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REPORT ON OIL ENGINE MACHINERY.

No. 67.

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Report of D.O. 11. Aug 51 When handed in at Local Office 19 Port of Amsterdam
 Survey held at Amsterdam Date, First Survey 7. May 51 Last Survey 7 Aug 1951
 Book. M.S. NIASSA Number of Visits 27.
 Single on the Twin Triple Quadruple Screw vessel Ferry-boat for Mocambique
 at Arrangement By whom built Arrangement Stoomschip. Mij Yard No. 354 When built
 nes made at Amsterdam By whom made Maasf. Ansb. Namb. 18 Engine No. 430544 When made 1951
 ey Boilers made at By whom made Boiler No. When made
 e Horse Power 2 x 230 Owners Port belonging to
 nks Power as per Rule 2 x 43.5 88 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 e for which vessel is intended Ferry.

ENGINES, &c. Type of Engines M.A.V. 96133 8 1/2" 2 or 4 stroke cycle 4 Single or double acting Single
 imum pressure in cylinders 55 atm Diameter of cylinders 220 mm Length of stroke 330 mm No. of cylinders 6 each No. of cranks 6 each
 Indicated Pressure 5.5 atm Ahead Firing Order in Cylinders 1-3-5-6-4-2 Span of bearings, adjacent to the crank, measured
 inner edge to inner edge 260 mm Is there a bearing between each crank yes Revolutions per minute 500
 heel dia. 100 mm Weight 1000 kg Moment of inertia of flywheel (16 lbs. in² or Kg.cm²) 580 Means of ignition pre-ignition Kind of fuel used gas oil
 k Solid forged dia. of journals as per Rule Crank pin dia. 130 mm Crank webs Mid. length breadth 240 mm Thickness parallel to axis
 t. Semi built All built as fitted 130 mm Mid. length thickness 61 mm shrunk Thickness around eyehole
 heel Shaft, diameter as per Rule Intermediate Shafts, diameter as fitted Thrust Shaft, diameter at collars as fitted
 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
 ze Liners, thickness in way of bushes as per Rule Thickness between bushes as fitted Is the after end of the liner made watertight in the
 ller boss. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
 e 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-
 sive. 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
 tube shaft If so, state type Length of bearing in Stern Bush next to and supporting propeller
 eller, dia. Pitch No. of blades Material whether moveable Total developed surface sq. feet
 nt of inertia of propeller (16 lbs. in² or Kg.cm²) Kind of damper, if fitted
 od of reversing Engines by Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of
 ation forced comp. air Thickness of cylinder liners 14 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled
 aged with non-conducting material water If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
 to the engine Cooling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel
 Pumps worked from the Main Engines, No. 2 outp. Diameter 11.5 mm Stroke 3/8 each Can one be overhauled while the other is at work
 ps connected to the Main Bilge Line No. and size How driven
 e 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
 gements
 st Pumps, No. and size main engine Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 x 3.34 m³/h each
 wo independent means arranged for circulating water through the Oil Cooler Suctions, connected to both main bilge pumps and auxiliary
 pumps, No. and size:—In machinery spaces In pump room
 ds, &c.
 endent Power Pump Direct Suctions to the engine room bilges, No. and size
 ll the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily
 ible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges
 ll Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed
 ently 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
 ey 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
 pipes pass through the bunkers How are they protected
 pipes pass through the deep tanks Have they been tested as per Rule
 ll pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times
 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
 , or from one compartment to another Is the shaft tunnel watertight Is it fitted with a watertight door worked from
 ood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
 Air Compressors, No. No. of stages diameters stroke driven by
 iary Air Compressors, No. No. of stages diameters stroke driven by
 Auxiliary Air Compressors, No. No. of stages diameters stroke driven by
 Shipp provision is made for first charging the air receivers
 nging Air Pumps, No. diameter stroke driven by
 iary Engines crank shafts, diameter as per Rule No. Position
 the auxiliary engines been constructed under special survey 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, 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, 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. 27.9.48. Receivers. Separate fuel tanks. Donkey boilers. General pumping arrangements. Pumping arrangements in machinery space. Oil fuel burning arrangements.

Have Torsional Vibration characteristics been approved. on 30.4.57 from 15 Lunden via Rollo, dan. Date of approval. approved. Sund letter 28.5.57. Re

SPARE GEAR.

Has the spare gear required by the Rules been supplied. 1 piston, 1 Bush. no 272c, 7 fuel oil pump. State the principal additional spare gear supplied. 2 main bearing balls, 4 g. cover studs, 4 ball and bearing built.

Maschinenfabrik Augsburg-Nürnberg A.G.

The foregoing is a correct description. Mfr. Mr. Helmut K. K. K.

Manufacturer.

Dates of Survey while building. During progress of work in shops - 1957: May: 7.11.17.28.31. June: 1.4.7.11.22.27. July: 2.3.4.9.17.20.21.23.25.27.28.29. Aug. 1.4.6.7. During erection on board vessel - 27. Total No. of visits.

Dates of examination of principal parts—Cylinders. 4.6.57. Covers. 9.7.57. Pistons. 7.6.57. Rods. Connecting rods. 7.6. Crank shaft. 27.6.57. Flywheel shaft. Thrust shaft. Intermediate shafts. Tube shaft. Screw shaft. Propeller. Stern tube. Engine seatings. Engine holding down bolts. Completion of fitting sea connections. Completion of pumping arrangements. Engines tried under working conditions. Crank shaft, material. S.M. Steel. 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. Identification marks on air receivers. Welded receivers, state Makers' Name. 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. Description of fire extinguishing apparatus fitted. 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 two heavy oil main engines have been constructed under special survey in accordance with the approved plans of the Society's Rules, and Secretary's Letters. The material used in the construction is good and the workmanship satisfactory. Both engines have been tested running on makers test bed under full-over and part loads with satisfactory results. In my opinion the vessel for which these heavy oil main engines are intended will be eligible for the notation of L.M.C. (with date) when the whole machinery has been satisfactorily fitted on board and tried under full working conditions.

The amount of Survey Fee... 6.40. When applied for... 19. Special... 160. When received... 19. Test crank... 122. Donkey Boiler Fee... 33. Travelling Expenses (if any) £ 40. Committee's Minute. Assigned. Sue A.E. mch. spl. TUES. 26 FEB 1952.

