

REPORT ON OIL ENGINE MACHINERY.

No. 9337.

Received at London Office

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Date of writing Report 24th May 1933 When handed in at Local Office 24th May 1933 Port of Göteborg
 No. in Survey held at Göteborg Date, First Survey 17th January Last Survey 24th May 1933
 Reg. Book. Number of Visits 46

on the Single Twin Triple Quadruple Screw vessel "KAAPAREN" ex "LARVIKSFJORD." Tons Gross 3385.68
Net 1878.80

Built at GÖTHENBURG By whom built AKT. GÖTAVERKEN Yard No. 466 When built 1930
 Engines made at GÖTHENBURG By whom made AKT. GÖTAVERKEN Engine No. 902/903 When made 1930
 Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
 Brake Horse Power 2125 Owners Rederiaktiebolaget Transatlantic Port belonging to GÖTHENBURG
 Nom. Horse Power as per Rule 224 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 Trade for which vessel is intended General Ballast liner

L ENGINES, &c. Type of Engines Two Diesel Oil Engines 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 49 kg/cm² Diameter of cylinders 215 mm [550 in] Length of stroke 353 mm [1000 in] No. of cylinders 16 No. of cranks 16
 Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 710 mm Is there a bearing between each crank Yes
 Revolutions per minute 175 Flywheel dia. None Weight ✓ Means of ignition Diesel System Kind of fuel used Diesel fuel oil

Crank Shaft, dia. of journals as per Rule 347 mm Crank pin dia. 350 mm Crank Webs Mid. length breadth 620 mm Thickness parallel to axis 197-215 mm
as fitted 350 mm Mid. length thickness 213 mm Thickness around eyehole 141 mm

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 242 mm Thrust Shaft, diameter at collars as per Rule 254 mm
as fitted as fitted 245 mm as fitted 300 mm

Propeller Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 265 mm Is the shaft fitted with a continuous liner? Yes
as fitted as fitted 273-275 mm Yes

Bronze Liners, thickness in way of bushes as per Rule 15.6 mm Thickness between bushes as per rule 11.7 mm Is the after end of the liner made watertight in the
as fitted 16-17 mm as fitted 15.5 mm

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 liner in one length.
 Does 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 Yes

Are two liners 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 1350 mm
 Propeller, dia. 3320 mm Pitch 2780 mm No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 2.44 = 8.8 sq. feet

Method of reversing Engines direct reversal Is a governor or other arrangement fitted to prevent racing of the engine when dechitched Yes Means of lubrication Forced
 Thickness of cylinder liners Top 38 mm Bottom 37.5 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with lagged

Is the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine in a funnel.
 Cooling Water Pumps, No. Two - 200 tons each 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. 2 Diameter 150 mm Stroke 175 mm Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size One rotary ballast pumps 150 tons One plunger pump 20 tons Two main engine pumps
How driven Electric ✓ electric ✓ Main engine ✓

Ballast Pumps, No. and size One 150 tons ✓ Lubricating Oil Pumps, including Spare Pump, No. and size Two - 80 tons each ✓

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 - 3 1/2"; One - 5 1/2" in tunnel with, One - 3 1/2" in same tank room In Pump Room ✓

Holds, &c. Two 3 1/2" in each hold.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 3 1/2"; One 3"; One 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 Yes

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 Both

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 above

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 ✓

Do all pipes pass through the bunkers No coal bunkers How are they protected ✓

Do all pipes pass through the deep tanks No deep tank 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 upper engine room platform

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. ✓ No. of stages 2 Diameters 2320 mm; HP 320 mm Stroke 190 mm Driven by ✓

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 2335 mm; HP 307 mm Stroke 220 mm Driven by Aut. engines

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 1062 mm Stroke 80 mm Driven by Aut. engines

Exhausting Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule 150 mm 20/9-32 for 1/470 3 of 180 mm No. —
as fitted One of 150 mm; three of 180 mm Position 1st & 3rd in port side in the engine room.
3rd in starboard 2nd in engine

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 Yes Is a drain fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. 1 Cubic capacity of each 250 litres Internal diameter 380 mm thickness 15 mm

Are all receivers, lap welded or riveted longitudinal joint Lap welded Material S. H. Steel Range of tensile strength Not available Working pressure by Rules
Actual 40 kg/cm²

Low Pressure Air Receivers, No. Two Total cubic capacity 2 x 14 = 28 m³ Internal diameter 1600-1644 mm thickness 22 & 22.5 mm
 Are all receivers, lap welded or riveted longitudinal joint Riveted Material S. H. Steel Range of tensile strength Not available Working pressure by Rules
Actual 25 kg/cm²

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

22.11.32

20.9.32 Receivers

22.11.32

Separate Tanks 1.3.33

Donkey Boilers

✓

General Pumping Arrangements

22.11.32

Oil Fuel Burning Arrangements

✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes

State the principal additional spare gear supplied For the main engines, 1 cylinder liner, 1 cooling jacket, 4 halves of crank pin and gudgeon pin brasses, 2 halves of main bearing brasses, 4 sets of piston rings for one piston, 1 telescopic pipe, 15 exhaust valves complete with 4 extra spindles & 8 extra valve seats for same, 1 suction valve complete, 8 fuel valves complete with 8 extra valves and seats and 16 atomizers for same, 1 slitting air valve complete, for the fuel pumps: 16 suction valves, 8 plungers with liners, 8 slide valves with liners, 12 delivery pipes to the fuel valve, 12 delivery pipes for the thrust block & pads, 1 propeller shaft, 2 bronze propellers.

For the auxiliary engines

Type 280/350 HKS - 2 - 3 off. 1 cylinder cover, 1 piston with gudgeon pin, 4 sets of piston rings for one piston, 5 exhaust valves complete with 4 extra spindles and 6 extra seats for same, 2 halves of crank pin and 4 halves of main bearing brasses, 1 set of gudgeon pin bushes.

Type 240/360 HKS - 1 off. 2 fuel valves complete, 2 extra atomizers & 2 extra slide valves with liners, 2 exhaust valves complete, 2 halves of crank pin, 2 of main bearing and 1 of gudgeon pin brasses.

Compressors: 1 set of valves and rings of each type & size, 1 cylinder cover for the emergency pump.

Pumps: 2 valves for the rotary ballast pump. 1/2 set of valves for suction & sanitary pumps.

A number of springs of each size for main & auxiliary engines.

The foregoing is a correct description.

AKTIEBOLAGET GÖTAVERKEN

H. G. Hammar, Manufacturer.

Dates of Survey while building
During progress of work in shops - -
During erection on board vessel - -
Total No. of visits

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods

Crank shaft 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 3.10.29 H. G. B. Flywheel shaft, Material ✓ Identification Mark ✓

Thrust shaft, Material S. M. Steel Identification Mark 3.5.30 L. F. H. Intermediate shafts, Material S. M. Steel Identification Marks ✓

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material S. M. Steel Identification Mark Post

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

No

Is this machinery duplicate of a previous case

No

If so, state name of vessel

✓

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been built

under Special Survey of the Norwegian Veritas. The scantlings and arrangements of the machinery has been verified as stated above. The machinery has been surveyed and repaired as per report attached. The auxiliary machinery consists of 3 - 2 cylinder single acting diesel oil engine with cyl. diam. 280 mm and stroke 450 mm & 1 - 3 cylinder do. with cylinder diam. 240 mm and stroke 360 mm. each working a generator of 66 kw.

The machinery has been tested under full working conditions and found to work satisfactorily.

The machinery of this vessel is eligible in our opinion to be classed LMC in the Register Book and to have record of LMC 5.33.

The amount of Entry Fee .. £ : : When applied for, ✓ : :
Special ... £ : : ✓ : :
Donkey Boiler Fee ... £ : : : :
Travelling Expenses (if any) £ : : : :
When received, : : : :
19. : : : :
19. : : : :

Committee's Minute

Assigned

TUE. 30 MAY 1933

See other Rpt
Job 9337

V. Paulow

E. Bernerius

Engineer Surveyors to Lloyd's Register of Shipping.



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Lloyd's Register Foundation

Rpt. 13.

RE

Date of writing

No. in Series
Reg. Book

Built at

Owners

Electric Light

Is the Vessel

System of

Pressure of

Direct or A

If alternating

Has the Auto

Generators,

are they over

Where more t

series with eac

Are all termin

short circuited

Position of

is the ventilat

if situated n

are their axes

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their respectiv

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Main Switch

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Instruments

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Switches, CI

Joint Boxes