

RECEIVED

REPORT ON OIL ENGINE MACHINERY.

No. 15

I.D. No. 2082 7003.

Received at London Office.

12-4-51

6 APR 1951

Date of writing Report 10.3. 19 51 When handed in at Local Office 19 Port of Düsseldorf

IN D.O. Survey held at Köln-Deutz Date, First Survey 16.9.50 Last Survey 13.3. 19 51
Reg. Book. Number of Visits 8

"PETO"

Single
on the Twin Triple
Screw vessel
Quadruple

Tons { Gross
Net

Built at Meppel By whom built Worst u. Duttmer Yard No. 101 When built 1275905-10

Engines made at Köln-Deutz By whom made Klöckner-Humboldt-Deutz Engine No. When made 3.51

Donkey Boilers made at - - - By whom made - - - Boiler No. - - When made - -

Brake Horse Power 295 Owners. Port belonging to

M.N. Power as per Rule 65.6 71.5 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c. —Type of Engines Airless Injection Heavy Oil RV6M⁵³⁶ 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 55 ✓ Diameter of cylinders 270 ✓ Length of stroke 360 ✓ No. of cylinders 6 ✓ No. of cranks 6 ✓

Mean Indicated Pressure 6.9 Kg Ahead Firing Order in Cylinders 1-2-3-6-5-4 Span of bearings, adjacent to the crank, measured

from inner edge to inner edge 278 mm Is there a bearing between each crank yes Revolutions per minute 393 ✓

Flywheel dia 1200 mm Weight 1000 kg Moment of inertia of flywheel (lbs. in² or Kg. cm.²) Means of ignition Compr. Kind of fuel used Diesel

Crank Shaft, (Solid forged Approved
Semi built dia. of journals as per Rule 25.5.50
All built as fitted 165 mm Crank pin dia 165 mm Crank webs Mid. length breadth 300 mm ✓ Thickness parallel to axis
Mid. length thickness 64.5 mm ✓ Thickness around eyehole

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 29.11.50 Thrust Shaft, diameter at collars as fitted 165 mm Approved
as fitted 160 as per Rule 25.5.50

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

Bronze 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

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

lubrication forced Thickness of cylinder liners 1.8 mm Are the cylinders fitted with safety valves yes ✓ Are the exhaust manifolds water cooled

or lagged with non-conducting 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 Cooling Water Pumps, No. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. One Diameter 100 Stroke 75 Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line (No. and size. No other information than above.

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

Ballast Pumps, No. and size Power Driven Lubricating Oil Pumps, including spare pump, No. and size Capacity 105 ltrs. p. min.

Are 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

In 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

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 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

What pipes pass through the bunkers How are they protected

What 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

If 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. One on Main No. of stages Two diameters 60/145 mm stroke 75 mm driven by Main Eng.

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

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

What provision is made for first charging the air receivers

Scavenging Air Pumps, No. diameter stroke driven by

Auxiliary Engines crank shafts, diameter as per Rule No. Position

Have the auxiliary engines been constructed under special survey Is a report sent herewith

4B No 15.

Düsseldorf Certificates

AIR RECEIVERS:—Have they been made under survey

State No. of report or certificate Nos. 541 & 1084

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

by Rules

Starting Air Receivers, No

1x500 ltr. & 1x250 ltr.

Total cubic capacity 750 ltrs.

Internal diameter 460 mm

thickness 10 mm

Actual

Seamless, welded or riveted longitudinal joint

welded

Material S.M. Steel

Range of tensile strength 47-53

Working pressure

by Rules

30 kg/cm²

Actual

30 kg/cm²

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

(If not, state date of approval)

Receivers

Separate fuel tanks

Donkey boilers

General pumping arrangements

Pumping arrangements in machinery space

Oil fuel burning arrangements

Have Torsional Vibration characteristics been approved At London

Date of approval 12/12/50

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description,

Klöckner-Humboldt-Deutz

Aktiengesellschaft

Manufacturer

Dates of Survey while building

During progress of work in shops

16.9.50, 9.1., 26.1., 30.1., 2.2., 24.2., 26.6., 13.3.51

During erection on board vessel

Total No. of visits

Dates of examination of principal parts—Cylinders

26.1., 30.1., 30.1., 26.2.51

Covers

26.2.51

Pistons

26.2.51

Rods

16.9.50

Connecting rods

17.11.51

Crank shaft 2.2. 26.2.51

Flywheel shaft

Thrust shaft 2.2. 26.2.51

Intermediate shafts

9.1.51

Tube shaft

16.9.50

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

24.2.51

Crank shaft, material S.M. Steel

Identification mark

Lloyds F.S.65

Flywheel shaft, material

Identification mark

S.M. Steel

Identification mark

Lloyds H.B.20

Thrust shaft, material

Identification mark

Intermediate shafts, material

58.6 kg/mm²

Identification mark

9.1.51

Tube shaft, material

Identification mark

Identification marks on air receivers

Lloyds Test

Klöckner-Humboldt-Deutz No.

H 1704 & 1162

T.P.60 Atm. W.P.30 Atm.

H.B.22.12.50 & H.B. 11.8.50

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

No. If so, state name of vessel

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

This engine has been constructed under special survey of tested materials and is in accordance with the Secretary's letters, approved plans and Rule Requirements. The materials and workmanship are good and the engine, when tested in the shops under full and overload conditions, was found to function satisfactorily. The governor tests were also satisfactory. This engine is suitable in my opinion for main propelling purpose and when satisfactorily installed and reported will be eligible to receive the notation  LMC (with date).

The amount of Entry Fee ... £

Special ... £

Donkey Boiler Fee... £

Travelling Expenses (if any) £

When applied for

19

When received

19

Committee's Minute

13th July 1951

Assigned

See F.E. maly opt

H. Jünger

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation