

REPORT ON OIL ENGINE MACHINERY.

No. 299572

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 Reg. Book. Number of Visits 14

72.305 ^{Single} ~~on the Twin~~ ^{Triple} ~~Quadruple~~ Screw Vessel "Elisabeth" Tons ^{Gross} 336 ^{Net} 172

Built at Ruischerbrug By whom built Wid. J. de Jong Yard No. 1487534 When built 1927
 Engines made at Köln Dents By whom made Klochner-Humboldt Dents Engine No. 1487512 When made 1927
 Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
 Brake Horse Power 2 x 110 Owners N.V. Rotterdamse Kustvaart Central Port belonging to Rotterdam
 Nom. Horse Power as per Rule 47 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended Coasting trade

OIL ENGINES, &c.—Type of Engines 2 Heavy Oil VMZ. 145 2 or 4 stroke cycle 4 Single or double acting single
 Maximum pressure in cylinders 48 kg/cm² Diameter of cylinders 280 mm Length of stroke 175 mm No. of cylinders 2 x 2 No. of cranks 2 x 2
 Mean Indicated Pressure 5.6 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 335 mm Is there a bearing between each crank yes
 Revolutions per minute 300 Flywheel dia. 1200 mm Weight 2000 kg Means of ignition solid injection Kind of fuel used Diesel oil

Crank Shaft, ^{Solid forged} ~~Semi built dia. of journals~~ ~~All built~~ as per Rule ✓ as fitted 150 mm Crank pin dia. 150 mm Crank Webs Mid. length breadth 200 mm shrunk Thickness parallel to axis ✓
 Mid. length thickness 80 mm Thickness around eye-hole ✓

Flywheel Shaft, diameter as per Rule ✓ as fitted 150 mm Intermediate Shafts, diameter as per Rule ✓ as fitted ✓ Reversing coupling as per Rule ✓ Thrust Shaft, diameter at collars as fitted 100 mm

Tube Shaft, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule ✓ as fitted 112 mm Is the ^{tube} ~~screw~~ shaft fitted with a continuous liner no

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 no If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller 422/230 mm

Propeller, dia. 1300 mm Pitch 1050 mm No. of blades 3 Material cast iron whether Moveable no Total Developed Surface ✓ sq. feet
 Method of reversing Engines clutch with Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced
 Thickness of cylinder liners 12 mm Are the cylinders fitted with safety valves yes 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 syphoned back to the engine funnel

Cooling Water Pumps, No. one each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
 Bilge Pumps worked from the Main Engines, No. one Diameter 75 mm Stroke 70 mm Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line ^{No. and Size} 2 x 675 x 70 mm ^{one x 15 mm}
 How driven main engines belt driven by aux. engine
 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 ✓

Ballast Pumps, No. and size one x 15 mm Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one hand pump 1200 mm
 Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 3 x 2" In Pump Room ✓

In Holds, &c. 3 x 2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 x 2" 1 off to Ballast Pump
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes 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 no

Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks valves
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes Are the Overboard Discharges above or below the deep water line above
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate ✓

What pipes pass through the bunkers none How are they protected ✓
 What pipes pass through the deep tanks none 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 yes
 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 yes Is the Shaft Tunnel watertight machinery 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. 2 x 1 No. of stages 2 Diameters 115/135 mm Stroke 75 mm Driven by main engine
 Auxiliary Air Compressors, No. one No. of stages one Diameters 90 mm Stroke 90 mm Driven by aux. engine

Small Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓
 What provision is made for first Charging the Air Receivers aux. engine hand started

Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule ✓ as fitted 50 mm No. one Position forward in engine room

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

AIR RECEIVERS:—Have they been made under survey *no* ✓ State No. of Report or Certificate *9.L*
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* ✓ Is a drain fitted at the lowest part of each receiver *yes* ✓
Injection Air Receivers, No. *2* Cubic capacity of each *2 2 250* Internal diameter *2 2 40* thickness *10*
Seamless, lap welded or riveted longitudinal joint *no* Material *Steel* Range of tensile strength *25* Working pressure *10*
Starting Air Receivers, No. *4* Total cubic capacity *1700* Internal diameter *2 2 40* thickness *10*
Seamless, lap welded or riveted longitudinal joint *seamless* Material *Steel* Range of tensile strength *25* Working pressure *10*
IS A DONKEY BOILER FITTED? *no* If so, is a report forwarded? *yes* ✓
Is the donkey boiler intended to be used for domestic purposes only *yes* ✓
PLANS. Are approved plans forwarded herewith for Shafting *15/11/47* Receivers *4/2/47* Separate Fuel Tanks *yes*
(If not, state date of approval) *14/1/47* Pumping Arrangements in Machinery Space *14/1/47*
Donkey Boilers *yes* General Pumping Arrangements *yes*
Oil Fuel Burning Arrangements *yes*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes* ✓
State the principal additional spare gear supplied *yes* ✓

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops *yes* ✓
During erection on board vessel *yes* ✓
Total No. of visits *yes* ✓

Dates of Examination of principal parts—Cylinders *15/11/46* Covers *15/11/46* Pistons *15/11/46* Rods *15/11/46* Connecting rods *15/11/46*
Crank shaft *15/11/46* Flywheel shaft *15/11/46* Thrust shaft *15/11/46* Intermediate shafts *15/11/46* Tube shaft *2/5/47*
Screw shaft *17/2/47* Propellers *17/2/47* Stern tube *yes* ✓ Engine seatings *2/5/47* Engines holding down bolts *2/5/47*
Completion of fitting sea connections *18/2/47* Completion of pumping arrangements *10/5/47* Engines tried under working conditions *2/6/47*
Crank shaft, Material *S.I. 7 steel* Identification Mark *9.L* Flywheel shaft, Material *S.I. 7 steel* Identification Mark *9.L*
Thrust shaft, Material *S.I. 7 steel* Identification Mark *9.L* Intermediate shafts, Material *yes* ✓ Identification Marks *yes* ✓
Tube shaft, Material *yes* ✓ Identification Mark *yes* ✓ Screw shaft, Material *S.I. 7 steel* Identification Mark *yes* ✓
Identification Marks on Air Receivers *9.L*

Is the flash point of the oil to be used over 150° F. *yes* ✓
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *yes* ✓
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *no* ✓ If so, have the requirements of the Rules been complied with *yes* ✓
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *yes* ✓
Is this machinery duplicate of a previous case *no* ✓ If so, state name of the vessel *yes* ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been opened up and examined. The sea things have been verified with the approved plans and letter and found good.*

The amount of Entry Fee *£ 19* When applied for, *19*
Special *£ 19* When received, *19*
Donkey Boiler Fee *£ 19*
Travelling Expenses (if any) *£ 19*

Committee's Minute

Assigned

*LMC 6.47 Oil Eng.
TS (N) 3.47*

Engineer Surveyor to Lloyd's Register of Shipping.



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Rpt. 13.

Date of writing

No. in Reg. B

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