

REPORT ON OIL ENGINE MACHINERY.

No. 7931.

17 APR 1929

Registered at London Office

of writing Report 29/3 1929 When handed in at Local Office

Port of Copenhagen

in Survey held at Copenhagen & Halsborg

Date, First Survey 6/1 1928 Last Survey 13/3 1929

Number of Visits 58

322 on the Single Twin Triple Quadruple Screw vessel

"BORGNY"

Tons Gross 3015.20 Net 1686.15

built at Halsborg

By whom built a/s Halsborg Maskin-og Skibsbyggeri Yard No. 37 When built 1928-9

Engines made at Copenhagen

By whom made a/s Bilmester & Wain Engine No. 1499 When made 1928

Boiler made at Halsborg

By whom made a/s Halsborg Maskin-og Skibsbyggeri Boiler No. 69 When made 1928

Horse Power 1000

Owners a/s Borga (Fred. Olsen & Co.) Port belonging to Oslo.

Horse Power as per Rule 222

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

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

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

Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 500 mm Length of stroke 1250 mm No. of cylinders 6 No. of cranks 6

Distance 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

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

Crank 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 Thickness parallel to axis 210 mm Mid. length thickness 190 mm shrunk Thickness around eye-hole 163 mm

Intermediate Shafts, diameter as per Rule 335 mm as fitted 336 mm Thrust Shaft, diameter at collars as per Rule 7 1/2 as fitted 340 mm

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

Liner 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

seller 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

When 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

When two 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

Length of Bearing in Stern Bush next to and supporting propeller 1580 mm

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

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

Method of cooling exhaust pipes 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

Bilge Water Pumps, No. 1 of 60 t, centrifugal BALLAST PUMP FITTED AS "STAND BY." 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 150 mm Stroke 80 mm Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size 1 of 150 mm diam, 80 mm stroke, 1 of 20 t, 1 of 10 t. How driven by main engine electrically, electrically

Last Pumps, No. and size 1 of 10 t, rotary Lubricating Oil Pumps, including Spare Pump, No. and size 2 of 25 t each, cog wheel.

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 3 of 2 1/2", 2 of 3", 2 of 4", 1 of 5" 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", FORE HOLD: 2 of 2 1/2", FORWARD PUMP ROOM: 1 of 2 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 3", 2 of 4", 1 of 5"

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

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 except boiler blow off cock.

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 yes.

Are all pipes pass through the bunkers yes How are they protected yes

Are all pipes pass through the deep tanks No. Have they been tested as per Rule yes.

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

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

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

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

Auxiliary 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.

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

Auxiliary 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.

Are the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces man hole in starting air receiver, arrangement made for cleaning and inspection air receiver.

Is there a drain arrangement fitted at the lowest part of each receiver yes

High Pressure Air Receivers, No. 2 (MAIN ENG) 2 (SPARE) Cubic capacity of each 125 LITERS Internal diameter 312 mm thickness 23 mm Working pressure by Rules 71.4 kg/cm²

Are all receivers, lap welded or riveted longitudinal joint yes Material S.M. steel Range of tensile strength 22,25 22,25 28,5 6'-0" thickness SHELL 5/16" ENDS 3/8" Working pressure by Rules 66.3 kg/cm²

Are all receivers, lap welded or riveted longitudinal joint yes Total cubic capacity 353 cb.ft. Internal diameter 6'-0" thickness SHELL 28,5 ENDS 26,5 RIVETS 26,5 Working pressure by Rules 25,0 kg/cm²

Material S.M. steel Range of tensile strength 22,25 22,25 28,5 6'-0" thickness SHELL 28,5 ENDS 26,5 RIVETS 26,5 Working pressure by Rules 25,0 kg/cm²

WF-0095

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 & WAINES MACKIN-CO SKIBSBYGGERI**

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	6/18, 28/2, 30/3, 2/4, 10/4, 14/4, 17/4, 20/4, 21/4, 28/4, 2/5, 8/5, 11/5, 12/5, 14/5, 16/5, 17/5, 21/5, 26/5, 29/5, 30/5, 1/6, 4/6, 6/6, 7/6, 12/6
	During erection on board vessel - - -	15/6, 16/6, 18/6, 21/6, 22/6, 25/6, 26/6, 14/7, 17/7, 19/7, 21/7, 23/7, 25/7, 14/8, 31/8, 4/9, 22/10, 13/11, 30/11, 13/12 1928.
Total No. of visits		58

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 30/4, 24/4, 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 *cast steel with LLOYDS N° 9448* Flywheel shaft, Material Identification Mark *✓*

Thrust shaft, Material *S.M. ingot steel* Identification Mark *✓* Intermediate shafts, Material *S.M. ingot steel* Identification Marks *✓*

Tube shaft, Material Identification Mark *✓* Screw shaft, Material *S.M. ingot 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 *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 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 cargo oil pump arrangement was tried under full power working conditions and found satisfactory and on the final 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 ENG C.L.

The amount of Entry Fee	£ 72.80	When applied for,	15. 4. 29.
Special	£ 1010.00		
FITTING Donkey Boiler Fee	£ 100.00	When received,	6. 5. 29.
1 STARTING AIR RECEIVER	£ 76.44		
Travelling Expenses (if any)	£ 522.50		
LATE FEE	£ 30.00		

Committee's Minute TUE. 23 APR 1929

Assigned

+ LMC 3-29 Oil Engines

A. E. Johnson Chief Officer
Engineer Surveyor to Lloyd's Register of Shipping.



© 2021

Lloyd's Register Foundation