

REPORT ON OIL ENGINE MACHINERY.

No. 172

Received at London Office

JUL 12 1939

Date of writing Report 20-5-39 When handed in at Local Office 19 Port of WINTERTHUR

No. in Survey held at WINTERTHUR Date, First Survey 16-8-38 Last Survey 10-5-1939
Reg. Book. Number of Visits

on the Single Twin Triple Quadruple Screw vessel "PRINCESS VICTORIA" Tons Gross 2197
Net 1032

Built at DUMBARTON By whom built WM. DENNY AND BROS. Yard No. 1333 When built 1939

Engines made at WINTERTHUR By whom made SULZER BROS. Engine No. 23342 When made 1939

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

Brake Horse Power 2550 Owners LONDON, MIDLAND + SCOTTISH RAILWAY Port belonging to ✓

Nom. Horse Power as per Rule 439 ^{437.4 for one engine} Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

Trade for which vessel is intended ✓

II ENGINES, &c. Type of Engines SULZER SOLID INJECTION 2 or 4 stroke cycle 2 Single or double acting SINGLE

Maximum pressure in cylinders 850 LB/IN² Diameter of cylinders 18 7/8 Length of stroke 27 1/2 No. of cylinders 7 No. of cranks 7

Mean Indicated Pressure 84 LB/IN² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 590 MM. ^{570?} Is there a bearing between each crank YES

Revolutions per minute 265 Flywheel dia. 1765 MM Weight 1058 Kg. Means of ignition COMPRESSION Kind of fuel used HEAVY OIL

Crank Shaft, Solid forged as per Rule 287 MM. dia. of journals as fitted 320 MM. Crank pin dia. 320 MM. Crank Webs Mid. length breadth 460 MM Thickness parallel to axis ✓
Semi built All built Mid. length thickness 165 MM shrink Thickness around eyehole ✓

Flywheel Shaft, diameter as per Rule APPD. 14.2.39 Intermediate Shafts, diameter as per Rule ✓ Thrust Shaft, diameter at collars as per Rule APPD. 14.2.39
as fitted 330 MM. as fitted ✓ as fitted 330 MM.

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

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
as fitted ✓ as fitted ✓ 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 the 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 ✓

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 39 MM Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers 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. ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Bilge 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 ✓

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 ✓

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 Suctions 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 sized 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. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

STARTING 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. 1, DA, TANDEM Diameter 1110 AND 960 MM Stroke 400 MM Driven by MAIN ENGINE

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

Have the Auxiliary Engines been constructed under special survey ✓ Is a report sent herewith ✓

W285-0119



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

14-2-39

Receivers

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 To BE SUPPLIED BY Wm. DENNY AND BROS.

State the principal additional spare gear supplied FOR ITEMS SUPPLIED BY SULZER BROS. PLEASE SEE LIST.

The foregoing is a correct description,

Sulzer Brothers

Manufacturers

Manufacturer.

Dates of Survey while building: During progress of work in shops - 16-8-38 to 4-5-39 25 VISITS. During erection on board vessel - Total No. of visits

Dates of Examination of principal parts: Cylinders 17-2-39 Covers 27-1-39 Pistons 2-3-39 Rods Connecting rods 23-8-38 8-11-38 Crank shaft 2-2-39 4-5-39 Flywheel shaft 4-5-39 Thrust shaft 4-5-39 Intermediate shafts Tube shaft Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts Crank shaft, Material S.M. STEEL Identification Mark 2269 A J1863 Flywheel shaft, Material S.M. STEEL Identification Mark 5.8641 W.K. 15-11-38 CSP 20-9-38 Thrust shaft, Material AS FLYWHEEL SHAFT Identification Mark Intermediate shafts, Material Identification Marks 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

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 in accordance with the requirements of the Rules, the Secretary's letters and the approved plans. Material and workmanship are good. Full power trials of the engine in the shop were satisfactory. The engine has been despatched to Messrs Denny and Bros, Dumbarton to be installed in the vessel.

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

The amount of Entry Fee .. £ 125.- : When applied for, Special ... £ 2270.- : 19 Donkey Boiler Fee ... £ : When received, Travelling Expenses (if any) £ : 7.6.1939

J. Buchanan Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW

11 JUL 1939

Assigned SEE ACCOMPANYING MACHINERY REPORT.



© 2021 Lloyd's Register Foundation