

# REPORT ON OIL ENGINE MACHINERY.

No. 391

Report 14th April 1952

Received at London Office

When handed in at Local Office

19

Port of Bremen

Survey held at Bremen/Vegesack

Date, First Survey 24th May 51

Last Survey 9th April, 1952

Number of Visits 77

Single Screw vessel M.V. "BONITA"

Gross 11083

Bremen/Vegesack

By whom built Bremer Vulkan

Yard No. 816

When built 4.52

at Bremen/Vegesack

By whom made Bremer Vulkan

Engine No. 408

When made 4.52

made at Bremen/Vegesack

By whom made Bremer Vulkan

Boiler No. 1017/8/9

When made 4.52

power 6500

Owners A/B Dalen

Port belonging to Goteborg

per Rule 1550

NEW MM = 1300

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

vessel is intended Carrying petroleum in bulk

MAN oil engines

Pressure 48 kgs/cm<sup>2</sup>

Diameter of cylinders 600 mm

Length of stroke 1100 mm

No. of cylinders 8

No. of cranks 8

Pressure 6.07 kgs/cm<sup>2</sup>

Ahead Firing Order in Cylinders

Span of bearings, adjacent to the crank, measured

to inner edge 864 mm

Is there a bearing between each crank yes

Revolutions per minute 125

Weight 6,400 kgs

Moment of inertia of flywheel

19,000

Means of ignition compression

Kind of fuel used Diesel

dia. of journals 450 mm

Crank pin dia. 450 mm

Crank webs

Mid. length breadth 265 mm

shrunk

Thickness parallel to axis 265 mm

as per Rule 440

Intermediate Shafts, diameter

as per Rule 390 mm

Thrust Shaft, diameter at collars

as per Rule 420 mm

as per Rule 435 mm

Screw Shaft, diameter

as per Rule 435 mm

Is the screw shaft fitted with a continuous liner yes

thickness in way of bushes 21 mm

Thickness between bushes 15.5 mm

Is the after end of the liner made watertight in the

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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-

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

Length of bearing in Stern Bush next to and supporting propeller 1950 mm

Pitch 3,940 mm No. of blades 4 Material bronze whether moveable no

Total developed surface 8.8 m<sup>2</sup> sq. feet

Kind of damper, if fitted NONE

Is a governor or other arrangement fitted to prevent racing of the engine yes

Means of Thickness of cylinder liners 40 mm Are the cylinders fitted with safety valves yes

Are the exhaust pipes and silencers water cooled

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

Cooling Water Pumps, No. 3 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Can one be overhauled while the other is at work

No. and size 1 - 30 tons per hour, 1 - 225 tons/hr 1 - 40 tons/hr

How driven electric steam

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Power Driven Lubricating Oil Pumps, including spare pump, No. and size two, 65 tons/hr

Means arranged for circulating water through the Oil Cooler yes

Suctions, connected to both main bilge pumps and auxiliary

In machinery spaces 4 at 90 mm, 2 at 200 mm diam., Ford pp. room 1 at 90, to cable locker 75 mm

to cargo hold p & s 90 mm, to cofferdam 90 mm, Centre pp. & aft pump rooms each p & s 90 mm & cofferdams p & s 90 mm

over Pump Direct Suctions to the engine room bilges, No. and size one at 200 mm diam., one at 90 mm (one - 200 mm emergency)

Are the bilge suction in the machinery spaces led from easily

Are they fitted with valves or cocks both

Are they fixed

Are the overboard discharges above or below the deep water line yes

on welded steel doubler

How are they protected

Have they been tested as per Rule yes

Is it fitted with a watertight door

worked from

What means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

essors, No. two No. of stages two diameters 265 & 105 mm stroke 250

driven by port ford. and stbd. aux. engs.

compressors, No. one No. of stages one diameters (40 cbm) 117/130 mm stroke 110 mm

driven by steam engine

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

Is made for first charging the air receivers steam driven compressor

Pumps, No. one diameter 1,500 mm stroke 1000 mm driven by main engine

es crank shafts, diameter as per Rule 150 mm No. three

Position port ford. and aft and starbd. ford.

Is a report sent herewith yes

004308-004315-0053



AIR RECEIVERS:—Have they been made under survey. yes State No. of report or certificate. No. 529

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. two Total cubic capacity. 20,000 ltrs. Internal diameter. 1.648 mm thickness. 47/53.3 kg

Seamless, welded or riveted longitudinal joint. butt welded Material. S.M. steel Range of tensile strength. - Working pressure. -

IS A DONKEY BOILER FITTED yes If so, is a report now forwarded. yes

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

PLANS. Are approved plans forwarded herewith for shafting. no yes Receivers. yes Separation. -

Donkey boilers. yes General pumping arrangements. yes Pumping arrangements in machinery space. -

Oil fuel burning arrangements. yes

Have Torsional Vibration characteristics been approved. yes Date of approval. 21.6.51

### SPARE GEAR.

Has the spare gear required by the Rules been supplied. yes

State the principal additional spare gear supplied. -

The foregoing is a correct description.

Dates of Survey while building. During progress of work in shops. 24/5., 11/6., 26., 6/7, 20, 25, 29/7, 16/8, 22, 25, 3/9, 15, 19, 25, 27, 1/10, 3, 5, 11, 19, 23, 25, 1/11, 22, 27, 3/12, 7, 11, 13, 14, 20, 21, 27, 1951. 3/1, 12, 16, 18, 22, 23, 25, 28, 29, 30, W.O.D., 4/2, 1952.

During erection on board vessel. 16/1, 28, 30, 13/2, 15, 18, 21, 28, 4/3, 6, 8, 12, 14, 18, 28/3, 31, 1/4, 2, 4, 5, 8, 9

Total No. of visits. 77 11.10.51 to 11.12.51 to 14.12.51 to 16.11.51 to

Dates of examination of principal parts—Cylinders. 4.4.52 Covers. 25.1.52 Pistons. 28.3.52 Rods. 28.3.52 Connecting rods. 28.3.52

Crank shaft. 16.11.52 Flywheel shaft. - Thrust shaft. 16.11.52 Intermediate shafts. 14.11.51 Tube shaft. 14.11.51

Screw shaft. 21.2.52 Propeller. 6.4.52 Stern tube. 7.11.51 Engine seatings. 15.2.52 Engine holding down. 15.2.52

Completion of fitting sea connections. 28.1.52 Completion of pumping arrangements. 8.4.52 Engines tried under working conditions. 15.2.52

Crank shaft, material. S.M. steel Identification mark. 79 & 79a WAA Flywheel shaft, material. - Identification mark. -

Thrust shaft, material. SM steel Identification mark. 507 Intermediate shafts, material. S.M. steel Identification mark. -

Tube shaft, material. - Identification mark. - Screw shaft, material. S.M. steel Identification mark. -

Identification marks on air receivers. LLOYDS TEST NOS. 529 & 530 W.P. 30 ATU T.P. 48.5 ATU 18.2.52 WOD

Aux. & whistle air bottles: S 816, W.P. 30 ATU (aux.) & 15 ATU (whistle) T.P. 50 ATU 14.11.51 WAA

Welded receivers, state Makers' Name. Main receivers, Brenner Vulkan, Vegesack, to Aux. receivers, not known.

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. steam smothering in boiler room, sand boxes, chemical extinguishers

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. no If so, state name of vessel. DAGMAR SALEN

General Remarks (State quality of workmanship, opinions as to class, &c. This engine has been constructed under Special License.

in conformity with the Society's Rules and Regulations, the approved plans and the Secretary's letters.

and workmanship are good. The engine has been examined during construction, properly installed in the abode.

and found satisfactory under working conditions and is eligible in my opinion, for classification with Class.

Oil Engines 2 S.C.S.A. 8 Cyl. 23.6" - 43.3", 1300 MM

2 DB 105 lbs, 1 DB (WT) 105 lbs. TS CL.

ME not to be run continuously between 48 and 58 RPM.

The amount of Entry Fee ... £ 6 640.00

Special ... £ -

Donkey Boiler Fee... £ -

Travelling Expenses (if any) £ 240.00

Assigned LMC 4.52 Oil Eng.

C.H. 228 180lb (with torsional endorsement)

Engineer Surveyor to Lloyd's Register

Lloyd's Register

Foundation