

# REPORT ON OIL ENGINE MACHINERY.

No. 8165

27 DEC 1930

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of writing Report 17th Dec. 1930 When handed in at Local Office 23rd Dec 1930 Port of *Gothenburg*

in Survey held at *Trollhättan & Gothenburg* Date, First Survey *8th May* Last Survey *10th Dec 1930*

Book.

on the

Single

Twin

Triple

Quadruple

Screw vessel

"NORDANVIK"

Tons

Gross 8232.89

Net 4808.31

Yard No. 438

When built 1930

By whom built AKT. GÖTAVERKEN

By whom made AKT. GÖTAVERKEN

Engine No. When made 1930

By whom made NYOQVIST & HOLM A.B.

Boiler No. 1009 When made 1930

Owners NORRKÖPINGS REDERIÅKTIEBOLAG

Port belonging to NORRKÖPING

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ade for which vessel is intended General

ENGINE, &c.—Type of Engines One auxiliary diesel oil engine 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 55 kg/cm<sup>2</sup> Diameter of cylinders 210 mm Length of stroke 320 mm No. of cylinders 2 No. of cranks 2

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 298 mm

Revolutions per minute 400 Flywheel dia. 1050 mm Weight 700 kgs

Means of ignition Diesel System Kind of fuel used Diesel fuel oil.

Crank Shaft, dia. of journals as per Rule 135 mm Crank pin dia. 135 mm Crank Webs Mid. length breadth 180 mm Thickness parallel to axis

as fitted 135 mm Mid. length thickness 74 mm Thickness around eyehole

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collar's as per Rule

as fitted as fitted as fitted

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner

as fitted as fitted as fitted

Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per rule Is the after end of the liner made watertight in the

as fitted as fitted as fitted

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

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

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

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 22 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

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

Boiling Water Pumps, No. One 2600 l/h. 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

Bilge Pumps connected to the Main Bilge Line No. and Size How driven

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size One 600 l/h.

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

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 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

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

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

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

Is 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. Solid injection 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. One Diameter 410 mm Stroke 120 mm Driven by Rev. engine

Auxiliary Engines crank shafts, diameter as per Rule as fitted

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

Can the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces

Is there a drain arrangement 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 Material Range of tensile strength Working pressure by Rules

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

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting

27. 3. 30

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR 2 fuel valves complete with 2 extra valves & 2 extra seats for same, 1 starting valve, 1 safety valve, 1 scavenging air valve, 1 set of valves for the water pump, 1 piston complete with piston rings and in addition 10 extra piston rings, 2 gudgeon pins with 2 bushes for same, 8 cylinder cover studs & nuts, 2 crank pin bearing bolts & 1 set of crank pin brasses, 1 set of journal brasses, 1 fuel oil pump complete with 1 extra plunger spring and 2 extra delivery valve springs, 1 complete set of all springs and packings and 1 length of steel pipe with unions.

The foregoing is a correct description,

HYDQVIST & HOLM AKTIEBOLAG

Manufacturer.

Dates of Survey while building  
During progress of work in shops - May 8, July 9, 26, Aug 5.  
During erection on board vessel - Dec. 8, 10  
Total No. of visits 6 visits.

Dates of Examination of principal parts—Cylinders 8/5 26/7-30 Covers 8/5 26/7-30 Pistons 7/8-30 Rods Connecting rods 5/8-30  
Crank shaft 26/7-30 Flywheel shaft Thrust shaft Intermediate shafts Tube shaft  
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts  
Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions  
Crank shaft, Material S. M. Steel Identification Mark 440YDS No. 660 Flywheel shaft, Material Identification Mark  
Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Marks  
Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

Is the flash point of the oil to be used over 150° F.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

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

Is this machinery duplicate of a previous case

If so, state name of vessel

M/S FOSTA.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This auxiliary engine has been built under special survey.

All the Rules requirements have been complied with.  
The workmanship is good.

The amount of Entry Fee ...  
Special ... Kr. 100:00  
Donkey Boiler Fee ... £  
Travelling Expenses (if any) £ 32:60

When applied for,

23<sup>rd</sup> Dec 1930

When received,

19.1.1931

Committee's Minute

FRI. 16 JAN 1931

Assigned

See fol. 76. 8765

By Commander T. Berndsen  
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation