

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 3505a

Received at London Office 11 SEP 1930

Date of writing Report 14/8/1930 When handed in at Local Office

18/1030 Port of Oslo

No. in Survey held at Fredrikstad

Date, First Survey 12/9-29 Last Survey 13/8-1930

eg. Book.

Number of Visits 15

on the ~~Single~~ ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel

"DANWOOD"

Tons Gross 6399.7 Net 3764.41

built at Fredrikstad

By whom built Fredrikstad Mch. Verhsted

Yard No. 255 When built 1930

Engines made at Stockholm

By whom made Dutch - Atlas - Diesel

Engine No. 50/23/24 When made 1930

Donkey Boiler made at Annan

By whom made Cochran & Co, Annan Ltd

Boiler No. When made 1929

Brake Horse Power 1170

Owners M/S Danwood

Port belonging to Oslo

Norm. Horse Power as per Rule 382

Is Refrigerating Machinery fitted for cargo purposes no.

Is Electric Light fitted yes

Trade for which vessel is intended

L ENGINES, &c. Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Position of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank

Revolutions per minute Flange dia. Weight Means of ignition Kind of fuel used

Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth shrunk Thickness parallel to axis

Intermediate Shafts, diameter as per Rule as fitted 216 mm Thrust Shaft, diameter at collars as per Rule as fitted 220

Screw Shaft, diameter as per Rule as fitted 240 mm Is the shaft fitted with a continuous liner yes

Ronze Liners, thickness in way of bushes as per Rule as fitted 16 x 17 mm Thickness between bushes as per rule as fitted 15 mm Is the after end of the liner made watertight in the

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

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

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

Length of Bearing in Stern Bush next to and supporting propeller 1160 mm

Propeller, dia. 3250 mm Pitch 2560 mm No. of blades 3 Material Bronze whether Moveable no Total Developed Surface 33 sq. feet

Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material 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. 1 each engine 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 each Diameter 130 mm Stroke 22 double act. Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size Two, 130 x 221 mm How driven electric motors

Ballast Pumps, No. and size one, 10" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size See Stockholm Rpt.

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 Three @ 89 mm In Pump Room

Holds, etc. Fore hold: Two @ 102 mm Main hold: Two @ 102 mm

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one, 120 mm

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces

and 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 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 all above except bilge pump discharge

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

That pipes pass through the bunkers How are they protected

That 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 Is it fitted with a watertight door worked from

For 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

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted

R RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes

Are the internal surfaces of the receivers be examined and cleaned Is a drain fitted at the lowest part of each receiver

High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Range of tensile strength Working pressure by Rules Actual

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual

IS A DONKEY BOILER FITTED? *Yes.* If so, is a report now forwarded? *Glasgow Rpt.*

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

PLANS. Are approved plans forwarded herewith for Shafting *7/12/28, 15/1/29* Receivers *✓* Separate Tanks *✓*
(If not, state date of approval)
Donkey Boilers *✓* General Pumping Arrangements *3/4/29, 3/12/29* Oil Fuel Burning Arrangements *✓*

SPARE GEAR.

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

State the principal additional spare gear supplied: *1 cylinder liner, with packing. 1 pair crosshead
brasses. 1 pair bottom end brasses. 4 fuel valves completely mounted.
Cam shaft bearing brasses. 8 safety valves for various purposes.
Additional piston rings, springs &c. Additional telescope pipes, with packing &c.
1 lubricator complete.*

Auxiliary engines: The spare gear required by the Rules has been supplied.
Additional spare gear supplied: *1 piston complete. - 2 bolts for bedplate -
1 pair bottom end brasses, all per engine. Additional piston rings, springs,
packing, bolts &c.*

The foregoing is a correct description.

pr. A/s Fredrikstad mch. Werkstad Manufacturer.

Dates of Survey while building: During progress of work in shops - *See Stockholm Rpt.*
During erection on board vessel - *1929: 12/9, 24/9, 31/10, 22/11 - 1930: 12/2, 20/2, 25/2, 5/3, 17/3, 10/4, 9/5, 10/5, 2/7, 8/8, 13/8*
Total No. of visits *15.*

Dates of Examination of principal parts: Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*
Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *12/2/30* Tube shaft *✓*
Screw shafts *12/2/30* Propellers *17/3/30* Stern tubes *12/2/30* Engine seatings *31/10, 22/11/29* Engines holding down bolts *12/2/30*
Completion of fitting sea connections *10/4/30* Completion of pumping arrangements *10/5/30* Engines tried under working conditions *8/8*
Crank shaft, Material *Stockholm Rpt* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *✓*
Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *S.M. Steel* Identification Marks *✓*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *S.M. Steel* Identification Mark *✓*

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 *✓* 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 vessels machinery has been examined, while being fitted onboard, and has been subsequently examined during a 6 hours trial trip, during which all necessary manœuvring was carried out, a full speed trial also being held. The donkey boiler has been examined under steam. The machinery worked satisfactorily throughout. It is recommended that this vessels machinery be classed
LMC 8.30

It is submitted that this vessel is eligible for THE RECORD + LMC 8.30 C-L
Oil Engines 2SCSA 164 16 9/16 - 28 3/8
NHP 765 DB 802
The amount of Entry Fee *£109.20* When applied for, *23/8/1930*
Special ... *£500.00*
Donkey Boiler Fee ... *£5* When received, *8/10/30*
Travelling Expenses (if any) *£r.*
Committee's Minute **FRI. 26 SEP 1930**
Assigned *+ L.M.C. 8.30*
Oil Eng. DB 802
Plaid *Per John Rolin*
Engineer Surveyor to Lloyd's Register of Shipping.
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TUE. 12 MAY 1931