

REPORT ON OIL ENGINE MACHINERY.

No. 7931.

17 APR 1929

st. 4b.

Received at London Office

29/3 29. When handed in at Local Office

Port of

Copenhagen

Date, First Survey

6/1 1928

Last Survey

1/3

1929

Number of Visits

58

in Survey held at Copenhagen & Aalborg

322 on the Single Triple Quadruple Screw vessel

"BORGNY"

Tons Gross 3015 20 Net 1686 15

uilt at Aalborg

By whom built Aalborg Maskin- & Skibbyggeri Yard No. 37 When built 1928-9

Engines made at Copenhagen

By whom made A. B. Bismark & Wain Engine No. 1499 When made 1928

Monkey Boilers made at Aalborg

By whom made Aalborg Maskin- & Skibbyggeri Boiler No. 69 When made 1928

Horse Power 1000

Owners A/S Borga (Fred. Olsen & Co.) Port belonging to Csl.

n. Horse Power as per Rule 222

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

de for which vessel is intended Ocean Trade, Carrying petroleum in bulk.

ENGINES, &c.—Type of Engines Vertical Diesel engine, crosshead type, 2 stroke cycle 4 Single or double acting single

imum pressure in cylinders 35 kg/cm<sup>2</sup> Diameter of cylinders 500 mm Length of stroke 1250 mm No. of cylinders 6 No. of cranks 6

of bearings, adjacent to the Crank, measured from inner edge to inner edge 698 mm 680 calculated. Is there a bearing between each crank yes

tutions per minute 115 Flywheel dia. 2230 mm Weight 5850 kg Means of ignition compression Kind of fuel used crude oil

ank Shaft, dia. of journals as per Rule 335 mm as fitted 336 mm Crank pin dia. 336 mm Crank Webs Mid. length breadth 672 mm Mid. length thickness 190 mm Thickness parallel to axis 210 mm Thickness around eye-hole 163 mm

heel Shaft, diameter as per Rule 335 mm as fitted 336 mm Intermediate Shafts, diameter as per Rule 305 mm as fitted 305 mm Thrust Shaft, diameter at collars as per Rule 312 mm as fitted 340 mm

ic Shaft, diameter as per Rule 326 mm as fitted 326 mm Is the tube screw shaft fitted with a continuous liner yes

onze Liners, thickness in way of bushes as per Rule 17.5 mm as fitted 22 - 20 mm Thickness between bushes as per rule 13.1 mm as fitted 20.5 mm Is the after end of the liner made watertight in the

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

he 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

wo liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after end of the tube

If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 1580 mm

opeller, dia. 12'-0" Pitch 9'-6" No. of blades 4 Material BRONZE whether Moveable No Total Developed Surface 45 sq. feet

thod of reversing Engines direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when decelerated yes Means of lubrication

met. Thickness of cylinder liners 36 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine this funnel

ling Water Pumps, No. 1 of 60 t. centrifugal Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

ge Pumps worked from the Main Engines, No. 1 Diameter 150 mm Stroke 80 mm Can one be overhauled while the other is at work yes

aps connected to the Main Bilge Line No. and Size 1 of 150 mm diam, 80 mm stroke How driven by main engine electrically, electrically

last Pumps, No. and size 1 of 100 t. rotary Lubricating Oil Pumps, including Spare Pump, No. and size 2 of 25 t. each, cog wheel.

two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

aps, No. and size:—In Machinery Spaces 3 of 2 1/2", 2 of 3", 2 of 4", 1 of 5" Are the Bilge Suctions in the Machinery Spaces

Holds, &c. AP TANK: 1 of 2 1/2", OIL FUEL D.T. AFT: 2 of 3", MAIN PUMP ROOM: 2 of 4", FORWARD COFF: 1 of 4", FOREHOLD: 2 of 2 1/2", FORWARD PUMP ROOM: 1 of 2 1/2"

ependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 3", 2 of 4", 1 of 5" Are the Bilge Suctions in the Machinery Spaces

all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are they fitted with Valves or Cocks yes, except bilge blow off cock.

from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes Are the Overboard Discharges above or below the deep water line above.

all Sea Connections fitted direct on the skin of the ship yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes.

they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes How are they protected yes.

they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Have they been tested as per Rule yes.

at pipes pass through the bunks yes

at pipes pass through the deep tanks No.

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes.

he 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

partment to another yes Is the Shaft Tunnel watertight no, tunnel Is it fitted with a watertight door yes worked from yes

wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

in Air Compressors, No. 1 No. of stages 3 Diameters 480-430-78 Stroke 490 mm Driven by main engine.

iliary Air Compressors, No. 2 No. of stages 2 Diameters 225-68 Stroke 220 mm Driven by auxiliary engine.

all Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 90-35 Stroke 120 mm Driven by hand.

venting Air Pumps, No. 1 Diameter 162 mm Stroke 170 mm Driven by

iliary Engines crank shafts, diameter as per Rule 162 mm as fitted 170 mm

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

the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces man hole in starting air receiver.

here a drain arrangement fitted at the lowest part of each receiver yes arrangement made for draining out injection air receiver.

h Pressure Air Receivers, No. 2 (MAIN ENG.) Cubic capacity of each 125 LITERS Internal diameter 312 mm thickness 23 mm

unless, lap welded or riveted longitudinal joint 2 (SPARE) 25 mm Range of tensile strength 22,25 mm 22,25 mm 28,5 mm 6'-0" Working pressure by Rules 71.4 kg/cm<sup>2</sup> 66.3 kg/cm<sup>2</sup> 73.5 kg/cm<sup>2</sup>

rting Air Receivers, No. 1 Total cubic capacity 353 cb. ft. Internal diameter 312 mm thickness 23 mm Working pressure by Rules 71.4 kg/cm<sup>2</sup> 66.3 kg/cm<sup>2</sup> 73.5 kg/cm<sup>2</sup>

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IS A DONKEY BOILER FITTED?

yes.

If so, is a report now forwarded?

yes.

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

yes

Receivers

yes

Separate Tanks

yes

Donkey Boilers

yes

General Pumping Arrangements

yes

Oil Fuel Burning Arrangements

SPARE GEAR

as per accompanying list.

The foregoing is a correct description,

AKTIESELSKABET

BURMEISTER & WAIN MACKIN-CO SKIBSBYGGERI

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 with Covers 19/5-15/6 Pistons 19/5-15/6 Rods 28/4-30/5-22/6 Connecting rods 17/4-20/4

Crank shaft 3/3-2/4-12/5-14/6 Flywheel shaft Thrust shaft 20/4-12/5-14/6 Intermediate shafts 22/10-13/11 Tube shaft

Screw shaft 16/8-13/11 Propeller 13/11 Stern tube 30/11-13/12 Engine seatings 13/11-5/11 Engines holding down bolts 16/11

Completion of fitting sea connections 17/12 Completion of pumping arrangements 5/2 Engines tried under working conditions 13/3

Crank shaft, Material S.M. ingot steel Identification Mark 14-6-28 Flywheel shaft, Material Identification Mark 14-6-28

Thrust shaft, Material S.M. ingot steel Identification Mark 14-6-28 Intermediate shafts, Material S.M. ingot steel Identification Marks 13-11-28

Tube shaft, Material Identification Mark Screw shaft, Material S.M. ingot steel Identification Mark 13-11-28

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 yes. If so, have the requirements of the Rules been complied with yes.

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.)

This machinery has been built under Special Survey and in accordance with the Society's Rules, the approved plans and the requirements contained in the Surveyor's letters of dated 2/1-3/1-23/2-18/4-26/7-1/10-9/11 1928. The material used in the construction has been tested and examined as required by the Rules and found good, and the workmanship is of good description throughout.

After completion the main & auxiliary engines as well as the aux. oil pump arrangement was tried under full power working conditions and found satisfactory and on the first trial trip the manoeuvring of the main engine was tested and found good.

Recommend the vessel's machinery to have notation of +LMC 3-29, OIL ENGINES.

C.L.

The amount of Entry Fee ... 72.80

Special ... 1010.00

FITTING Donkey Boiler Fee ... 100.00

STARTING AIR RECEIVER ... 76.44

Travelling Expenses (if any) ... 528.50

LATE FEE ... 30.00

Committee's Minute

Assigned

TUE. 23 APR 1929

+LMC 3-29

Oil Engines

CERTIFICATE

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