

REPORT ON OIL ENGINE MACHINERY.

No. 31795 B

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4b.

of writing Report 7/11 1949 When handed in at Local Office 19 Port of Rotterdam

Survey held at Heusden Date, First Survey 6/5 '49 Last Survey 26/10 1949 Number of Visits 4

Book. Single on the Twin Triple Quadruple Screw Vessel Motorship "ELIZABETH B." Tons Gross 119.4 Net 115

built at Heusden By whom built Jansz. de Haan & Verbeek Yard No. 253 When built 1949
Engines made at Appingedam By whom made N.V. "Brons Motorfab." Engine No. 5317 When made 1949
Boilers made at Annan By whom made Cochran & Co. Boiler No. 18540 When made 1949
Horse Power 240 Owners N.V. "Gabo Broom" Port belonging to Ardrecht
Horse Power as per Rule 60 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
Use for which vessel is intended Seagoing trade

MAIN ENGINES, &c.—Type of Engines Heavy oil engines 2 or 4 stroke cycle 2 Single or double acting single
Maximum pressure in cylinders 45.1 kg/cm² Diameter of cylinders 190 mm Length of stroke 178 mm No. of cylinders 3 No. of cranks 3
Indicated Pressure 5.9 kg/cm² Is there a bearing between each crank yes
No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 190 mm 411 mm
Revolutions per minute 265 Flywheel dia. 1300 mm Weight 1700 kg Means of ignition Compression Kind of fuel used Diesel oil

Crank shaft, Solid forged as per Rule x Semi-built dia. of journals as fitted 175 mm Crank pin dia. 175 mm Crank Webs Mid. length breadth 240 mm shrunk Thickness parallel to axis x All built as fitted 175 mm Mid. length thickness 100 mm Thickness around eyehole x

Propeller Shaft, diameter as per Rule x Intermediate Shafts, diameter as per Rule x Thrust Shaft, diameter at collars as per Rule x as fitted x Reversing gear as fitted 125/150 mm

Propeller Shaft, diameter as per Rule x Screw Shaft, diameter as per Rule x Is the (tube) shaft fitted with a continuous liner x as fitted x as fitted 150 mm as fitted 145 mm as fitted x

Cylinder Liners, thickness in way of bushes as per Rule x Thickness between bushes as per Rule x Is the after end of the liner made watertight in the stern tube x as fitted x as fitted x If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner x

Propeller boss x 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 x
If two liners are fitted, is the shaft lapped or protected between the liners x Is an approved Oil Gland or other appliance fitted at the after end of the tube x

Propeller, dia. 1700 mm Pitch 1175 mm No. of blades 4 Material bronze whether Moveable no Total Developed Surface 570 sq. feet
Method of reversing Engines Reversing gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication x
Thickness of cylinder liners 30 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled and lagged with x

Boiling Water Pumps, No. 2 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 110 mm Stroke 80 mm Can one be overhauled while the other is at work x

Bilge Pumps connected to the Main Bilge Line No. and Size one 110 x 80 mm How driven main engine one 2 plunger type 23 m³/h 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 x

Ballast Pumps, No. and size one 23 m³/h Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 x 16 ltr/min
Are there 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 2 x 2 1/2 In Pump Room x

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 x 2 1/2
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes x Are the Bilge Suctions in the Machinery Spaces x

Are they fitted with Valves or Cocks valves & blow-off cocks
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 yes
How are they protected x

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
Have they been tested as per Rule x

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, from one compartment to another yes Is the Shaft Tunnel watertight x Is it fitted with a watertight door x worked from x

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork x

Main Air Compressors, No. x No. of stages x Diameters x Stroke x Driven by x
Auxiliary Air Compressors, No. one No. of stages 2 Diameters 440 x 511 Stroke 3 1/4" belt Driven by main engine

Small Auxiliary Air Compressors, No. one No. of stages 2 Diameters 440 x 511 Stroke 70% belt Driven by main engine
What provision is made for first Charging the Air Receivers hand started aux engine during aux air compressor

Scavenging Air Pumps, No. 3 Diameter rotary Stroke x Driven by main engine

Auxiliary Engines crank shafts, diameter as per Rule x No. one 2 1/2 40 B.H.P. heavy oil engine No. 15180
as fitted 90 mm Position Starboard side in eng. room
Have the Auxiliary Engines been constructed under special survey yes Is a report sent herewith yes



AIR RECEIVERS:—Have they been made under survey *yes* ✓ State No. of Report or Certificate *A.R. 1*

Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes* ✓ *safety valves on per Rule on compressed air lines fitted pipe fitted to receivers.*

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. *✓* 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. *1* ✓ Total cubic capacity *205 lbs* Internal diameter *25.3 in* thickness *7 in*

Seamless, lap welded or riveted longitudinal joint *standard* Material *S.M. steel* Range of tensile strength *41/2-12 1/2* Working pressure *10.19 lbs* by Rules Actual

IS A DONKEY BOILER FITTED? *yes* ✓ If so, is a report forwarded? *yes* ✓

Is the donkey boiler intended to be used for domestic purposes only *no* ✓

PLANS. Are approved plans forwarded herewith for Shafting *8/4/49* Receivers *✓* Separate Fuel Tanks *15/11/49 17/11/49*

Donkey Boilers *report attached* General Pumping Arrangements *23/12/49* Pumping Arrangements in Machinery Space *15/11/49*

Oil Fuel Burning Arrangements *✓* **SPARE GEAR.** *1" steam piston and back line round D.B. box with completion*

Has the spare gear required by the Rules been supplied *yes* ✓ *for short voyages.*

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 - *1949* During erection on board vessel - *May 6, July 8-13, Aug 19, Sept 15-20-20, Oct 19-26.* Total No. of visits *9*

Dates of Examination of principal parts—Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*

Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *19/10/49* Tube shaft *✓*

Screw shaft *9/7/49* Propeller *9/7/49* Stern tube *9/7/49, 13/11/49* Engine seatings *9/7/49* Engines holding down bolts *19/10/49*

Completion of fitting sea connections *9/7/49* Completion of pumping arrangements *19/10/49* Engines tried under working conditions *26/10/49*

Crank shaft, Material *✓* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *S.M. steel* Identification Marks *LLOYDS ERA 452 FEB 14-8-49*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *S.M. steel* Identification Mark *LLOYDS NR. 509, ERA FEB 8-7-49*

Identification Marks on Air Receivers *LLOYD TEST No. 32 40 KG W.P. 20 KG MB 10-7-49* *propeller LLOYDS No. 1320 A.V.H. 29-4-49*

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 *✓* 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 the vessel *✓*

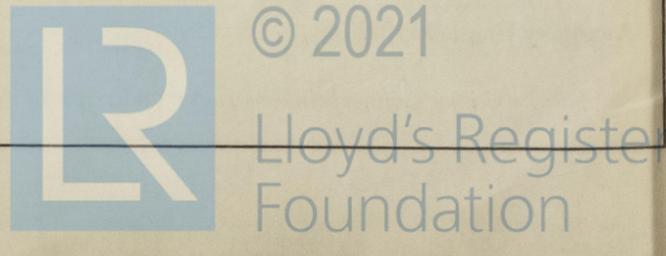
General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been satisfactorily fitted in the vessel in accordance with the approved plans, Society's Rules and Secretary's letters. Workmanship throughout good. The machinery was tried during a trial trip and was found in a good working order and is in my opinion eligible to be classed in the Society's Register book with + L.M.C. oil engines O.G. and D.B. 100 lbs.*

Table with 4 columns: Fee Type, Amount (£), When applied for, When received. Includes Entry Fee, Special Fee (£130), Donkey Boiler Fee, and Travelling Expenses (£90).

Signature of J. Williams, Engineer Surveyor to Lloyd's Register of Shipping.

FRI, 30 DEC 1949

Assigned + L.M.C. 10.49 Oil Eng. + B. 100 lb. O.G.



Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute).