

REPORT ON OIL ENGINE MACHINERY.

No. 13349
-4 JAN 1935

Received at London Office

Date of writing Report 19 Dec 1934 When handed in at Local Office 19 Port of Amsterdam

No. in Survey held at Hengelo & Amsterdam Date, First Survey 23 Nov 1933 Last Survey 10 Dec 1934
Reg. Book. Number of Visits 74

on the ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel

MV JACERS FONTEIN

Tons { Gross 1076.69
Net 615.023

Built at Amsterdam By whom built N.V. Medaal Scheep N^o 229 Yard No 229 When built 1934

Engines made at Hengelo By whom made Jeth Stork & Co Engine No. 3684/When made 1934

Donkey Boilers made at Amrum Lolland By whom made Cochran & Co Boiler No. 12609/When made 1934

Brake Horse Power 2 x 4150 Owners N.V. Vereen Wedel Scheep N^o 4 Port belonging to Copenhagen

Nom. Horse Power as per Rule 2034 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which vessel is intended Holland South Africa

OIL ENGINES, &c.—Type of Engines Stork Havelman Rules 2 or 4 stroke cycle 2 Single or double acting double

Maximum pressure in cylinders 45 kg/cm² Diameter of cylinders 600 mm/m Length of stroke 1100 mm/m No. of cylinders 6 x 2 No. of cranks 6

Mean Indicated Pressure 5.5 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 945 mm/m Is there a bearing between each crank Yes

Revolutions per minute 162 Flywheel dia. 2400 mm/m Weight 5560 kg Means of ignition Rules Kind of fuel used Crude oil

Crank Shaft, dia. of journals as per Rule approved as fitted 420 mm/m Crank pin dia. 420 mm/m Crank Webs Mid. length breadth 1190 mm/m shrunk Thickness parallel to axis — Mid. length thickness 245/265 mm/m Thickness around eyehole —

Flywheel Shaft, diameter as per Rule — as fitted — Intermediate Shafts, diameter as per Rule approved as fitted 337 mm/m Thrust Shaft, diameter at collars as per Rule approved as fitted 354 mm/m

Tube Shaft, diameter as per Rule — as fitted — Screw Shaft, diameter as per Rule approved as fitted 304 mm/m Is the { tube screw } shaft fitted with a continuous liner { no }

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 the tube shaft Yes If so, state type Cedemall Length of Bearing in Stern Bush next to and supporting propeller 1550 mm/m

Propeller, dia. 4250 mm/m Pitch 4450 mm/m No. of blades 3 Material Bronze whether Moveable no Total Developed Surface 5.35 M² sq. feet

Method of reversing Engines Air down engine's a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced light lubrication

Thickness of cylinder liners 20 mm/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged 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. 3 fresh water pumps 175 l/h 3 seawater pumps 225 l/h 3 oil cooling pumps 80 l/h 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. 1 Diameter 200 mm/m Stroke 140 mm/m Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and Size 1-110 l/h self-priming centrifugal pumps 1-110 l/h ballast pump } How driven —

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 2x7 x 7 1/2 Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3 20 l/h pumps 40 l/h

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 6-3, 4 direct 6, 1 cofferdam 3, Tunnel 2-3 and 1-3 In Pump Room —

In Holds, &c. No. 1-1x3; No. 2-2x3; No. 3-2x3; No. 4-2x3; Hold No. 5-3x3; No. 6-2x3; Cofferdam 1x3

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 4-6

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions 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 Yes Are they fitted with Valves or Cocks Valve & 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 both

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

What pipes pass through the bunkers none How are they protected —

What pipes pass through the deep tanks none a pipe tunnel is fitted 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 Yes Is it fitted with a watertight door Yes worked from main deck

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. 2 twin No. of stages 2 Diameters 4 1/2 x 11 Stroke 8 Driven by Main Motor

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 3 15/16 x 1 3/4 Stroke 2 3/4 Driven by Diesel Motor hand starting

Scavenging Air Pumps, No. 1 for each engine Diameter 1450 mm/m Stroke 950 mm/m Driven by Main Motor

Auxiliary Engines crank shafts, diameter as per Rule — as fitted 100 mm/m

1 m. 12. 30.

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also see back of cover. eng. 40

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes* *See List 14/1/35*

Can the internal surfaces of the receivers be examined and cleaned *Yes* ✓ Is a drain fitted at the lowest part of each receiver *Yes* ✓

High Pressure 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. *2* Total cubic capacity *40 M³* Internal diameter *1600 mm* ✓ thickness *25 mm* ✓

Seamless, lap welded or riveted longitudinal joint *nick* Material *SMS* Range of tensile strength *20-32 ton* Working pressure *—* by Rules *approved* Actual *25 ton* ✓

IS A DONKEY BOILER FITTED? *2* If so, is a report now forwarded? *—*

Is the donkey boiler intended to be used for domestic purposes only *Yes* ✓

PLANS. Are approved plans forwarded herewith for Shafting *11-9-34 2-7-34* Receivers *9-11-33* Separate Tanks *3-11-33*
(If not, state date of approval)

Donkey Boilers *attached* General Pumping Arrangements *29-9-33* Oil Fuel Burning Arrangements *29-9-33*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes* ✓

State the principal additional spare gear supplied *As per Attached List*

The foregoing is a correct description,
MACHINEFABRIK GEBR. STORK & Co, N.Y.

Manufacturer.

Dates of Survey while building { During progress of work in shops - 19-23 Nov 23-30 Dec 4-7-8-14-21-28 Jan 3-9-30-31 Feb 1-8-9-12-20-28 March 2-7-9-16-23 April 4-6-11-12-16-19-26 May 3-11-17-25-29 June 1-2-5-7-8-20-22-27-29 July 16-18-19-20-21-6-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31 Aug 1-14-17-22 Sept 10-14 Oct 3-16-22-30 Nov 5-17-20-24-27 Dec 10-11-13-18
During erection on board vessel - July 25-26-27 Aug 1-14-17-22 Sept 10-14 Oct 3-16-22-30 Nov 5-17-20-24-27 Dec 10-11-13-18
Total No. of visits *74*

Dates of Examination of principal parts—Cylinders *19-4-34* Covers *19-4-34* Pistons *7-6-34* Rods *11-5-34* Connecting rods *25-5-34*
Crank shaft *26-4-34* Flywheel shaft *—* Thrust shaft *—* Intermediate shafts *8-12-33* Tube shaft *—*
Screw shaft *7-12-33* Propeller *6-12-34* Stern tube *29-5-34* Engine seatings *1-8-34* Engines holding down bolts *3-10-34*
Completion of fitting sea connections *19-7-34* Completion of pumping arrangements *17-11-34* Engines tried under working conditions *—*
Crank shaft, Material *SMS* Identification Mark *4284/4305 10257/94 B 3-2-34* Flywheel shaft, Material *—* Identification Mark *—*
Thrust shaft, Material *SMS* Identification Mark *753 FNB 21-11-33* Intermediate shafts, Material *SMS* Identification Marks *as per list*
Tube shaft, Material *—* Identification Mark *—* Screw shaft, Material *SMS* Identification Mark *77 1/2 FNB 7-12-33*

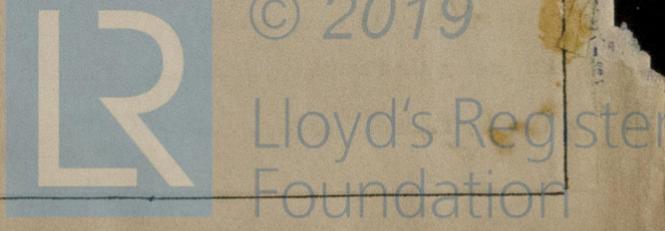
Is the flash point of the oil to be used over 150° F. *Yes*
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yes*
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *No* If so, have the requirements of the Rules been complied with *—*
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *—*
Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *M.V. Bloemfontein Arms up N*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The Machinery has been made in accordance with the rules. Secretary's letters approved plans, workmanship throughout good. Redex Machinery, pumps, auxiliary compressors and bilge valves (fitted with mechanical operated distance controls) which on a trial trip on the North Sea found working good. Auxiliary compressor which does not require compressed air for starting up the full charging of the air receivers is placed aboard. She is eligible in my opinion, for the approval of the Committee to be classed as LMC 12-34.

The amount of Entry Fee .. £ *72* : — : When applied for, *—*
Special .. £ *1900* : — : When received, *—*
Donkey Boiler Fee .. £ *75.60* : — :
Travelling Expenses (if any) £ *325* : — : *29-1-35*

Committee's Minute *Tue. 15 JAN 1935*
Assigned *+ LMC 12-34*
oil Eng. OG 2 DB 120 lb.

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping.



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