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Under Biff

REPORT ON OIL ENGINE MACHINERY.

No. 108

10 NOV 1952

Received at London Office

Date of writing Report 16.4.1952 When handed in at Local Office 19 Port of AUGSBURG

Survey held at Augsburg Date, First Survey 10.4.51 Last Survey 4.2.1952

eg. Book. Number of Visits 56

on the Single Screw vessel "M.S. NYON" Tons Gross Net

Ysselmonde By whom built Scheepsinstallatiebedrijf "Neder-land" Yard No. H 3137 When built 1952

Augsburg By whom made Maschinenfabrik Augsburg-Nürnberg Engine No. 501517 When made 1951/2

Boilers made at By whom made Boiler No. When made

29 Brake Horse Power 3300/3500 BHP Owners Suisse-Atlantique, Société de Navigation Port belonging to Switzerland

N. Power as per Rule 664 MN Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ade for which vessel is intended

L ENGINES, &c. Type of Engines M.A.N. Standard Type K5770/120 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 50 atm. Diameter of cylinders 700 mm Length of stroke 1200 mm No. of cylinders 5 No. of cranks 5

Indicated Pressure 6.2 atm. Ahead Firing Order in Cylinders 1-5-2-3-4 Span of bearings, adjacent to the crank, measured

from inner edge to inner edge 920 mm Is there a bearing between each crank yes Revolutions per minute 125-130

Flywheel dia 2300 mm Weight 4255 kg Moment of inertia of flywheel (lbs. in² or Kg. cm. 16600 Means of ignition dir. inj. Kind of fuel used Diesel + Heavy Fuel Oil

Crank pin dia 445 mm Crank webs Mid. length breadth 400/820 mm Thickness parallel to axis 185 mm

Journal dia 445 mm Crank webs Mid. length thickness 7.5 mm Thickness around eyehole 185 mm

Propeller Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted 430 mm

Propeller Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube screw shaft fitted with a continuous liner

Brass 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

propeller 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 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 tube shaft If so, state type 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

Moment of inertia of propeller (lbs. in² or Kg. cm.²) Kind of damper, if fitted

Method of reversing Engines by compressed air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of

lubrication forced Thickness of cylinder liners 40-45 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled

lagged 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

Water 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

Is the 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

Fast Pumps, No. and size Power Driven 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

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

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction 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

cently 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

Are pipes pass through the bunkers How are they protected

Are 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

Is the 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

Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

Is provision made for first charging the air receivers

Charging Air Pumps, No. 1 double acting diameter 1380 mm stroke 1160 mm driven by main engine crank

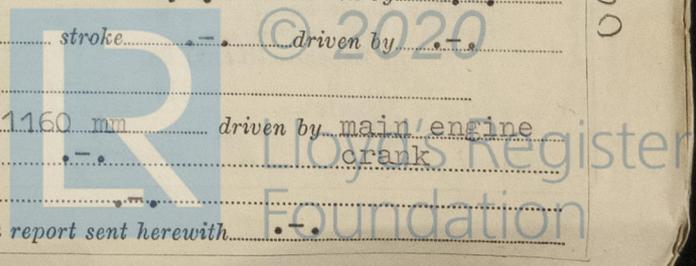
Auxiliary Engines crank shafts, diameter as per Rule 130 mm Position

Have the auxiliary engines been constructed under special survey see 1. Entry No. 90 Is a report sent herewith

of 20.11.51

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0565-000-599500



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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... Injection Air Receivers, No... Cubic capacity of each... Internal diameter... thickness... Seamless, welded or riveted longitudinal joint... Material... Range of tensile strength... Working pressure... Starting Air Receivers, No... Total cubic capacity... Internal diameter... thickness... Seamless, welded or riveted longitudinal joint... Material... Range of tensile strength... Working pressure...

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... Donkey boilers... General pumping arrangements... Pumping arrangements in machinery space... Oil fuel burning arrangements... Have Torsional Vibration characteristics been approved... Date of approval...

SPARE GEAR.

Has the spare gear required by the Rules been supplied... Spare Gear is not yet complete, will be forwarded by the... at a later date. State the principal additional spare gear supplied...

Maschinenfabrik Augsburg-Nürnberg A.G. Manufacturer.

Dates of Survey while building... During progress of work in shops... 1951: April, 15.17; June, 18.22.27; July, 11.20; Aug., 18.24.27.31; Sept., 12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30.31; Oct., 4.8.16.25.26.30.31; Nov., 2.3.7.8.10.13.14.15.22.23.24.26.27.29.30; Dec., 4.6.10.11.15.17.18.19.21. During erection on board vessel... 1952: Jan., 5.8.9.12.17.19.22.26.28.30.31; Febr., 4.-

Total No. of visits... 56 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... 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... 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... M.A.N. Standard Type

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.) This M.A.N. Standard Type of Heavy Oil Engine Machinery has been constructed under special supervision in accordance with the Society's Rules and Regulations, the Secretary's letters and the instructions thereto. The material used in the construction is good and has been tested by the local Society's Surveyor with satisfactory results. The workmanship was found to be of high quality. This main engine has been tested on Makers test bed a suitable time under full-, over- and part-loads and was found to work satisfactory. In my opinion the vessel for which this engine is intended will be eligible for the notation of L.M.C. (with date) when the whole machinery has been fitted aboard and tried under full working conditions.

Table with 2 columns: Description of fee, Amount. Includes Entry Fee, Special Survey Fee, Welded bed plates & crabs, Donkey Boiler Fee, Several test bed trials, Travelling Expenses (if any).

When applied for... 19... When received... 19... Engineer Surveyor to Lloyd's Register of Shipping



Assigned... See F.B. Mch. rpt Rot 25543