

pt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 108

Received at London Office

10 NOV 1952

ate of writing Report 16.4.1952

When handed in at Local Office 19

Port of AUGSBURG

o. in Survey held at Augsburg

Date, First Survey 10.4.51

Last Survey 4.2.1952

eg. Book.

Number of Visits 56

Single

on the Twin

Triple

Quadruple

Screw vessel

M.S. NYON

Giesse 760

Tons Gross

Net

By whom built Scheepsinstallatiebedrijf "Neder-

land"

Yard No. H 3137

When built 1952

By whom made Maschinenfabrik Augsburg-Nürnberg

Engine No. 501517

When made 1951/2

By whom made

Boiler No.

When made

Suisse-Atlantique, Société de Navigation

Port belonging to Switzerland

Maritime S.A., Lausanne

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

664 MN

ake Horse Power 3300/3500 BHP

N. Power as per Rule

ade for which vessel is intended

L. copy

ENGINES, &c. —Type of Engines M.A.N. Standard Type K5Z70/120

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

om inner edge to inner edge 920 mm

Is there a bearing between each crank yes

Revolutions per minute 125-130

Wheel 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

ank dia. of journals 445 mm

Crank pin dia. 445 mm

Crank webs

Mid. length breadth 400/820 mm

Mid. length thickness 275 mm

Thrust Shaft, diameter at collars 430 mm

Wheel Shaft, diameter

Intermediate Shafts, diameter

Screw Shaft, diameter

Is the tube screw shaft fitted with a continuous liner

onze Liners, thickness in way of bushes

Thickness between bushes

Is the after end of the liner made watertight in the

PELLER 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-

rosive

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

of tube shaft

If so, state type

Length of bearing in Stern Bush next to and supporting propeller

PELLER, dia.

Pitch

No. of blades

Material

whether moveable

Total developed surface

sq. feet

ment of inertia of propeller (lbs. in² or Kg. cm.²)

Kind of damper, if fitted

thod of reversing Engines by compressed

Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes

Means of

ication forced

Thickness of cylinder liners 40-45 mm

Are the cylinders fitted with safety valves yes

Are the exhaust pipes and silencers water cooled

agged with non-conducting material 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

Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

aps connected to the Main Bilge Line

No. and size

How driven

ve 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

ngements

ast Pumps, No. and size

Power Driven Lubricating Oil Pumps, including spare pump, No. and size

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

olds, &c.

pendent Power Pump Direct Suctions to the engine room bilges, No. and size

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

sible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

all Sea Connections fitted direct on the skin of the Ship

Are they fitted with valves or cocks

Are they fixed

iently 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

hey 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

ary Air Compressors, No.

No. of stages

diameters

stroke

driven by

Auxiliary Air Compressors, No.

No. of stages

diameters

stroke

driven by

provision is made for first charging the air receivers

aging Air Pumps, No. 1 double acting

diameter 1380 mm

stroke 1160 mm

driven by main engine

ary Engines crank shafts, diameter

as per Rule

as fitted 130 mm

No.

Position

he auxiliary engines been constructed under special survey see 1. Entry No. 90

Is a report sent herewith

of 20.11.51

27

5

52

000-019600-509500

418 106.

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.....

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..... appr. 19.6.50 Receivers..... Separate fuel tanks.....

Donkey boilers..... General pumping arrangements..... Pumping arrangements in machinery space.....

Oil fuel burning arrangements.....

Have Torsional Vibration characteristics been approved..... appr. 14.6.51 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.
During progress of work in shops - - - 1951: April, 13.17; June, 18.22.27; July, 11.20; Aug., 18.24.27.31; Sept., 12.13.
Oct., 4.8.16.25.26.30.31; Nov., 2.3.7.8.10.13.12.15.22.23.24.26.27.29;
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..... 15.11.51 Covers..... 8.10.11.51 Pistons..... 10.12.51 Rods..... 10.12.51 Connecting rods..... 9.11.51

Crank shaft..... 31.10.51 Flywheel shaft..... Thrust shaft..... 31.10.51 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..... 544, 545, 546 Flywheel shaft, material..... Identification mark.....

Thrust shaft, material..... S.M. Steel Identification mark..... 547, 548 Intermediate shafts, material..... Identification marks.....

Tube shaft, material..... Identification mark..... 553 9.7.51 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 su

in accordance with the Society's Rules and Regulations, the Secretary's letters and the inst

thereto. The material used in the construction is good and has been tested by the local Soci

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 p

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.

The amount of Entry Fee ... DM : :
3/3 Special Survey Fee 664.00
Welded bed plates & cable. 2440.00
Donkey Boiler Fee... 480.00
Several test bed trials 240.00
Travelling Expenses (if any) 80.00
DM 3540.00
When applied for 19
When received 19

Committee's Minute
Assigned
See F.E. mch. rpt Rot 35543
TUES 9 DEC 1952

