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REPORT ON OIL ENGINE MACHINERY.

No. 173

3 - DEC 1952

Received at London Office

Writing Report 11th Nov. 1952 When handed in at Local Office 19 Port of Augsburg
Survey held at Augsburg Date, First Survey 21st April, 1951 Last Survey 4th November 1952
Number of Visits 78
Single on the Twin Triple Quadruple Screw vessel
Tons Gross Net
Uddevalle By whom built Uddevallavarvet A/B Yard No. 126 When built
No. 19 made at Augsburg By whom made Maschinenfabrik Augsburg-Nürnberg A.G. Engine No. 501539 When made 1951/52
Boilers made at By whom made Boiler No. When made
Horse Power { Maximum Service 6300 Owners Reederei Torm, Copenhagen Port belonging to Denmark
per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
for which vessel is intended

ENGINES, &c. — Type of Engines M.A.N. Standard Type K7Z78/1402 or 4 stroke cycle 2 Single or double acting single
um pressure in cylinders 50 atm. Diameter of cylinders 780 mm Length of stroke 1400 mm No. of cylinders 7 No. of cranks 7
Indicated Pressure 6.3 atm. Span of bearings (i.e., distance between inner edges of bearings in
a crank) 1040 mm Is there a bearing between each crank Yes Revolutions per minute { Maximum Service 115
el dia 2700 mm Weight 4000 kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) 17000 kgm² Means of ignition air. inj Kind of fuel used diesel oil
" " " " balance wts. (" " " ")

Semi built dia. of journals as per Rule as fitted 520 mm Crank pin dia. 520 mm Crank webs Mid. length breadth 1000 mm Thickness parallel to axis
Mid. length thickness 315 mm shrunk Thickness around eyehole 237.5 mm

el Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted 500 mm
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 { }

Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted Is the after end of the liner made watertight in the
er boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
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-
e If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland fitted at the after
stern tube If so, state type Length of bearing in Stern Bush next to and supporting propeller
er, dia. Pitch No. of blades Material whether moveable Total developed surface sq. feet

0.11 of inertia of propeller including entrained water (lbs. in² or Kg. cm²) Kind of damper, if fitted
1.1. of reversing Engines pneum. hydr. Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of
ion forced Thickness of cylinder liners 50 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled
d with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

See 1 the engine Cooling Water Pumps, No. and how driven Working F.W.
26 Spare F.W. S.W. Is the sea suction provided with an efficient strainer which can be cleared within the vessel
15.4 pumps worked from the Main Engines, No. and capacity Can one be overhauled while the other is at work

YD'S connected to the Main Bilge Line No. and capacity of each
15.4 How driven

rafts 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
ments

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

ish independent means arranged for circulating water through the Oil Cooler Branch Bilge Suctions

size:—In machinery spaces In pump room

s, &c.

Bilge Suctions to the engine room bilges, No. and size

F.E.B the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily

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

y ins Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed

utly 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

y 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

the pipes pass through the bunkers How are they protected

180 pipes pass through the deep tanks Have they been tested as per Rule

pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times

with 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

nd 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

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

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

of Sh provision is made for first charging the air receivers

ing Air Pumps or Blowers, No. 1 tandem double acting driven by main engine crank

ry Engines Have they been made under survey yes Engine Nos. 430 794/95/96

Makers name M.A.N. Position of each in engine room

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AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....

State full details of safety devices.....

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. 30.10.51 ✓ Receivers..... Separate fuel tank.....
(If not, state date of approval)

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

Oil fuel burning arrangements.....

Have Torsional Vibration characteristics been approved yes Date and particulars of approval 30.10.51

SPARE GEAR.

Has the spare gear required by the Rules been supplied follows State if for "short voyages" only.....

State the principal additional spare gear supplied.....

Maschinenfabrik Augsburg-Nürnberg A.G.
The foregoing is a correct description.

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1951, April, 24; June 14.21; Aug., 6.7.13; Nov., 2; Dec., 21; 1952 Jan., 28.29; Ma April, 4.8.16.18.22; May, 2.7.10.15.27.28.29.31; June, 7.16.18.19.21; July, 1 9.11.12.15.26.29; Aug., 4.5.7.14.23.28.29; Sept., 2.8.11.13.15.18.19.20.21. 25.30; Oct., 1.2.3.6.7.8.9.10.14.15.16.17.22.23.25; Nov., 4.
During erection on board vessel -
Total No. of visits seventy-eight

Dates of examination of principal parts—Cylinders 6.10.52 Covers 15.10.52 Pistons 19+21+23.9.52 Rods 9+10.10.52 Connecting rods 22

Crank shaft 25.10.52 Flywheel shaft..... Thrust shaft 25.10.52 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 J.Q. 48, 322, 382 Flywheel shaft, material..... Identification mark.....

Thrust shaft, material see cranksh. 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.....

Full description of fire extinguishing apparatus fitted in machinery spaces.....

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.....

What is the special notation desired.....

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 Standard Type If so, state name of vessel.....

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.....)

This heavy oil main engine has been constructed in accordance with the approved plans, the Secretary's letters and instructions thereto. The material used in the construction is good

the workmanship was found to be satisfactory. The engine has not been tested on Makers test

In our opinion the vessel for whom this engine is intended will be eligible for the notation

+ L.M.C. (with date) when the whole machinery has been satisfactorily fitted aboard the and has been tried under full working conditions.

The amount of Entry Fee ... £ 3690.-

Welded bed plates, cyl. columns ... £ 872.-

Donkey Boiler Fee... £

Travelling Expenses (if any) ... £ 78.-

When applied for 19

When received 19

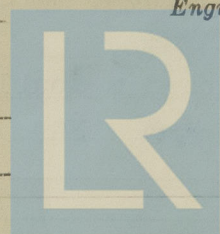
Engineer Surveyor to Lloyd's Register of SH

(The Committee's Minute

Assigned

Su F.E. mch. spb.

TUES. 24 FEB 1953



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