

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 8551.

Date of writing Report 22<sup>nd</sup> June 1931 When handed in at Local Office 24<sup>th</sup> June 1931 Port of Copenhagen Received at London Office 27 JUN 1931  
No. in Survey held at Holby and Nakskov Date, First Survey 24/10 1930 Last Survey 19/6 1931  
Reg. Book. 91530 on the Single Twin Triple Quadruple Screw vessel "Münau" Number of Visits 16

Built at Nakskov By whom built Nakskov Skibvaerft Yard No. 43 When built 1931  
Engines made at Holby By whom made Holby Dieselmotor Fabrik Engines No. 353 354 355 When made 1930-1  
Donkey Boiler made at Nakskov By whom made Nakskov Skibvaerft Boiler No. 15 When made 1931  
Brake Horse Power ✓ Owners Det Kongelige Højskole Port belonging to Copenhagen  
Nom. Horse Power as per Rule ✓ Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted yes  
Trade for which vessel is intended Ocean trade, Gen. Cargo

**OIL ENGINES, &c.** Type of Engines Diesel, trunk piston, air injection or 4 stroke cycle 4 Single or double acting single  
Maximum pressure in cylinders 35 kg/cm<sup>2</sup> Diameter of cylinders 310 mm Length of stroke 350 mm No. of cylinders 2 No. of cranks 2  
Span 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 400 Flywheel dia. 1240 mm Weight 2650 kg Means of ignition compression Kind of fuel used crude oil  
Crank Shaft, dia. of journals as per Rule 161.8 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 1355 mm dia. Thickness parallel to axis ✓  
as fitted 170 mm Mid. length thickness 95 mm Thickness around eye-hole ✓

Flywheel 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 ✓  
Tube Shaft, diameter as per Rule ✓ Screw Shaft, diameter as per Rule ✓ Is the tube ✓ shaft fitted with a continuous liner ✓  
as fitted ✓ as fitted ✓

Bronze 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 propeller boss ✓  
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 shaft ✓  
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 non-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 ✓

Cooling Water Pumps, No. ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓  
Bilge 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 ✓

Ballast Pumps, No. and size ✓ Lubricating Oil Pumps, including Spare Pump, No. and size ✓  
Are 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 ✓  
In Holds, &c. ✓

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ✓  
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ✓ Are the Bilge Suctions in the Machinery Spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges ✓  
Are all Sea Connections fitted direct on the skin of the ship ✓ Are they fitted with Valves or Cocks ✓  
Are 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 ✓  
Are 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 ✓  
What pipes pass through the bunkers ✓ How are they protected ✓  
What pipes pass through the deep tanks ✓ 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 ✓  
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 ✓ Is the Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓  
If 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 ✓ Diameters A. B. C. Stroke ✓ Driven by ✓  
Auxiliary Air Compressors, No. 3 No. of stages 3 Diameters 318-285-78 Stroke 170 Driven by auxil. Diesel engine  
Small Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓  
Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule ✓ No. ✓ Position ✓  
as fitted ✓

**AIR RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes  
Can 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 27 liters Internal diameter 185 mm thickness 9.5 mm  
Seamless, lap welded or riveted longitudinal joint seamless Material S.M. steel Range of tensile strength 59 Working pressure by Rules 123 kg/cm<sup>2</sup> Actual 65

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



IS A DONKEY BOILER FITTED? *yes.*

If so, is a report now forwarded? *yes.*

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 *yes.*

Separate Tanks *✓*

Donkey Boiler *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 list.*

The foregoing is a correct description.

AKTIESELSKABET  
HOLEBY DIESELMOTOR FABRIK

Manufacturer.

Dates of Survey while building	During progress of work in shops--	<i>24/10. 21/11. 12/12 1930. 23/2 1931.</i>	
		During erection on board vessel--	<i>11/3. 18/3. 27/3. 1/4. 13/4. 1/5. 12/5. 28/5. 11/6. 16/6. 17/6. 19/6. 1931.</i>
		Total No. of visits	<i>16.</i>

Dates of Examination of principal parts—Cylinders	<i>with Covers 12/12</i>	Pistons	<i>12/12</i>	Rods	<i>✓</i>	Connecting rods	<i>21/11. 12/12</i>
Crank shafts	<i>21/11</i>	Flywheel shaft	<i>✓</i>	Thrust shaft	<i>✓</i>	Intermediate shafts	<i>✓</i>
Screw shaft	<i>✓</i>	Propeller	<i>✓</i>	Stern tube	<i>✓</i>	Engine seatings	<i>20/2. 3/3</i>
Engines holding down bolts	<i>18/3. 27/3</i>						
Completion of fitting sea connections	<i>✓</i>	Completion of pumping arrangements	<i>✓</i>	Engines tried under working conditions	<i>23/2</i>		
Crank shaft, Material	<i>S. H. ingh ates</i>	Identification Mark	<i>21. 11. 30</i>	Flywheel shaft, Material	<i>✓</i>	Identification Mark	<i>✓</i>
Thrust shaft, Material	<i>✓</i>	Identification Mark	<i>✓</i>	Intermediate shafts, Material	<i>✓</i>	Identification Marks	<i>✓</i>
Tube shaft, Material	<i>✓</i>	Identification Mark	<i>✓</i>	Screw shaft, Material	<i>✓</i>	Identification Mark	<i>✓</i>

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 *✓*

If so, state name of vessel *✓*

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

*These auxiliary engines have been built and fitted under special survey and in accordance with the Society's Rules, the approved plans and the requirements contained in the Surveyor's letter dated 10/3/30. The material used for the construction has been tested and examined as per Rules and found good and the workmanship is good.*

*Each engine has been connected to a 66 kwts. dynamo, and on completion of the installation on board the vessel the engines were tested under full power working conditions and found to work satisfactorily.*

Certificate (if required) to be sent to

The amount of Entry Fee .. £	:	:	When applied for,
Special ...	<i>16. 300. 00</i>		<i>4/3 1931</i>
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) <i>16. 85. 00</i>			<i>10/3 1931</i>

Committee's Minute *FRI. 3 JUL 1931*

Assigned *See F. C. Rep.*

*C. Sturiff. S. M. Hansen*  
Engineer Surveyor to Lloyd's Register of Shipping.



© 2020

Lloyd's Register Foundation