

REPORT ON OIL ENGINE MACHINERY

No. 1013

20 AUG 1931

Received at London Office

Writing Report 20 Aug 1931 When handed in at Local Office

Port of STETTIN

Survey held at Berlin

Date, First Survey 19th Sept 1930 Last Survey 4th Aug 1931

Number of Visits 22

on the ^{Single} Twin ^{Triple} Screw vesselTons ^{Gross}
^{Net}

at Hamburg

By whom built Deutsche Werft AG Yard No. 146 When built 1931

Machinery made at Berlin

By whom made A. & G. Turbinen-Fabrik Engine No. 222/3 When made 1931

Boilers made at

By whom made Boiler No. When made

Horse Power 2 x 2250

Owners

Port belonging to

Horse Power as per Rule 984

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

for which vessel is intended

ENGINES, &c.—Type of Engines *Brunswick & Wain* 2 or 4 stroke cycle 4 Single or double acting *Single*Mean pressure in cylinders 38 kg/cm² Diameter of cylinders 440 mm Length of stroke 1300 mm No. of cylinders 2 x 6 No. of cranks 2 x 6

of bearings, adjacent to the Crank, measured from inner edge to inner edge

Is there a bearing between each crank

Revolutions per minute 118

Flywheel dia. 2136 mm

Weight 2000 kg

Means of ignition *Compr. air*Kind of fuel used *Heavy fuel oil*

Crank Shaft, dia. of journals

as per Rule 448 mm

as fitted 460 mm

Crank pin dia. 460 mm

Crank Webs

Mid. length breadth 842 mm

shrunk

Thickness parallel to axis 290 mm

Propeller Shaft, diameter

as per Rule 448 mm

as fitted 460 mm

Intermediate Shafts, diameter

as per Rule 281 mm

as fitted

Thrust Shaft, diameter at collars

as per Rule

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 {

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

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-corrosive

Liners are fitted, is the shaft lapped or protected between the liners

Is an approved Oil Gland or other appliance fitted at the after

the tube shaft

Length of Bearing in Stern Bush next to and supporting propeller

Pitch

No. of blades

Material

whether Moveable

Total Developed Surface

sq. feet

Kind of reversing Engines *direct*Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes*

Means of lubrication

Thickness of cylinder liners 50-32 mm

Are the cylinders fitted with safety valves *yes*

Are the exhaust pipes and silencers

water cooled or lagged with

ducting material *yes*

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. 1 each engine

260 x 350 mm

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

Pumps worked from the Main Engines, No. 1 each engine

Diameter 150 mm

Stroke 350 mm

Can one be overhauled while the other is at work

s connected to the Main Bilge Line

No. and Size

How driven

Lubricating Oil Pumps, No. and size

1 each engine

Gear wheel pump of 24 m³ p. h.

Lubricating Oil Pumps, including Spare Pump, No. and size

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Machinery Spaces

Independent means arranged for circulating water through the Oil Cooler

No. and size:—In Machinery Spaces

ds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are the Bilge Suctions in the Machinery Spaces

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

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

Sea Connections fitted direct on the skin of the ship

Are they fitted with Valves or Cocks

Are 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

Are 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

How are they protected

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

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

tment to another

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. 1 each engine

No. of stages 3

Diameters 150/150 mm

Stroke 460 mm

Driven by Crank shaft

Auxiliary Air Compressors, No.

No. of stages

Diameters 150

Stroke

Driven by

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Working Air Pumps, No.

Diameter

Stroke

Driven by

Air Engines crank shafts, diameter

as per Rule

as fitted

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes*Are the internal surfaces of the receivers be examined *yes*What means are provided for cleaning their inner surfaces *covers on both ends*Is a drain arrangement fitted at the lowest part of each receiver *yes*

Pressure Air Receivers, No. 1 each engine

Cubic capacity of each 400 litres

Internal diameter 450 mm

thickness 21 mm

Material *Seamless*

Range of tensile strength 42.7-43 kg

Working pressure by Rules 92.8 kg

Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

Material

Range of tensile strength

Working pressure by Rules

Is lap welded or riveted longitudinal joint

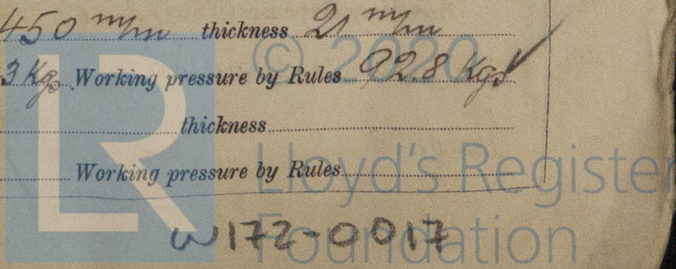
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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

4c.

PLANS. Are approved plans forwarded herewith for Shafting 15.4.30. 27.9.30
(If not, state date of approval)

Receivers 4.11.30.

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

All spare gear required for main engines as per Section 9 of the Rules for Heavy Oil Engines and in addition: 5 cylinders covers, 6 liners, 3 pistons, 2 top end and 2 bottom end braces, 1 piston rod with crosshead and guide shoe and 1 connecting rod have been supplied.

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building

During progress of work in shops -
During erection on board vessel -
Total No. of visits

19.9.23.9.24.9.7.11.12.11.8.12.16.12.22.12.1930. - 8.1.14.1.14.1.3.2.17.2.13.2.18.2.25.2.27.10.3.20.3.26.3.1.4.9.4.17.4.4.5.7.5.20.5.28.5.3.6.10.6.23.6.1.7.4.8.1931.

Dates of Examination of principal parts - Cylinders 2.12.30-1.4.31. Covers 7.11.30-1.4.31. Pistons 7.11.30-4.8.31. Rods 8.1.31-1.4.31. Connecting rods 16.12.30-1.4.31.

Crank shaft 3.2.-1.4.31. Flywheel shaft 23.5.-4.8.31. 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 L.H. Steel Identification Mark ES.25.10.30. NK.5.12.30a Flywheel shaft, Material L.H. Steel Identification Mark F.S. 4.5.

Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Marks

Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

Is the flash point of the oil to be used over 150° F. yes

Is this machinery duplicate of a previous case no If so, state name of vessel

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

These Engines have been constructed under Special Survey in accordance with approved plans and the requirements of the Rules. Materials and workmanship are of good quality.

Full power trials of these Engines were carried out in the makers shop on the 28th May and 23rd June 1931 with satisfactory results.

Certificate (if required) to be sent to
(The Surveyor are requested not to write on or below the space for Committee's Minute.)

(4/5th of total Fee)
The amount of Entry Fee ... £ 4 : 16 :
Special ... £ 99 : 4 :
Donkey Boiler Fee ... £ - : - :
Travelling Expenses (if any) £ 25 : 2 :
When applied for, 5th Aug. 1931.
When received, 26.8.31.

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping



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