

Auxiliary

REPORT ON OIL ENGINE MACHINERY.

No. 8227

28 APR 1930

pt. 4b.

Received at London Office
 Date of writing Report 14/4 1930. When handed in at Local Office 19 Port of Copenhagen.
 in Survey held at Holsten & Copenhagen. Date, First Survey 3/6 1929. Last Survey 12/4 1930.
 Book. Number of Visits 22.

518. on the Single Twin Triple Quadruple Screw vessel "BORINGIA"
 Tons { Gross 5820.99
 Net 3605.64

At Copenhagen. By whom built of Birnbecker & Wain. Yard No. 560 When built 1930.
 Engines made at Holsten. By whom made Holsten Dieselmaschinen Fabrik. Engine No. 1639 When made 1929.
 Key Boilers made at Grady & Heath. By whom made The Grady Boiler Co. Ld. Boiler No. 16920. When made 1929.
 Indicated Horse Power 1 Owners of Det Ostasiatisk Kompagni. Port belonging to Copenhagen.
 Indicated Horse Power as per Rule 1 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted yes.
 Trade 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
 Distance 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. as fitted 170 mm. Crank pin dia. 170 mm. Crank Webs Mid. length breadth 355 mm. da. Thickness parallel to axis shrunk ✓
 Mid. length thickness 95 mm. Thickness around eye-hole ✓
 Propeller Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted

Propeller Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the { tube { shaft fitted with a continuous liner {
 { screw }
 Liner Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule as fitted Is the after end of the liner made watertight in the
 stern boss no. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner no.

Does the liner do 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 no.
 If two liners are fitted, is the shaft lapped or protected between the liners no. Is an approved Oil Gland or other appliance fitted at the after end of the tube no.
 If so, state type no. Length of Bearing in Stern Bush next to and supporting propeller no.

Propeller, dia. no. Pitch no. No. of blades no. Material no. whether Moveable no. Total Developed Surface no. sq. feet no.
 Method of reversing Engines no. Is a governor or other arrangement fitted to prevent racing of the engine when declutched no. Means of lubrication no.
 Thickness of cylinder liners no. Are the cylinders fitted with safety valves no. Are the exhaust pipes and silencers water cooled or lagged with
 conducting material no. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine no.

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

Ballast Pumps, No. and size no. Lubricating Oil Pumps, including Spare Pump, No. and size no.
 Are two independent means arranged for circulating water through the Oil Cooler no. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 pumps, No. and size:—In Machinery Spaces no. In Pump Room no.

Folds, &c. no.
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size no.
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes no. 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 no.

Are all Sea Connections fitted direct on the skin of the ship no. Are they fitted with Valves or Cocks no.
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates no. Are the Overboard Discharges above or below the deep water line no.
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel no. Are the Blow Off Cocks fitted with a spigot and brass covering plate no.

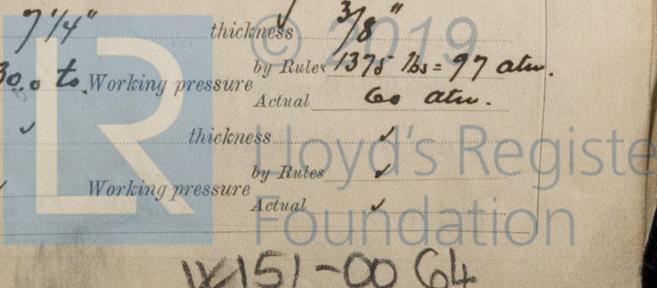
Do all pipes pass through the bunkers no. How are they protected no.
 Do all pipes pass through the deep tanks no. Have they been tested as per Rule no.
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times no.

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 no. Is the Shaft Tunnel watertight no. Is it fitted with a watertight door no. worked from no.
 On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork no.

Auxiliary Air Compressors, No. 3. No. of stages 3. Diameters 318-285-78 mm. Stroke 220 mm. Driven by 3-cyl. engines
 All Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke 170 Driven by 2-cyl. engines
 Reciprocating Air Pumps, No. ✓ 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 1/20.
 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. 3. Cubic capacity of each 30 liters. Internal diameter 7 1/4" thickness 3/8"
 Material solid drawn mild steel. Range of tensile strength 28.7-30.0 t. Working pressure by Rules 1375 lbs = 97 atm.
 Actual 60 atm.
 Low Pressure Air Receivers, No. ✓ Total cubic capacity ✓ Internal diameter ✓ thickness ✓
 Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓
 Actual ✓



IS A DONKEY BOILER FITTED? *yes.*

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

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

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

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

Please see accompanying lists.

The foregoing is a correct description,

**AKTIESELSKABET
HOLEBY DIESEL MOTOR FABRIK**

Manufacturer.

Dates of Survey while building	During progress of work in shops -	<i>3/6 6/6 11/6 26/6 28/6 8/7 28/8 3/10 9/10 6/11 15/11 20/11 1929.</i>	
		During erection on board vessel - -	<i>17/2 19/2 26/2 6/3 13/3 22/3 1/4 4/4 5/4 12/4 1930.</i>
		Total No. of visits	<i>22.</i>

Dates of Examination of principal parts—Cylinders	<i>with</i>	Covers	<i>9/10 20/11</i>	Pistons	<i>3/10</i>	Rods	<input checked="" type="checkbox"/>	Connecting rods	<i>3/6 6/6 11/6 28/6 3/10</i>
Crank shafts	<i>6/6 11/6 28/6 8/7 28/8</i>	Flywheel shaft	<input checked="" type="checkbox"/>	Thrust shaft	<input checked="" type="checkbox"/>	Intermediate shafts	<input checked="" type="checkbox"/>	Tube shaft	<input checked="" type="checkbox"/>
Screw shaft	<input checked="" type="checkbox"/>	Propeller	<input checked="" type="checkbox"/>	Stern tube	<input checked="" type="checkbox"/>	Engine seatings	<i>3/12 3/12 27/1 6/1</i>	Engines holding down bolts	<i>6/3 13/3 22/3</i>
Completion of fitting sea connections	<input checked="" type="checkbox"/>	Completion of pumping arrangements	<input checked="" type="checkbox"/>	Engines tried under working conditions	<i>15/6 1/4 4/4 5/4 12/4</i>				
Crank shaft, Material	<i>S.M. steel</i>	Identification Mark	<i>LLOYDS No 95-77-113 628-8-29</i>	Flywheel shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>		
Thrust shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>	Intermediate shafts, Material	<input checked="" type="checkbox"/>	Identification Marks	<input checked="" type="checkbox"/>		
Tube shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>	Screw shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>		

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.

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute)

The amount of Entry Fee	..	<i>4</i>	:	:	When applied for,	
Special	...	<i>12. 300.00</i>	:	:	<i>28/11 29.</i>	
Donkey Boiler Fee	...	<i>4</i>	:	:	When received,	
Travelling Expenses (if any)	<i>4</i>	<i>1.05.00</i>	:	:	<i>5/12 1929.</i>	

A. J. Fisher. M. Kilffer.
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute

TUE. 6 MAY 1930

Assigned

See attached J.E. Qm 8227



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