

REPORT ON OIL ENGINE MACHINERY.

No. 59977

Received at London Office

JUL 15 1938

Date of writing Report 13: 7: 38 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 5: 7: 37 Last Survey 7th July 1938
 Reg. Book. Number of Visits 50

on the Single Screw vessel "DONAX"
 Built at Glasgow By whom built Harland & Wolff Ltd. Yard No. 1008⁶ When built 1938
 Engines made at Glasgow By whom made Harland & Wolff Ltd. Engine No. 1008⁶ When made 1938
 Donkey Boilers made at Belfast By whom made Harland & Wolff Ltd. Boiler No. When made 1938
 Brake Horse Power 3600 Owners Anglo Saxon Petroleum 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 Tanker

IL ENGINES, &c. Type of Engines Heavy oil Solid injection 2 or 4 stroke cycle 4 Single or double acting S.A.
 Maximum pressure in cylinders 700 lb. Diameter of cylinders 650 mm. Length of stroke 1400 mm No. of cylinders 8 No. of cranks 8
 Mean Indicated Pressure 130 " Is there a bearing between each crank yes
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 866 mm
 Revolutions per minute 120 Flywheel dia. 2218.5 mm. Weight 2150 Kgs. Means of ignition compression Kind of fuel used Diesel oil
 Crank Shaft, { Solid forged dia. of journals as per Rule 456 mm. Crank pin dia. 460 mm. Crank Webs Mid. length breadth 750 mm. Thickness parallel to axis 267 mm.
 { Semi built as fitted 460 " 134 mm. hole 13.65 " Mid. length thickness 267 " shrunk Thickness around eye hole 205 "
 { All built as per Rule 456 mm. Intermediate Shafts, diameter as fitted 19 " Thrust Shaft, diameter at collars as per Rule 14.35 "
 Flywheel Shaft, diameter as fitted 18 " as fitted 18 " Is the { tube shaft fitted with a continuous liner } yes
 Tube Shaft, diameter as per Rule 14.96 " as fitted 18 " Is the { tube screw }
 Bronze Liners, thickness in way of bushes as per Rule .756 " as fitted 2 " Thickness between bushes as per Rule .567 " as fitted 3/4 " 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
 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
 If so, state type Length of Bearing in Stern Bush next to and supporting propeller 5'-0"
 Propeller, dia. 15'-6" Pitch 12'-0" No. of blades 4 Material Bronze whether Moveable no Total Developed Surface 75 sq. feet
 Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when detached yes Means of lubrication
 Lubricated Thickness of cylinder liners 48/40 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
 Cooling Water Pumps, No. 1 @ 75 " 1 @ 8' x 8' x 10' 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. 2 Diameter 35 cm/hour each. Can one be overhauled while the other is at work yes
 Pumps connected to the Main Bilge Line { No. and Size 2 bilge, 35 cm/hour each } 1 Sanitary 35 cm/hour } 1 General Service 8' x 8' x 10' }
 { How driven Main engine Main engine Steam }
 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
 Ballast Pumps, No. and size 1 @ 40 cm/hour. 1 @ 8' x 8' x 10' Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 @ 8' x 8' x 10' In Pump Rooms 4 @ 3"
 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 3 @ 8' x 8' x 10' 2 @ 2' x 2' In Pump Rooms 4 @ 3"
 Holds, &c. dependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 6"
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes 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 yes
 Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks both
 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
 Do all pipes pass through the bunkers yes How are they protected
 Do all pipes pass through the deep tanks yes 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 worked from yes

If 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. 1 No. of stages 2 Diameters 120 cm Stroke 1 Driven by 1 by Diesel Engine
 Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 120 cm Stroke 1 Driven by 1 " Steam engine
 Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 120 cm Stroke 1 Driven by 1 " Steam engine
 What provision is made for first Charging the Air Receivers Steam driven compression
 Scavenging Air Pumps, No. 1 Diameter 120 cm Stroke 1 Driven by 1 " Steam engine
 Auxiliary Engines crank shafts, diameter as per Rule 110 mm. as fitted 110 mm. No. 1 Position Starboard Side aft.
 Have the Auxiliary Engines been constructed under special survey yes Is a report sent herewith Amsterdam Rpt. 15151

W1168 0284

AIR RECEIVERS:—Have they been made under survey

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

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

Starting Air Receivers, No.

2

Total cubic capacity 800 cu ft.

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

IS A DONKEY BOILER FITTED?

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—1937 July: 5 Aug: 24 Oct: 12 Nov: 12. 16. 26 Dec: 2. 6. 9. 13 (1938) Jan: 11. 21. 24. 27
During erection on board vessel—9 Mar: 1. 11. 14. 15. 17. 18. 21. 22. 24. 29 Apr: 4. 8. 15. 20. 22. 28 May: 3. 10. 11. 18. 24. 26. 27
Total No. of visits 50 June: 3. 9. 10. 14. 17. 22. 24. 27. 29 July: 1. 2. 7

Dates of Examination of principal parts—Cylinders 17-3-38 17-3-38 11-3-38
Crank shaft 27-1-38 Flywheel shaft 27-1-38 Thrust shaft 27-1-38 Intermediate shafts 29-3-38 Tube shaft 29-3-38
Screw shaft 29-3-38 Propeller 29-3-38 Stern tube 29-3-38 Engine sealings 22-4-38 Engines holding down bolts 24-6-38
Completion of fitting sea connections 22-6-38 Completion of pumping arrangements 1-7-38 Engines tried under working conditions 7-7-38

Crank shaft, Material Steel Identification Mark 1008 P. 9. 6. 2. n. Flywheel shaft, Material Steel Identification Mark 6982 P. 3.
Thrust shaft, Material Steel Identification Mark 7364 P. 4 Intermediate shafts, Material Steel Identification Marks 7169 P. 7
Tube shaft, Material Steel Identification Mark 7169 P. 7

Identification Marks on Air Receivers No 178 R.L.A. 28-3-38

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

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

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. These main and auxiliary engines have been built under special survey, in accordance with the Rules and approved plans. The materials and workmanship are good. They have been properly secured on board, tried under full working conditions and found satisfactory, and are eligible in our opinion to have the record in the Register Book of + L.M.C. 7-38 T.S.C.L. also S.B.-180 lbs per sq inch

The amount of Entry Fee .. £ 6 0 0

Special ... £ 100 2 0

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

Committee's Minute

Assigned

P. Fitzgibbon & G. E. Murdoch

Engineer Surveyors to Lloyd's Register of Shipping.



© 2020

Lloyd's Register Foundation