

pt. 4b. RECEIVED

# REPORT ON OIL ENGINE MACHINERY.

No. 367 a

Received at London Office 15 SEP 1949

Date of writing Report Aug. 8 1949 When handed in at Local Office 19 1949 Port of Groningen

N.D.O. Survey held at Appingedam Date, First Survey 8-4-1949 Last Survey 22 7 19 49  
Reg. Book. Number of Visits 14

Single on the Twin Triple Quadruple } Screw vessel. ELIZABETH-B. Tons { Gross: Net:

Built at: By whom built: Yard No.: When built:

Engines made at Appingedam By whom made N.V. Appingedammer Brons- motorenfabriek Engine No. 5317 When made 1949

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

Brake Horse Power 240 Owners: Port belonging to:

M.N. Power as per Rule (68) 69 Is Refrigerating Machinery fitted for cargo purposes: Is Electric Light fitted:

Trade for which vessel is intended:

IL ENGINES, &c. — Type of Engines 3 TL 80; heavy oil eng. 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 290 mm Length of stroke 435 mm No. of cylinders 3 No. of cranks 3

Mean Indicated Pressure 5.9 kg/cm<sup>2</sup> Ahead Firing Order in Cylinders 1-3-2 Span of bearings, adjacent to the crank, measured

from inner edge to inner edge 390 mm Is there a bearing between each crank yes Revolutions per minute 265

Flywheel dia. 1300 mm Weight 1700 kg Moment of inertia of flywheel (16lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup>) 2200 Means of ignition Compr Kind of fuel used Diesel oil

Crank Shaft, Solid forged dia. of journals as per Rule Crank pin dia. 175 mm Crank webs Mid. length breadth 240 mm Thickness parallel to axis: shrunk

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars 125/150 mm

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner {

Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule 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 tube shaft. — If so, state type. — 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

Moment of inertia of propeller (16lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup>) — Kind of damper, if fitted —

Method of reversing rev. gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched. yes Means of

lubrication forced Thickness of cylinder liners 30 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled

or lagged with non-conducting material. yes 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. — Is the sea suction provided with an efficient strainer which can be cleared within the vessel. —

Bilge Pumps worked from the Main Engines, No. — Diameter — Stroke — Can one be overhauled while the other is at work. —

Pumps connected to the Main Bilge Line { No. and size: — How driven: —

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. — Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 x 26 l/min

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 suction 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. —

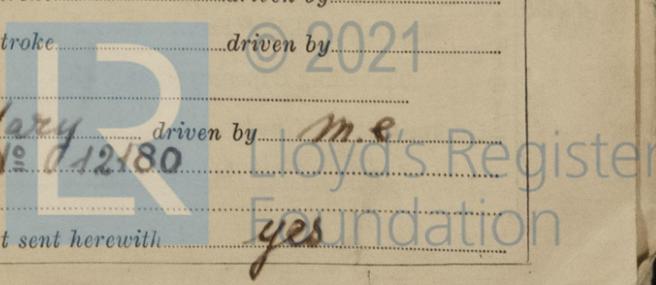
Scavenging Air Pumps, No. 3 diameter — stroke rotary driven by m.e.

Auxiliary Engines crank shafts, diameter as per Rule approved plan Works No. 112180 Position —

Have the auxiliary engines been constructed under special survey yes Is a report sent herewith yes

Sum 20/10/49

004263-004274-0176



**AIR RECEIVERS:**—Have they been made under survey *yes* ✓ State No. of report or certificate *Cert. N° A.R. 2*  
 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. — Cubic capacity of each — Internal diameter — thickness —  
 Seamless, welded or riveted longitudinal joint — Material — Range of tensile strength — Working pressure *by Rules* —  
 Starting Air Receivers, No. *3* Total cubic capacity *285 litres* Internal diameter *253 mm* thickness *7*  
 Seamless, welded or riveted longitudinal joint *built* Material *SM steel* Range of tensile strength *41/47* Working pressure *by Rules* *approx. 14*  
 Actual *20 kg/cm²*

**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 *8-4-49* Receivers *8-4-49* Separate fuel tanks *8-4-49*  
 (If not, state date of approval)  
 Donkey boilers — General pumping arrangements — Pumping arrangements in machinery space *23-6-49*  
 Oil fuel burning arrangements — *11 & 26*  
 Have Torsional Vibration characteristics been approved *yes* ✓ Date of approval *25-4-49*  
*for 265 rpm*

**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,  
*N.V. APPINGEDAMMER BRONSMOTORENFABRIEK* Manufacturer.

Dates of Survey while building  
 During progress of work in shops - - *1949: 8-4, 21-4, 2-5, 12-5, 18-5, 19-5, 23-5, 17-6, 21-6, 13-7*  
 During erection on board vessel - - — *[18-7, 22-7]*  
 Total No. of visits *14*  
 Dates of examination of principal parts—Cylinders *21-4-49* Covers *21-4-49* Pistons *21-4-49* Rods — Connecting rods *2-5-49*  
 Crank shaft *2-5-49* Flywheel shaft — Rev. gear *21-6-49* Thrust shaft — Intermediate shafts — Tube shaft —  
 Screw shaft — Propeller — Stern tube — Engine seatings — Engine holding down bolts —  
 Completion of fitting sea connections — Completion of pumping arrangements — Engines tried *in shop* *under working conditions* *13-7-49*  
 Crank shaft, material *SM steel* Identification mark *Lloyds Test 1 2.5.49* Flywheel shaft, material — Identification mark —  
 Thrust shaft, material *SM steel* Identification mark *Lloyds Test MB 16 21.6.49* Intermediate shafts, material — Identification marks —  
 Tube shaft, material — Identification mark — Screw shaft material — Identification mark —  
 Identification marks on air receivers *Lloyds Test MB 39 PD 40 WD 20 18.7.49*

Welded receivers, state Makers' Name —  
 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 —  
 Description of fire extinguishing apparatus fitted —  
 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 —

**General Remarks** (State quality of workmanship, opinions as to class, &c. *This engine has been built in accordance with approved plans and Society's Rules. The material used tested as required and workmanship found good. The engine has been tested in shop under full load condition and found working satisfactory. In my opinion this engine is eligible for the notation LMC with dlte after being placed on board and tried under full working condition. The engine is intended for yard N° 253 of Messrs de Haan & Derlemans and has been shipped to Heusden (Rotterdam District)*)

The amount of Entry Fee ... *254.00*  
*2/3 x 380.80 =* ... £ : :  
 Special ... £ : :  
 Donkey Boiler Fee... £ : :  
 Travelling Expenses (if any) £ *16.-* : :  
 When applied for *13-9-49* 19  
 When received 19

*W. J. ...*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
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Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

Committee's Minute  
 Assigned *for minute see J.E.R. 1/8*

FRI 30 DEC 1949