

pt. 4b.  
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# REPORT ON OIL ENGINE MACHINERY.

No. 367 a

Received at London Office 15 SEP 1949

Date of writing Report 9 SEP 1949 When handed in at Local Office 19 Port of Groningen  
Survey held at Appingedam Date, First Survey 8-4-1949 Last Survey 22-7-1949  
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- Engine No. 5317 When made 1949  
motorenfabriek

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 Comp Kind of fuel used Diesel oil

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

as fitted 175 mm Thrust bearing fitted 125/150 mm

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as fitted Rev. gear Thrust Shaft, diameter at collars as per Rule

Tube Shaft, diameter as per Rule 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 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 Engine 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 90 mm Works No. 112180

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

510-42274-0176



**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 *—*  
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 *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 *—*  
Have Torsional Vibration characteristics been approved *yes* Date of approval *25-4-49*

**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 - *—*  
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 *21-6-49* 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* *13-7-49*

Crank shaft, material *SM steel* Identification mark *Lloyds Test* Flywheel shaft, material *—* Identification mark *—*

Thrust shaft, material *SM steel* Identification mark *Lloyds Test* 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  $\pm$  LMC with d/bte after being placed on board and tried under full working condition.*

*The engine is intended for yard N° 253 of Messrs de Haan & Derlemaans 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*

When received *19*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *—*

Assigned *for use see J.E.R. 10*



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