

REPORT ON OIL ENGINE MACHINERY.

No. 15360

SEP -7 1938

Received at London Office

Date of writing Report 29th Aug 38 When handed in at Local Office 19

Port of Amsterdam

No. in Survey held at 100000 & Amsterdam Date, First Survey 8th July '37 Last Survey 10th Aug 1938

Reg. Book.

Single
on the Twin
Triple
Quadruple
Screw vessel

"Crista"

Tons
Gross
Net

Built at Schiedam By whom built Weef Gusto Yard No. 726 When built 1938

Engines made at 100000 & Amsterdam By whom made Stok & Werkspoor Engine No. 4151 When made 1938

Donkey Boilers made at Amsterdam By whom made D. F. Werkspoor Boiler No. 2805 When made 1938

Brake Horse Power 1500 Owners

Port belonging to

Nom. Horse Power as per Rule 223 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended Ocean Trade 1938 43 5/16

OIL ENGINES, &c.—Type of Engines Solid Injection super charge 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 400 lbs. Diameter of cylinders 500 mm Length of stroke 1100 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 130 lbs.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 640 mm Is there a bearing between each crank Yes.

Revolutions per minute 140 Flywheel dia. 1930 mm Weight 4085 lb. Means of ignition Compression Kind of fuel used Diesel Oil.

Crank Shaft, { Solid forged
Semi built
All built } dia. of journals as per Rule 400 mm as fitted 350 mm Crank pin dia. 350 mm Crank Webs Mid. length breadth 600 mm Mid. length thickness 120 mm Thickness parallel to axis 210 mm Thickness around eye hole 854 mm

Flywheel Shaft, diameter as per Rule 400 mm as fitted 300/350 Intermediate Shafts, diameter as per Rule 400 mm as fitted 175 mm Thrust Shaft, diameter at collars as per Rule 400 mm as fitted 300 mm

Tube Shaft, diameter as per Rule 400 mm as fitted 300 mm Screw Shaft, diameter as per Rule 400 mm as fitted 300 mm Is the { tube
screw } shaft fitted with a continuous liner Yes.

Bronze Liners, thickness in way of bushes as per Rule 10.5 mm as fitted 10.5 mm Thickness between bushes as per Rule 15 mm as fitted 15 mm 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 1810 mm

Propeller, dia. 3560 mm Pitch 2054/2406 No. of blades 4 Material Bronze whether Moveable Total Developed Surface 3.964 sq. feet

Method of reversing Engines Win Engine Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

forced Thickness of cylinder liners 33.5/41.5 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material lagged 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. 120 tony 100 ton per hour Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. 2 rotary pumps 30 ton per hour Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and Size 2 rotary 30 ton per hour
How driven Main Engine } 1 Duplex 8" x 8" x 10"

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 1 8" x 8" x 10" 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

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

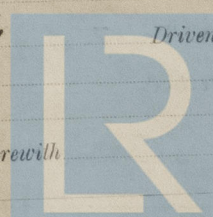
What provision is made for first Charging the Air Receivers

Sealing Air Pumps, No. 2 bottom part of each cylinder Diameter 500 mm Stroke 1100 mm Driven by Main Engine

Auxiliary Engines crank shafts, diameter as per Rule as fitted Position

Have the Auxiliary Engines been constructed under special survey

Is a report sent herewith

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Foundation

010580-010588-0099

AIR RECEIVERS:—Have they been made under survey.

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 and cleaned *Yes*

Injection Air Receivers, No. *✓*

Cubic capacity of each *✓*

Is a drain fitted at the lowest part of each receiver *Yes*

Seamless, lap welded or riveted longitudinal joint *✓*

Material *✓*

Range of tensile strength *✓*

Working pressure by Rules *✓*

Starting Air Receivers, No. *3*

Total cubic capacity *484 cub feet*

Internal diameter *1095 mm*

thickness *19 mm*

Seamless, lap welded or riveted longitudinal joint *✓*

Material *Sh. steel*

Range of tensile strength *30.5-35 ton*

Working pressure by Rules *30 h.p.*

IS A DONKEY BOILER FITTED?

Is the donkey boiler intended to be used for domestic purposes only *Yes*

If so, is a report now forwarded? *See R. dem report No 15*

PLANS. Are approved plans forwarded herewith for Shafting *13-4-37*

(If not, state date of approval) *1-7-37*

Receivers *6-1-30*

Separate Fuel Tanks *✓*

Donkey Boilers

General Pumping Arrangements *10-11-37*

Pumping Arrangements in Machinery Space *✓*

Oil Fuel Burning Arrangements *10-11-37*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*

State the principal additional spare gear supplied *As per attached list.*

The foregoing is a correct description,
MACHINEFABRIEK GEBR. STORK & CO.

Manufacturer.

Dates of Survey while building
During progress of work in shops-- *1937 July 0-19-21-23-26 Aug 1-16-30 Dec 7-11-15-20-30*
During erection on board vessel-- *1930 Jan 3-4-12-20-31 Feb 3-14; March 3-10-12-14-26-28*
Total No. of visits *39; April 15-27-29; May 11-13-16-17 June 0-15-20 July 20 Aug 13-15*

Dates of Examination of principal parts—Cylinders *18-12-19-4* and heads *19-14-17* Pistons *19-14-17* Rods *19-14-17* Connecting rods *19-14-17*
Crank shaft *19-14-17* Flywheel shaft *19-14-17* Thrust shaft *19-14-17* Intermediate shafts *19-14-17* Tube shaft *19-14-17*
Screw shaft *19-14-17* Propeller *19-14-17* Stern tube *19-14-17* Engine seatings *19-14-17* Engines holding down bolts *19-14-17*

Completion of fitting sea connections *✓* Completion of pumping arrangements *✓* Engines tried under working conditions *✓*
Crank shaft, Material *Sh. steel* Identification Mark *19-14-17* Flywheel shaft, Material *Sh. steel* Identification Mark *19-14-17*
Thrust shaft, Material *Sh. steel* Identification Mark *19-14-17* Intermediate shafts, Material *Sh. steel* Identification Marks *19-14-17*
Tube shaft, Material *✓* Identification Mark *19-14-17* Screw shaft, Material *Sh. steel* Identification Mark *19-14-17*
Identification Marks on Air Receivers *NO 4713-4714*
LLOYD'S TEST 44 h.p.
W.P. 30 h.p.
H.P.B. 19-4-30.

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 *M. T. Antonia*

General Remarks (State quality of workmanship, opinions as to class, &c. *This heavy oil engine has been constructed under Special Survey in accordance with the Society's rules and regulations as well in accordance with the approved plans and Secretary letters thereto. The material used in the construction is good and workmanship satisfactory. The engine have been shipped to schiedam. In my opinion the vessel for which this engine is intended will be eligible for the notation of + L.M.C (with date) when the whole machinery has been fitted satisfactorily on board and tried under full working condition.*

The amount of Entry Fee *£ 40.00*

4/5 Special *£ 535.00*

Donkey Boiler Fee *£ 45.00*

Travelling Expenses (if any) *£ 37.50*

When applied for, *5-9-1938*

When received, *28.10.1938*

Engineer Surveyor to Lloyd's Register of Shipping, *M. T. Truyst*

Committee's Minute

FRI 6 JAN 1939

Assigned *See R. I.E. machy 11-2766*



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