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REPORT ON OIL ENGINE MACHINERY.

No. 74441

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Single on the Twin Triple Quadruple Screw vessel **M.V. 'CHRISTINE'** Tons Gross

Built at Glasgow By whom built *Greenock Shipb. Co. Ltd.* Yard No. 474 When built 1949

Engines made at Glasgow By whom made *Greenock British Steam Engine Co. Ltd.* Engine No. 726 When made 1949

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

Brake Horse Power 1140 Owners Port belonging to

M.N. Power as per Rule 257 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended *Coasting.*

OIL ENGINES, &c.—Type of Engines *Heavy oil M.E. 7. M. 1. 1. 1.* 2 or 4 stroke cycle 2 Single or double acting *Single*

Maximum pressure in cylinders *855 lbs/sq. in.* Diameter of cylinders *13 3/8 in.* Length of stroke *22 1/16 in.* No. of cylinders 7 No. of cranks 7

Mean Indicated Pressure *100 lbs/sq. in.* Ahead Firing Order in Cylinders *7. 2. 6. 4. 6. 3. 1.* Span of bearings, adjacent to the crank, measured from inner edge to inner edge *49 1/2 in.* Is there a bearing between each crank *No* Revolutions per minute *250*

Flywheel dia. *118 1/2 in.* Weight *1250 lbs* Moment of inertia of flywheel (lbs. in² or Kg. cm²) *821 lb. in²* Means of ignition *Comp.* Kind of fuel used *Dist.*

Crank Shaft, *Solid forged* dia. of journals *2 1/2 in.* as per Rule *2 1/2 in.* as fitted *2 1/2 in.* Crank pin dia. *2 3/8 in.* Crank webs Mid. length breadth *3 1/2 in.* Thickness parallel to axis *1 1/2 in.* Mid. length thickness *1 1/2 in.* shrunk Thickness around eye hole *1 1/2 in.*

Flywheel Shaft, diameter as per Rule *2 1/2 in.* as fitted *2 1/2 in.* Intermediate Shafts, diameter as per Rule *2 1/2 in.* as fitted *2 1/2 in.* Thrust Shaft, diameter at collars as per Rule *2 1/2 in.* as fitted *2 1/2 in.*

Tube Shaft, diameter as per Rule *2 1/2 in.* as fitted *2 1/2 in.* Screw Shaft, diameter as per Rule *2 1/2 in.* as fitted *2 1/2 in.* Is the *tube* shaft fitted with a continuous liner *No*

Bronze Liners, thickness in way of bushes as per Rule *2 1/2 in.* as fitted *2 1/2 in.* Thickness between bushes as per Rule *2 1/2 in.* as fitted *2 1/2 in.* Is the after end of the liner made watertight in the propeller boss *No* If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *No*

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 *No* If two liners are fitted, is the shaft lapped or protected between the liners *No* Is an approved Oil Gland or other appliance fitted at the after end of tube shaft *No* If so, state type *No* Length of bearing in Stern Bush next to and supporting propeller *No*

Propeller, dia. *49 1/2 in.* No. of blades *3* Material *Steel* whether moveable *No* Total developed surface *141 sq. feet*

Moment of inertia of propeller (lbs. in² or Kg. cm²) *141* Kind of damper, if fitted *No*

Method of reversing Engines *Dist.* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *No* Means of lubrication *Forced* Thickness of cylinder liners *25.5%* Are the cylinders fitted with safety valves *No* Are the exhaust pipes and silencers water cooled or lagged with non-conducting material *No* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *No* Cooling Water Pumps, No. *2* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *No*

Bilge Pumps worked from the Main Engines, No. *2* Diameter *120%* Stroke *138%* Can one be overhauled while the other is at work *No*

Pumps connected to the Main Bilge Line No. and size *2* How driven *Electric*

Is the cooling water led to the bilges *No* If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements *No*

Ballast Pumps, No. and size *2* Power Driven Lubricating Oil Pumps, including spare pump, No. and size *2*

Are two independent means arranged for circulating water through the Oil Cooler *No* Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size:—In machinery spaces *2* In pump room *2*

In holds, &c. *2*

Independent Power Pump Direct Suctions to the engine room bilges, No. and size *2*

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes *No* Are the bilge suction pipes 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 *No*

Are all Sea Connections fitted direct on the skin of the Ship *No* Are they fitted with valves or cocks *No* Are they fixed efficiently high on the ship's side to be seen without lifting the platform plates *No* Are the overboard discharges above or below the deep water line *No*

Are they each fitted with a discharge valve always accessible on the plating of the vessel *No* Are the blow off cocks fitted with a spigot and brass covering plate *No*

That pipes pass through the bunkers *No* How are they protected *No*

That pipes pass through the deep tanks *No* Have they been tested as per Rule *No*

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times *No*

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 *No* Is the shaft tunnel watertight *No* Is it fitted with a watertight door *No* worked from *No*

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *No*

Main Air Compressors, No. *2* No. of stages *2* diameters *80% 2 1/2 in.* stroke *240* driven by *M.E.*

Auxiliary Air Compressors, No. *2* No. of stages *2* diameters *80% 2 1/2 in.* stroke *240* driven by *M.E.*

Small Auxiliary Air Compressors, No. *2* No. of stages *2* diameters *80% 2 1/2 in.* stroke *240* driven by *M.E.*

Is that provision is made for first charging the air receivers *No*

Revolving Air Pumps, No. *2* diameter *570%* stroke *240%* driven by *M.E.*

Auxiliary Engines crank shafts, diameter as per Rule *2 1/2 in.* as fitted *2 1/2 in.* No. *2* Position *Forward*

Have the auxiliary engines been constructed under special survey *No* Is a report sent herewith *No*

007432-007438-0063

AIR RECEIVERS:—Have they been made under survey

State No. of report or certificate 71826.

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

by Rules

Seamless, welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

Actual

Starting Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

by Rules

Seamless, welded or riveted longitudinal joint

Welded

Material

Range of tensile strength

Working pressure

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

(If not, state date of approval)

Donkey boilers

General pumping arrangements

Pumping arrangements in machinery space

Oil fuel burning arrangements

Have Torsional Vibration characteristics been approved

Date of approval 24. Aug. 1949.

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

Manufacturer.

Dates of Survey while building

During progress of work in shops

During erection on board vessel

Total No. of visits

Dates of examination of principal parts

Crank shaft

Screw shaft

Completion of fitting sea connections

Crank shaft, material

Thrust shaft, material

Tube shaft, material

Identification marks on air receivers

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 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

General Remarks

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

Committee's Minute

Assigned

Deferred for

Completions

When applied for

When received

Engineer Surveyor to Lloyd's Register of Shipping

7 SEP 1949

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GLASGOW

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Foundation