

REPORT ON OIL ENGINE MACHINERY.

No. 2002.

Received at London Office

MAR 28 1938

of writing Report 18th March 1938 When handed in at Local Office 21.3. 1938. Port of Bremen.

in Survey held at Pussburg Date, First Survey 6th March 1937 Last Survey 18th March 1938

Number of Visits

Single
Twin
Triple
Quadruple
Screw vesselTons
Gross
Net

Built at Hamburg

By whom built Messrs. Deutsche Werft

Yard No. 202 When built 1938

Engines made at Pussburg

By whom made Messrs. M. A. P.

Engine No. 650170 When made 1937/38.

Monkey Boilers made at

By whom made

Boiler No. When made

Indicated Horse Power 4100

Owners

Port belonging to

Indicated Horse Power as per Rule 4001

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Use for which vessel is intended 997

ENGINES, &c.—Type of Engines

K 8 Zm 68/120

2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 45 kg/cm²

Diameter of cylinders 680 mm

Length of stroke 1200 mm

No. of cylinders 8

No. of cranks 8

Indicated Pressure 5.6

No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 925 mm

Is there a bearing between each crank yes

Revolutions per minute 115

Flywheel dia. 2100 mm

Weight 4380 kg

Means of ignition dist. ign.

Kind of fuel used

Crank shaft,
Solid forged
Semi built
All built

dia. of journals as per Rule as fitted 460 mm

Crank pin dia. 460 mm

Crank Webs

Mid. length breadth 880 mm

shrunk

Thickness parallel to axis 385 mm

Wheel Shaft, diameter as per Rule as fitted 460 mm

Intermediate Shafts, diameter as per Rule as fitted

Thrust Shaft, diameter at collars as per Rule as fitted

Screw 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

Bronze 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

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-corrosive

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 the tube

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

Method of reversing Engines by comp. air

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

Means of lubrication

Thickness of cylinder liners 42 mm

Are the cylinders fitted with safety valves yes

Are the exhaust pipes and silencers water cooled or lagged with

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

Suction Water Pumps, No.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Suction 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

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

Suction Pumps, No. and size

Main engine

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1, 38 m³/h.

Two independent means arranged for circulating water through the Oil Cooler

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

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

All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Are the Bilge Suctions in the Machinery Spaces

from easily accessible 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

they fixed sufficiently 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

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

at pipes pass through the bunkers

How are they protected

at pipes pass through the deep tanks

Have they been tested as per Rule

All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

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

Department to another

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

In 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.

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

All Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

at provision is made for first Charging the Air Receivers

Suctioning Air Pumps, No. 1, (handum)

Diameter 1380 mm

Stroke 850 mm

Driven by main engine

Auxiliary Engines crank shafts, diameter as per Rule as fitted

No.

Position

Have 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, lap 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, lap 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 17.9.36/16.2.38 Receivers

(If not, state date of approval)

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

(not yet ready)

State the principal additional spare gear supplied

The foregoing is a correct description,

Maschinenfabrik Augsburg-Nürnberg A.-G.

per Hermann

per Stander

Manufacturer.

Dates of Survey while building
During progress of work in shops-- 1937. March 6, 17, 18. April 3, 9, 16, 21, 26. June 8, 9, 23, 28, 30. July 13, 14, 23, 29. Sept. 1, 10, 21, Oct. 1, 11, 15, 22, 25, 27, 29, 30. Dec. 1, 2, 3, 4, 8, 11, 15, 28, 29. 1938 Jan. 6, 7, 8, 10, 12, 13, 14, 15, 17, 18, 20, 21, 26, 28, 29, 31. Feb. 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 28. March 1, 2, 3, 4, 8, 9, 10, 11, 14, 15, 16, 17, 18.
During erection on board vessel--
Total No. of visits 47.

Dates of Examination of principal parts—Cylinders 15./16.2.38 Covers 16.2.38 Pistons 3./8. 12.37. Rods 22/23. 2.38 Connecting rods 17.2.

Crank shaft 24.1. 14.2.38 Flywheel shaft 28.1.38

Thrust shaft

Intermediate shafts

Tube shaft

Screw shaft

Propeller

Stern tube

Engine seatings

Engines 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

V.S. 1002/1003

Flywheel shaft, Material S. M. Steel

Identification Mark

M.B. 1312

Thrust shaft, Material

Identification Mark

11.10.37.

Intermediate shafts, Material

Identification Marks

21.5.37.

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark

Identification Marks on Air Receivers

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

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 Messrs. Deutsche Werft's yard No 20

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

This heavy oil main engine has been constructed under special survey in accordance with the Soc. Rules and Regulations, as well as with the approved plans, instructions and the Secretary's letters thereto. The material used in the construction is good and the workmanship satisfactory. This engine has not been tested on the makers' test bed.

In our opinion the vessel for which this engine is intended will be eligible for the notation of + U.M.C. (with date) when the whole machinery has been fitted satisfactorily on board and tried under full working conditions.

The amount of Entry Fee .. 4/5 96.00

Special ... 4/5 2000.40

Donkey Boiler Fee ... £

Travelling Expenses (if any) £ 140.60

When applied for,

25.3.1938.

When received,

3.6.1938

Committee's Minute

FRI. 12 AUG 1938

Assigned

See Ham. 22865

M. Mercer & Peterson

Engineer Surveyor to Lloyd's Register of Shipping.



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