

REPORT ON OIL ENGINE MACHINERY.

No. 172

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

Port of WINTERTHUR

No. in Survey held at WINTERTHUR
Reg. Book.

Date, First Survey 16-8-38 Last Survey 10-5-1939

Number of Visits

Single
on the 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

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

IL 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 480 MM Length of stroke 700 MM No. of cylinders 7 No. of cranks 7Mean Indicated Pressure 84 LB/IN²

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 590 MM 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
Semi built dia. of journals as fitted 320 MM
All built Crank pin dia. 320 MM Crank Webs Mid. length breadth 460 MM Thickness parallel to axis
Mid. length thickness 165 MM shrunk Thickness around eyehole

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

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the { tube { 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

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 decoupled 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 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. 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 as fitted 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 ☒
(If not, state date of approval)
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

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
2-2-39 8-11-38
Crank shaft { 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 ☒
Completion of fitting sea connections ☒ Completion of pumping arrangements ☒ Engines tried under working conditions IN SHOP 3-4-39
Crank shaft, Material S.M. STEEL. Identification Mark J1863 2269 A Flywheel shaft, Material S.M. STEEL. Identification Mark S.8641
Thrust shaft, Material AS FLYWHEEL SHAFT Identification Mark W.K. 15-11-38 Intermediate shafts, Material ☒ Identification Marks CSP 20-9-38
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.

The amount of Entry Fee .. £ 125.- : When applied for, 19
Special ... £ 2270.- :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When received, 1939

Committee's Minute **GLASGOW**

Assigned

SEE ACCOMPANYING MACHINERY REPORT.

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



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Foundation