

REPORT ON OIL ENGINE MACHINERY.

No. 2991

28 JUN 1928

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Port of Stockholm

Date, First Survey 24 April 1927 Last Survey 16 June 1928

Date of writing Report 23rd June 1928 When handed in at Local Office

No. in Survey held at Stockholm

on the Single Twin Triple Quadruple Screw vessel

Tons ^{Gross} _{Net}

Built at _____ By whom built _____ Yard No. _____ When built _____
Engines made at Stockholm By whom made J. & C. Bolinders Co. Ltd. Engine No. 19072/73 When made 1928.
Donkey Boilers made at _____ By whom made _____ Boiler No. _____ When made _____
Brake Horse Power 120 Owners Ordered by Messrs. James Pollock, Sons & Co. Port belonging to London
Nom. Horse Power as per Rule 34 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

Trade for which vessel is intended _____

II ENGINES, &c.—Type of Engines Bolinder Oil Engine 2 or 4 strokes cycle Single or double acting
Maximum pressure in cylinders 21 kg/cm² Diameter of cylinders 330 mm. Length of stroke 340 mm. No. of cylinders 2 No. of cranks 2
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 387 mm. Is there a bearing between each crank Yes
Revolutions per minute 375 Flywheel dia. 710 mm. Weight 385 mm. Means of ignition Hot bulb Kind of fuel used Grade Oil
Crank Shaft, dia. of journals as per Rule 125 mm. Crank pin dia. 130 mm. Crank Webs Mid. length breadth 180 mm. Thickness parallel to axis shrunk
Flywheel Shaft, diameter as fitted 95 mm. Intermediate Shafts, diameter as per Rule 88.4 Thrust Shaft, diameter at collars as per Rule 100 mm.
Tube Shaft, diameter as fitted Screw Shaft, diameter as fitted Is the tube screw shaft fitted with a continuous liner _____
Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes 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 _____ 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 Reversing gear Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of lubrication _____
Pumps Thickness of cylinder liners none fixed Are the cylinders fitted with safety valves no Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material _____ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being siphoned 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. 1 Diameter 100 mm. Stroke 100 mm. Can one be overhauled while the other is at work _____
Pumps connected to the Main Bilge Line { No. and Size _____ How driven _____

Ballast Pumps, No. and size _____ 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 Holds, &c. _____

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size _____ Are the Bilge Suctions in the Machinery Spaces _____
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes _____

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. none fitted No. of stages _____ Diameters _____ Stroke _____ Driven by _____
Auxiliary Air Compressors, No. _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____

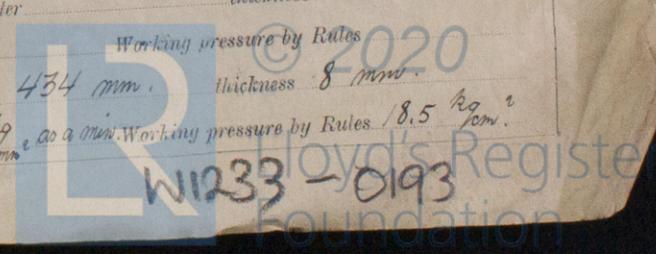
Small Auxiliary Air Compressors, No. _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____
Scavenging Air Pumps, No. none fitted Diameter _____ Stroke _____

Auxiliary Engines crank shafts, diameter as per Rule _____
AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces mudhole (280x200 mm.)
Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. none fitted Cubic capacity of each _____ Internal diameter _____ thickness _____
Seamless, lap welded or riveted longitudinal joint _____ Range of tensile strength _____ Working pressure by Rules _____

Starting Air Receivers, No. 1 Total cubic capacity 286 litres Internal diameter 434 mm. thickness 8 mm.
Seamless, lap welded or riveted longitudinal joint lapwelded Material S.M. Steel Range of tensile strength 36 kg/mm² Working pressure by Rules 8.5 kg/cm²



IS A DONKEY BOILER FITTED?

PLANS. Are approved plans forwarded herewith for Shafting *E 1.7. 1927*
See Secretary's letters
(If not, state date of approval)

If so, is a report now forwarded?

Receivers *E 8.3.16*

Donkey Boilers

General Pumping Arrangements

Separate Tanks

Oil Fuel Burning Arrangements

SPARE GEAR *To be supplied and inspected on delivery.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
 During progress of work in shops - *27/4, 2/6 1927, 4 & 25/5, 9.11 & 16/6 28.*
 During erection on board vessel -
 Total No. of visits *in shop 7*

Dates of Examination of principal parts—Cylinders *9/6 28* Covers *9/6 28* Pistons *1/6 28* Rods
 Crank shaft *4/5, 1/6 28* Flywheel shaft *9/6 28* Thrust shaft *25/5, 1/6 28* Intermediate shafts
 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 9/6 28*

Crank shaft, Material *S.M. Steel* Identification Mark *LLOYD'S N:03518 AT. 11.6.28 A* Flywheel shaft, Material Identification Mark
 Thrust shaft, Material *S.M. Steel* Identification Mark *LLOYD'S N:0809 F.N.B. 25.5.28* 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.

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

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *See Gen. report no. 2775*

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

*I am of opinion that this motor is of superior material and workmanship and as it has been designed and constructed under Special Survey, I have respectfully to submit that it will be eligible to be classed **LMG**, as soon as it has been fitted in a classed vessel to the satisfaction of the Society's Surveyors*

Certificate (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 ... £	When applied for,
Special Survey in Shop Tr. 273	19
Donkey Boiler Fee ... £	When received,
Travelling Expenses (if any) £	19

Committee's Minute

Assigned

See Gen. Report No 13311

R. J. Andersson
 Acting Engineer Surveyor to Lloyd's Register of Shipping.



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