

REPORT ON OIL ENGINE MACHINERY

No. 4398

Received at London Office

17 APR 1950

Date of writing Report **31-3-1950** When handed in at Local Office 19 **50** Port of **Groningen**

No. in Survey held at **Martenshoek** Date, First Survey **24-6-49** Last Survey **29-3-1950**

Reg. Book. **BERGÖ** Number of Visits **17**

on the **Single** Screw vessel **Tons** Gross **599.48** Net **369.37**

Built at **Martenshoek** By whom built **Bodewes Scheepswerven** Yard No. **377** When built **1950**

Engines made at **Hazelgrove, Stockport** By whom made **Mirreles, Bircherton & Day Ltd** Engine No. **32992** When made **1948**

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

Brake Horse Power **540** Owners **Edgar Erikson** Port belonging to **Mariehamn**

M.N. Power as per Rule **119** **NHP=110** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**

Trade for which vessel is intended **Ocean Trade**

OIL ENGINES, &c.—Type of Engines **Heavy Oil** 2 or 4 stroke cycle **4** Single or double acting **single**

Maximum pressure in cylinders **750 lbs** Diameter of cylinders **13.75"** Length of stroke **21"** No. of cylinders **6** No. of cranks **6**

Mean Indicated Pressure **97 lbs** Ahead Firing Order in Cylinders **1, 3, 5, 6, 4, 2** Span of bearings, adjacent to the crank, measured from inner edge to inner edge **15.25"** Is there a bearing between each crank **yes** Revolutions per minute **300**

Flywheel dia. **4'-6"** Weight **2,460 lbs** Moment of inertia of flywheel (16lbs. in² or Kg.cm.²) **3,270,000** Means of ignition **Comp.** Kind of fuel used **Diesel**

Crank Shaft, Solid forged dia. of journals **9.25"** as per Rule **appr.** Semi built as fitted **9.25"** Crank pin dia. **0.75"** Crank webs Mid. length breadth **11.25"** Thickness parallel to axis Mid. length thickness **4 5/8"** shrunk Thickness around eyehole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule **appr.** as fitted **1.60"** Thrust Shaft, diameter at collars as per Rule **appr.** as fitted

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule **appr.** as fitted **1.60"** Is the tube screw shaft fitted with a continuous liner

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 tube shaft **yes** If so, state type **Rubber ring** Length of bearing in Stern Bush next to and supporting propeller **650%**

Propeller, dia. **1940%** Pitch **1190%** No. of blades **4** Material **Bronze** whether moveable **no** Total developed surface **47%**

Moment of inertia of propeller (16lbs. in² or Kg.cm.²) Kind of damper, if fitted

Method of reversing Engines **Direct** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **yes** Means of lubrication **forced** Thickness of cylinder liners **7/8"** 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 **funnel** Cooling Water Pumps, No. **one** 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 **4 3/4"** Stroke **5 1/2"** Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and size **one 4 3/4" x 5 1/2"**, **one 6 5/8"**, **one 2 1/2"** How driven **main engine**, **aux. engine**, **main 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 6 5/8"** Duplex Power Driven Lubricating Oil Pumps, including spare pump, No. and size **2 ram type 3" x 3 5/8"** **one rotary (tested)**

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 **2 à 76 1/4"** **one à 63 1/4"** **one à 51 1/4"** In pump room

In holds, &c. **2 à 2 1/2" forward**, **2 à 2 1/2" aft** Independent Power Pump Direct Suctions to the engine room bilges, No. and size **2 à 76 1/4"** **1 à 51 1/4"**

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes **yes** 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 **yes**

Are all Sea Connections fitted direct on the skin of the Ship **welded chest** Are they fitted with valves or cocks **yes** 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 **below**

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 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 **no** 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. **one** No. of stages **2** diameters **5 5/8" / 5"** stroke **5 1/2"** driven by **main engine**

Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

Small Auxiliary Air Compressors, No. **one** No. of stages **2** diameters **1 1/2" / 9 5/8"** stroke **7 1/2"** driven by **auxiliary engine**

What provision is made for first charging the air receivers **Auxiliary engine hand started**

Scavenging Air Pumps, No. diameter stroke driven by

Auxiliary Engines crank shafts, diameter as per Rule **approved** No. **one** Position **starboard**

Have the auxiliary engines been constructed under special survey **no** Is a report sent herewith **yes**

SWK 3/17/50

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AIR RECEIVERS:—Have they been made under survey. *yes* State No. of report or certificate. *—*
 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. *2* Total cubic capacity *47 cu ft* Internal diameter *2 1/2 6"* thickness *3/8"*
 Seamless, welded or riveted longitudinal joint *welded* Material *6.4 steel* Range of tensile strength *24/30* Working pressure *—*

IS A DONKEY BOILER FITTED *no* 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. *16-3-49* Receivers *—* Separate fuel tanks *28-6-*
 (If not, state date of approval)
 Donkey boilers *—* General pumping arrangements *30-9-49* Pumping arrangements in machinery space *30-9-49*
 Oil fuel ~~arrangements~~ *14-7-49*

Have Torsional Vibration characteristics been approved. *yes* Date of approval *20-7-49*
SPARE GEAR.
 Has the spare gear required by the Rules been supplied. *yes, for unlimited voyages*
 State the principal additional spare gear supplied. *—*

N.V. Machinefabriek & Rep.bedrijf
E. E. GORTER
 The foregoing is a correct description,
 Manufacturer.

Dates of Survey while building: During progress of work in shops - *11 visits Manchester Dept No 13722*
 During erection on board vessel - *1948 June 24, July 11, Aug 15, Sep 13, Oct 6, 1950 Jan 12, 13, 27, Feb 8, 17, 27, March 3, 7, 10, 13, 29*
 Total No. of visits *29*
 Dates of examination of principal parts—Cylinders *14-10-48* Covers *19-10-48* Pistons *15-12-48* Rods *—* Connecting rods *27-10-48*
 Crank shaft *4-11-48* Flywheel shaft *—* Thrust shaft *24-12-48* Intermediate shafts *—* Tube shaft *—*
 Screw shaft *13-1-50* Propeller *2-12-49* Stern tube *12-7-49* Engine seatings *17-1-50* Engine holding down bolts *17-2-50*
 Completion of fitting sea connections *17-1-50* Completion of pumping arrangements *29-3-50* Engines tried under working conditions *29-3-50*
 Crank shaft, material *O.H. Steel* Identification mark *4-1-48 RJY* Flywheel shaft, material *—* Identification mark *—*
 Thrust shaft, material *O.H. Steel* Identification mark *4552 WJT* Intermediate shafts, material *—* Identification marks *—*
 Tube shaft, material *—* Identification mark *—* Screw shaft, material *SMS* Identification mark *AZM 13-1-50*
 Identification marks on air receivers: *81/470 L50* *4270* *LLOYDS* *M B 2 D*
LLOYD'S 5821 RJY *WP 300 LBS* *TDS* *4255*
H.T. 600 lbs *WP 300 LBS* *HT 600 LBS* *WP 300 LBS*
W.P. 300 lbs. 30-12-48 *2-2-49* *11-2-49*
B.W. 110 *W.J.I.* *B.W. 130* *W.J.I.*
 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*
 Description of fire extinguishing apparatus fitted *4 x 2 gallons*
 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 *—*
 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 *yes* If so, state name of vessel *YVONNE, yard no 376*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been made and fitted in accordance with the Rules, approved plans and Secretary's letters. The machinery was tested on a trial trip and all found good. The materials and workmanship are good. In our opinion the machinery of this vessel is eligible to be recorded in the Society's Register Book LMC Oil Engines O.G. 3-1950.*

The amount of Entry Fee ... £ :
 Special *3 x 666* ... £ *222.-* When applied for *5-4-1950*
 Donkey Boiler Fee... £ : When received *19*
 Travelling Expenses (if any) *113.-*
 Committee's Minute *5 MAY 1950*
 Assigned *+ LMC 3.50 Oil Eng. O.G.*

A. E. J. J. J.
 Engineer Surveyor to Lloyd's Register of Shipping.
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Certificate (if required) to be sent to ...