

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 6212

Received at London Office 8 OCT 1925

Date of writing Report 2nd Oct. 1925 When handed in at Local Office 2nd Oct. 1925 Port of GOTHENBURG
 No. in Survey held at GOTHENBURG Date, First Survey 5th December, 1924 Last Survey 5th October 1925
 Reg. Book. 17935 on the Single } Screw vessels "DELHI" }
 Twin }
 Triple }
 Master ✓ Built at GOTHENBURG By whom built AKTIEB. LINDHOLMEN-ATAALA Yard No. 993 When built 1925
 Engines made at STOCKHOLM By whom made AKTIEB. ATLAS-DIESEL Engine No. 50047 When made 1925
 Donkey Boilers made at LONGBOROUGH By whom made WALTER W. COLTMAN & CO. LD Boiler No. 4743 When made 1925
 Brake Horse Power ✓ Owners AKTIEB. SVENSKA OSTASIATISKA KOHP Port belonging to GOTHENBURG
 Nom. Horse Power as per Rule 716 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

OIL ENGINES, &c.—Type of Engines Two Polar Diesel oil Engines 2 or 4 stroke cycle 4 Single or double acting single
 Maximum pressure in cylinders 35.0 Kg/cm² No. of cylinders 2x6=12 No. of cranks 2x6=12 Diameter of cylinders 630mm [24 3/8"]
 Length of stroke 1000mm [39 3/8"] Revolutions per minute 195 Means of ignition Diesel system Kind of fuel used
 Is there a bearing between each crank Span of bearings (Page 92, Section 2, par. 7 of Rules)
 Distance between centres of main bearings Is a flywheel fitted Diameter of crank shaft journals as per Rule as fitted
 Diameter of crank pins Breadth of crank webs as per Rule as fitted Thickness of ditto as per Rule as fitted
 Diameter of flywheel shaft as per Rule as fitted Diameter of tunnel shaft as per Rule 250mm as fitted Diameter of thrust shaft as per Rule 263mm as fitted
 Diameter of screw shaft as per Rule 275mm as fitted Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes
 Is the after end of the liner made watertight in the propeller boss Yes If the liner is in more than one length are the joints burned
 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 If without liners, is the shaft arranged to run in oil
 Type of outer gland fitted to stern tube Length of stern bush 1310mm Diameter of propeller 3580mm
 Pitch of propeller 3330mm No. of blades 4 state whether moveable No Total surface 9x41= 8.2 square feet
 Method of reversing Non-reversing Is a governor or other arrangement fitted to prevent racing of the engine when declutched Thickness of cylinder liners
 Are the cylinders fitted with safety valves Yes Means of lubrication gear wheel pumps Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Both If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine The exhaust is led to a funnel
 No. of cooling water pumps 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes No. of bilge pumps fitted to the main engines 2 Diameter of ditto Stroke
 Can one be overhauled while the other is at work Yes No. of auxiliary pumps connected to the main bilge lines 2 How driven Electric
 Sizes of pumps 30 tons, double acting plunger pumps No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room Two 3" One 3" in tunnel
 and in holds, etc. Two 3" in No. 1, 2, 3 holds, Three 3" in No. 4, One 3" in No. 5 hold No. of ballast pumps 1 How driven Electric Sizes of pumps 150 tons rotary pump
 Is the ballast pump fitted with a direct suction from the engine room bilges Yes State size 6" Is a separate auxiliary pump suction fitted in Engine Room and size Yes, two 3 1/2" Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine Room always accessible Yes
 Are the sluices on Engine Room bulkheads always accessible None fitted Are all connections with the sea direct on the skin of the ship Yes
 Are they valves or cocks Both Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates No, by lifting of main plates
 Are the discharge pipes 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 all pipes, cocks, valves and pumps in connection with the machinery accessible at all times Yes Are the bilge suction pipes, cocks and valves arranged so as to prevent any communication between the sea and the bilges Yes Is the screw shaft tunnel watertight Yes Is it fitted with a watertight door Yes
 worked from Upper eng room platform If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

No. of main air compressors No. of stages Diameters Stroke Driven by
 No. of auxiliary air compressors No. of stages Diameters Stroke Driven by
 No. of small auxiliary air compressors No. of stages Diameters Stroke Driven by
 No. of scavenging air pumps None Diameter Stroke Driven by
 Diameter of auxiliary Diesel Engine crank shafts as per Rule 163.4mm as fitted 165mm Are the air compressors and their coolers made so as to be easy of access Yes

IR RECEIVERS:—No. of high pressure air receivers 8 (in all) Internal diameter Cubic capacity of each
 material Seamless, lap welded or riveted longitudinal joint Range of tensile strength
 thickness working pressure by Rules No. of starting air receivers 2 Internal diameter
 Total cubic capacity Material Seamless, lap welded or riveted longitudinal joint
 Range of tensile strength thickness Working pressure by rules Is each receiver, which can be isolated,
 fitted with a safety valve as per Rule Can the internal surfaces of the receivers be examined What means are provided for cleaning their
 inner surfaces Is there a drain arrangement fitted at the lowest part of each receiver

of Visits 83

IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS					
" " COVERS					
" " JACKETS.....					
" " PISTON WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....					
" " 2nd "					
" " 3rd "					
AIR RECEIVERS—STARTING					
" " INJECTION					
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER					
" " WATER JACKET	19/6/24	✓	As per Rule	R	
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting *19/6/24*
(If not, state date of approval)

Receivers ✓

Separate Tanks ✓ *Arrangement as app. for 7/5/25 Lloyd's 10/6/24.*

SPARE GEAR as per list approved on the 20th October, 1924, placed on board and in addition 1/2 set of auxil. bilge pump valves, 1 set of coupling bolts for the tunnel shafting, 1 propeller shaft, 2 propellers, 2 safety valve springs for the donkey boiler, 1 check valve with chest for the donkey boiler, 1 set of donkey boiler feed pump valves.

The foregoing is a correct description, FOR INSTALLATION ONLY.

SIGNS

AKTIEBOLAGET LINDHOLMEN-KOTALA
AVD.: LINDHOLMENS VERSTAD

Manufacturers

Dates of Survey while building
 During progress of work in shops— 1924: Dec. 5, 8, 1925: March 5, May 7, June 19.
 During erection on board vessel— 1925: March 12, April 12, 19, June 10, 11, 16, 20, Aug. 26, Sept. 8, 11, 17, 15, 24, 29, 30, Oct. 1, 5.
 Total No. of visits 93

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
 Crank shaft Thrust shaft Tunnel shafts 5/3/25 Screw shaft 7/5/25 Propeller 7/5/25 Stern tube 7/5/25 Engine seatings 12/4/25
 Engines holding down bolts 5/24, 12/3/25 Completion of pumping arrangements 8/9/25 Engines tried under working conditions 1/10/25
 Completion of fitting sea connections 11/6/25 Stern tube 11/6/25 Screw shaft and propeller 31/8/25
 Material of crank shaft Identification Mark on Do. Material of thrust shaft Identification Mark on Do. LLOYD'S No. 12022, 1201 GA. 7.5.25
 Material of tunnel shafts S.M. Steel Identification Marks on Do. Material of screw shafts S.M. Steel Identification Marks on Do.

Is the flash point of the oil to be used over 150° F. *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. Identification marks: *spare prop. shaft.*
part tunnel shafts
 Lloyd's No. 843, 842, 841, 816, 814 GA. 5.3.25
 Lloyd's No. 12092, 12025, 12024, 12021, 918 GA. 5.3.25
 Lloyd's No. 870 GA. 7.5.25

The main & auxiliary engines of this vessel which have been built under Special Survey of the Society's surveyor at Stockholm as per *Shm.* reports Nos. 2602, 2603, 2604, 2605, 2606 have been installed under our inspection and all the *To be continued.*

The machinery of this vessel is worthy in our opinion to be classed in the Register Book of this Society with the notation of *+LHC 10.25* being in a good and safe working condition. Working pressure of donkey boiler 85 lbs/p.

The amount of Entry Fee ... £ 109:20 : When applied for,
 Special ... £ 403:31 : 19
 Donkey Boiler Fee ... £ :
 Travelling Expenses (if any) £ :
 When received, 12/10/25

V. Nilow
 Engineer Surveyor to Lloyd's Register of Shipping.

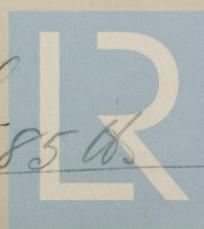
Committee's Minute

Assigned

+ Lmb. 10.25
Oil Engines D.B. - 85 lbs/p.

THES. 13 OCT 1925

CERTIFICATE WRITTEN



© 2021

Lloyd's Register Foundation

Certificate (if required) to be sent to Surveyors Office, Gotharby.

The Surveyors are requested not to write on or below the space for Committee's Minute.

Machinery of the Motorship "DELHI" N^o 17935 in the Register Books.

requirements of the Rules have been complied with.

The main engines have been tested under full working power on a twelve hours trial trip and proved to work satisfactorily both ahead and astern. The auxiliary engines have also been tested under full working power and found in good condition.

The auxiliary machinery consists of:

Three two cylinders, 4-stroke cycle, single acting Diesel oil engines, as per shov. reports N^o 2604, 2605, 2606 each working a dynamo of 66 kw. 220 volts and 300 amperes which have to supply the electric current motive power to the following electric motors:

- Two 7.5 HP shunt wound motors working the bilge pumps,
- One 20 " " " motor " " bilge & ballast pump
- Two 18 " " " motors " " cooling water pumps,
- One 15 " " " motor " " oil pump to the daily fuel tanks,
- One 8 " " " " " " sanitary pump.
- Two 10 " " " motors " " lubricating oil pumps,
- Two 7.5 " serie " " " " main engine turning gears,
- One 12 " shunt " motor " " } refrigerating machinery (stores)
- One 3.5 " " " " " " }
- One 9 " " " " " " drilling machine & turning lathe.
- Two 35 " compound " motors " " windlass,
- Twelve 25 " serie " " " " winches,
- Two 20 " shunt " " " " steering engine.

Also electric current for the lighting purpose with the voltage reduced to 110 volts after having passed the transformer.

Two 30 tons plunger pumps for bilge discharging.

One 150 " rotary ballast & bilge pump.

Two 180 " centrifugal cooling water pumps.

Two 2x18 " rotary lubricating oil pumps.

One 50 " " oil pump to daily fuel tanks.

One 30 " centrifugal pump for sanitary purpose.

One 75x40x75% donkey boiler feed pumps.

This vessel is also fitted with wireless telegraphy of the Telefunken system.