

REPORT ON OIL ENGINE MACHINERY.

No. 19920

Received at London Office

6 MAR 1935

Date of writing Report 4-2-35 When handed in at Local Office 2nd MARCH 1935. Port of GreenockDate, First Survey 28th DECEMBER 1933. Last Survey 1st MARCH 1935. Number of Visits 105.Name of vessel AMASTRA Tons Gross 3030.44 Net 1444.23Type of vessel Single Quadruple Screw vesselBuilt at Glasgow By whom built Lithgows & Co Yard No. 840 When built 1935Engines made at Greenock By whom made J. & H. Caird & Co Engine No. 174 When made 1935Monkey Boilers made at ditto By whom made ditto Boiler No. 174 When made 1935Horse Power 2800 Owners Anglo-Saxon Petroleum Co Ltd Port belonging to LondonIs Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YesTrade for which vessel is intended Foreign 23-3 55-8Type of Engines Diesel Solid Injection under Piston 2 or 4 stroke cycle 4 Single or double acting SingleMaximum pressure in cylinders 600 Diameter of cylinders 650 mm. Length of stroke 1400 mm. No. of cylinders 8 No. of cranks 8Pitch of bearings, adjacent to the Crank, measured from inner edge to inner edge 344 mm. Is there a bearing between each crank YesRevolutions per minute 112 Flywheel dia. 2218 mm. Weight 2.19 tons Means of ignition Compression Kind of fuel used DieselCrank Shaft, dia. of journals as per Rule 436 mm. as fitted 460 mm. Crank pin dia. 460 mm. Crank Webs Mid. length breadth shrunk Thickness parallel to axis 267 mm.Flywheel Shaft, diameter as per Rule 436 mm. as fitted 460 mm. Intermediate Shafts, diameter as per Rule 12.18 inches. as fitted 24 inches. Thrust Shaft, diameter at collars as per Rule 12.8 inches. as fitted 18.14 inches.Screw Shaft, diameter as per Rule 13.5 inches. as fitted 18 inches. Is the tube shaft fitted with a continuous liner YesBronze Liners, thickness in way of bushes as per Rule 72 mm. as fitted 72 mm. Thickness between bushes as per Rule 54 mm. as fitted 1116 mm. Is the after end of the liner made watertight in thepropeller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner YesIf 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 YesIf 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 YesLength of Bearing in Stern Bush next to and supporting propeller 5-0 inchesPropeller, dia. 15-9 inches. Pitch 11-3 inches. No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 80 sq. feetMethod of reversing Engines Air Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of lubrication ForcedThickness of cylinder liners 48 to 40 mm. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged withnon-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 YesCooling Water Pumps, No. 2 (one 4500 lbs) (one 2500 lbs) Is the sea suction provided with an efficient strainer which can be cleared within the vessel YesBilge Pumps worked from the Main Engines, No. 2 Diameter 35 tons each Stroke Rotary Can one be overhauled while the other is at work YesPumps connected to the Main Bilge Line { No. and Size } 2 at 35 tons one 8" x 8" x 10" { How driven } Main Engines SteamBallast Pumps, No. and size None Lubricating Oil Pumps, including Spare Pump, No. and size 2 (one 4000 lbs Rotary) one 8" x 8" x 10"Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary BilgePumps, No. and size:—In Machinery Spaces 3 at 3 1/2" In Pump Room MAIN 1-3 FORE 1-2"In Holds, &c. 2. 2" Tainter (Wing) 2. 6" Centre 1-8" Deep Tank 2. 4"Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Yes 2. 6" (205 in plan)Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spacesled from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YesAre all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks BothAre 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 AboveAre 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 YesWhat pipes pass through the bunkers None How are they protected —What 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 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 None Is it fitted with a watertight door — worked from —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. None No. of stages — Diameters — Stroke — Driven by —Auxiliary Air Compressors, No. Two No. of stages 2 Diameters 4 1/8" 8 7/8" Stroke 6" Driven by SteamSmall Auxiliary Air Compressors, No. None No. of stages — Diameters — Stroke — Driven by —Scavenging Air Pumps, No. — Diameter — Stroke — Driven by —Auxiliary Engines crank shafts, diameter as per Rule (as approved London 1-5-34) 110 mm. as fitted 110 mm.AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule YesCan the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver YesHigh Pressure Air Receivers, No. one Cubic capacity of each 45 litres Internal diameter 250 mm. thickness 7 mm.Seamless, lap welded or riveted longitudinal joint Seamless Material S Range of tensile strength 50568 kg/mm Working pressure by Rules 390 Actual 345Starting Air Receivers, No. 2 Total cubic capacity 800 Cub. ft. Internal diameter 5-10 1/4" thickness 15 1/16"Seamless lap welded or riveted longitudinal joint Riveted Material S Range of tensile strength 29.33 Working pressure by Rules 357 Actual 350

COR2071-COR2078-COR55

IS A DONKEY BOILER FITTED?

yes
no

If so, is a report now forwarded?

yes

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)

yes

Receivers

yes

Separate Tanks

yes

Donkey Boilers

yes

General Pumping Arrangements

yes

Oil Fuel Burning Arrangements

yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes

State the principal additional spare gear supplied

Propeller - Propeller Shaft - Tank - R. 4991 WGM. 18/11/35
Examination Rod.

The foregoing is a correct description.
For JOHN G. KINCAID & CO. LIMITED.

W. Carter

DIRECTOR Manufacturer.

Dates of Survey while building { During progress of work in shops - (1933) DEC. 28 (1934) FEB. 9 22-26-28 MAR. 6-9-12-14-16-20-23-29 APR. 3-6-13-16-19-23-24 MAY 1-3-10-14-15-21-25-29 JUNE 1-5-28-26-28 JULY 5-11-24-31
During erection on board vessel - - - AUG. 6-9-13-14-17-21-23-24 SEPT. 4-18-21-25 OCT. 4-10-11-13-26-30 NOV. 5-6-12-14-16-19-20-21-22-23-26-28-29-30 DEC. 3-4-5-6-10-13-14-17-21-24-26 (1935) JAN. 2-4-8-9-10-11-15-28-29-31 FEB. 4-6-7-13-15-16-18-25-28 MAR. 1-15-16-18-25-28
Total No. of visits 105.

Dates of Examination of principal parts - Cylinders 16-11-34 Covers 19-11-34 Pistons 5-12-34 Rods 9-7-34 Connecting rods 11-7-34

Crank shaft 21-8-34 Flywheel shaft 1-1-35 Thrust shaft 4-1-35 Intermediate shafts 7-1-35 Tube shaft 1-1-35

Screw shaft 30-11-34 Propeller 30-11-34 Stern tube 30-11-34 Engine seatings 26-11-34 Engines holding down bolts 11-2-35

Completion of fitting sea connections 26-11-34 Completion of pumping arrangements 11-2-35 Engines tried under working conditions 1-3-35

Crank shaft, Material S Identification Mark LR 220 Y Flywheel shaft, Material S Identification Mark S

Thrust shaft, Material S Identification Mark LR 4991 WGM Intermediate shafts, Material S Identification Marks LR 4991 WGM

Tube shaft, Material S Identification Mark S Screw shaft, Material S Identification Mark LR 4991 WGM

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 - 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 M/S "Sav. Alerts" 42.7.1991.0

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines & boiler have

been built under Special Survey in accordance with

the approved plans. The workmanship & material are

of good quality. They have been securely fitted on board

and under working conditions. found satisfactory

The Machinery is eligible in my opinion for the

second of L M C 3-35 (Notation of Donkey Boiler

W R 180 lbs)

On the official trials on the cycle on 28/2/35 & 1/3/35 a minimum horse

developed in the Propeller at 47 Revolutions continue at 1585 when it

disappeared entirely. It was agreed that an opportunity would be given to examine

this Propeller at the West Dry Docking (Propeller made by the Bush Metal Co. Glasgow)

The amount of Entry Fee ... £ 6 : - When applied for,

Special ... £ 100 : 3 : 25 March 1935

Donkey Boiler Fee ... £ 16 : 12 : When received,

Avi Review (if any) £ 8 : 8 : 5/3/35

Committee's Minute GLASGOW 5 - MAR 1935

Assigned + L.M.C. 3,35

DR-180lb.



© 2020

Lloyd's Register Foundation