker flat 2" F Peak 4" P & S Hold 2" P & S Cofferdam 2" F Pump Room 2" P & S Pump Room 3 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 2 1/2" 2 1 1/2" 6"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes 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

Are 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

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

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 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. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 11" & 6" Stroke 7 Driven by Steam

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

Exhausting Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Are the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces

Is there a drain arrangement fitted at the lowest part of each receiver

High Pressure 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

Working 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

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting
(If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - } 1937. Dec. 8. 1938. May. 10. Jun. 16. 22. 24. 28. July. 11. 19. Aug. 10. 29. Sep. 6. 8. 12. 14. 20. 22. 23. 28. 29. 30.
Total No. of visits 20

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 22.6.38 Stern tube 26.6.38 Engine seatings ✓ Engines holding down bolts 19.8.38
Completion of fitting sea connections 28.6.38 Completion of pumping arrangements 23.9.38 Engines tried under working conditions 29.9.38
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

Is the flash point of the oil to be used over 150° F. 72°

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 machinery described in Newcastle Report 96422. has been installed under Special Survey in accordance with the requirements of the Rules all prescribed tests on oil fuel filling & burning arrangement of pipes & fittings have been carried out. Pumping arrangements are in accordance with the approved plans. Donkey Boiler & air receiver valves adjusted 185 & 350 lbs respectively. The machinery was found satisfactory on full power trials & is eligible in my opinion to have the Records + RMC 9.38.
CL 2DB. 180 lbs.

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

The amount of Entry Fee ... £
Special ... £
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

When applied for,

When received,

TUE 18 OCT 1938

Committee's Minute

Assigned

+ LMC 9.38 C.L.

2 DB. 180 lbs.

Oil engines

Bellofitt
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation