

REPORT ON OIL ENGINE MACHINERY.

No. 8227
28 APR 1930

14/4 1930. When handed in at Local Office
Port of Copenhagen.
Survey held at Holsten & Copenhagen. Date, First Survey 3/6 1929. Last Survey 12/4 1930.
Book. Number of Visits 22.
5/8 on the Single Twin Triple Quadruple Screw vessel "BORINGIA"
Tons { Gross 5820.99
Net 3605.64
Built at Copenhagen. By whom built By Bismarck & Wain. Yard No. 560 When built 1930.
Engines made at Holsten. By whom made Holsten Dieselmaschinen Fabrik. Engine No. 1632 When made 1929.
Boilers made at Grady & Heath. By whom made The Grady & Heath Co. Ltd. Boiler No. 16920. When made 1929.
Horse Power 1 Owners By Ostasiatisk Kompagni. Port belonging to Copenhagen.
Horse Power as per Rule 1 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted yes.
Vessel for which vessel is intended Ocean Trade, Gen. Cargo & Passengers.

ENGINES, &c.—Type of Engines Vertical Diesel, trunk type. 2 or 4 stroke cycle 4 Single or double acting single
Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 310 mm. Length of stroke 350 mm. No. of cylinders { 3 No. of cranks { 3
No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 360 mm. Is there a bearing between each crank yes.
Revolutions per minute 360. Flywheel dia. 1240 mm. Weight 2650 kg. Means of ignition compression Kind of fuel used ordis Diesel oil.
Crank Shaft, dia. of journals as per Rule 162 mm. Crank pin dia. 170 mm. Crank Webs Mid. length breadth 355 mm. do. Thickness parallel to axis 1
as fitted 170 mm. Mid. length thickness 95 mm. shrunk Thickness around eyehole 1

Wheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted as fitted as fitted
Propeller 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

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

Boiling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Ge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work
Pumps connected to the Main Bilge Line { No. and Size
How driven

Last Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size
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 In Pump Room
Folds, &c.

Dependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size
all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes 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
all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
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
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

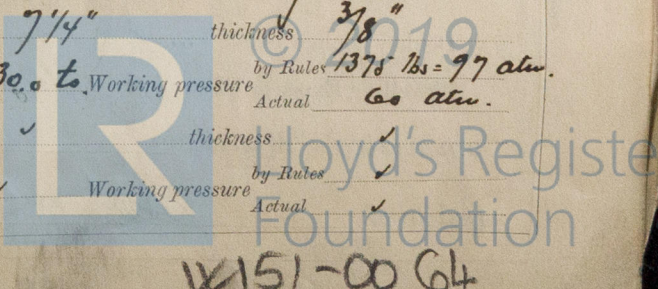
at pipes pass through the bunkers How are they protected
at pipes pass through the deep tanks Have they been tested as per Rule
all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one
partment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
in Air Compressors, No. No. of stages Diameters Stroke Driven by
Auxiliary Air Compressors, No. 3. No. of stages 3. Diameters 3/8-285-78 mm. Stroke 220 mm. Driven by 3-cyl. engine
all Auxiliary Air Compressors, No. 1. No. of stages 1. Diameters 1/2-170 mm. Stroke 170 mm. Driven by 2-cyl. engine

Working Air Pumps, No. 1. Diameter Stroke Driven by
Auxiliary Engines crank shafts, diameter as per Rule as fitted

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 and cleaned yes. Is a drain fitted at the lowest part of each receiver yes.
High Pressure Air Receivers, No. 3. Cubic capacity of each 30 ltr. Internal diameter 7 1/4" thickness 3/8"
less, lap welded or riveted longitudinal joint solid drawn Material mild steel Range of tensile strength 28.7-30.0 t. Working pressure by Rules 1375 lbs. = 97 atm.
Actual 60 atm.

Working Air Receivers, No. 1. Total cubic capacity 1 Internal diameter 1 thickness 1
less, lap welded or riveted longitudinal joint 1 Material 1 Range of tensile strength 1 Working pressure by Rules 1
Actual 1



W151-00 64

IS A DONKEY BOILER FITTED?

yes.

If so, is a report now forwarded? *Shuffled Rpt. No 410.*

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

yes.

PLANS. Are approved plans forwarded herewith for Shafting
(If not, state date of approval)

yes.

Receivers

Separate Tanks

Donkey Boilers

yes.

General Pumping Arrangements

yes.

Oil Fuel Burning Arrangements

✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes.

State the principal additional spare gear supplied

These see accompanying lists.

The foregoing is a correct description,

**AKTIESELSKABET
HOLEBY DIESELMOTOR FABRIK**

Manufacturer.

Dates of Survey while building
During progress of work in shops - *3/6, 6/6, 11/6, 26/6, 28/6, 8/7, 28/8, 3/10, 9/10, 6/11, 13/11, 20/11, 1929.*
During erection on board vessel - *17/2, 19/2, 26/2, 6/3, 13/3, 22/3, 1/4, 4/4, 5/4, 12/4, 1930.*
Total No. of visits *22.*

Dates of Examination of principal parts—Cylinders *with* Covers *9/10, 20/11* Pistons *3/10* Rods *✓* Connecting rods *3/6, 6/6, 11/6, 28/6, 3/10*
Crank shafts *6/6, 11/6, 28/6, 8/7, 28/8* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *✓* Tube shaft *✓*
Screw shaft *✓* Propeller *✓* Stern tube *✓* Engine seatings *3/12, 31/12, 27/1, 6/1* Engines holding down bolts *6/3, 13/3, 22/3*
Completion of fitting sea connections *✓* Completion of pumping arrangements *✓* Engines tried under working conditions *13/4, 1/4, 4/4, 7/4, 12/4*
Crank shaft, Material *S. M. steel* Identification Mark *LLOYD'S No 95-77-113* 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. *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 *✓*

Is this machinery duplicate of a previous case *yes.* If so, state name of vessel *1/5 Alisia*

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

The auxiliary engines as above described have been built under Special Survey and in accordance with the Society's Rules, the approved plans of crank shafts and the requirements contained in the Secretary's letter of date 22/2 29.

The engines are connected to compound wound dynamos of resp. 90 kwts. for the 3-cyl. engine and 60 kwts. for the 2-cyl. engine.

The engines have been fitted on board the vessel under our supervision and to our satisfaction, and after completion the engines were tested under full power working conditions and found to work satisfactorily.

The amount of Entry Fee *4* : : When applied for, *28/11 29.*
Special *12. 300.00*
Donkey Boiler Fee *✓* : : When received, *5/12 1929.*
Travelling Expenses (if any) *4* *105.00*

Committee's Minute

TUE. 6 MAY 1930

Assigned

See attached J.E. Qm 8227

A. J. Fisher. Ch. Liff.
Engineer Surveyors to Lloyd's Register of Shipping.



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Foundation