

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 6263

27 NOV. 1925

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 No. in Survey held at Gothenburg Date, First Survey 12th March Last Survey 19th Nov. 1925  
 Reg. Book. Single Supplement Single 37930 on the Twin Triple Screw vessels "ANNIE JOHNSON" Number of Visits 74 Tons Gross 4896  
Net 2852  
 Master ✓ Built at GO THENBURG By whom built AKTIEB. GÖTAVERKEN Yard No. 399 When built 1925  
 Engines made at GO THENBURG By whom made AKTIEB. GÖTAVERKEN Engine No. 682 When made 1925  
 Donkey Boiler made at LONGBOROUGH By whom made H. H. COLTMAN & Co. LD. Boiler No. 4747 When made 1925  
 Brake Horse Power ✓ Owners REDERIAKTIEB. NORDSTJERNAN. Port belonging to STOCKHOLM.  
 Nom. Horse Power as per Rule 623 630 Is Refrigerating Machinery fitted for cargo purposes YES Is Electric Light fitted YES

**L ENGINES, &c.**—Type of Engines Two Diesel Oil Engines 2 or 4 stroke cycle 4 Single or double acting Single  
 Maximum pressure in cylinders 500 lb./sq. in. No. of cylinders 2 × 6 = 12 No. of cranks 2 × 6 = 12 Diameter of cylinders 590 mm. [23 1/8"]  
 Length of stroke 1900 mm. [47 1/4"] Revolutions per minute 190 Means of ignition Diesel system Kind of fuel used Crude oil  
 Is there a bearing between each crank Yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 826 mm.  
 Distance between centres of main bearings 1160 mm. Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule 376 mm.  
 as fitted 380 mm. Thickness (parallel) of crank webs as per Rule 935 mm. metal around crank webs as per Rule 156 mm.  
 Diameter of crank pins 380 mm. Breadth of crank webs as fitted 955 mm. Thickness of ditto as fitted 162 mm.  
 Diameter of flywheel shaft as per Rule 376 mm. Diameter of tunnel shaft as per Rule 253 mm. Diameter of thrust shaft as per Rule 266 mm.  
 as fitted 380 mm. as fitted 264 mm. as fitted 315 mm.  
 Diameter of screw shaft as per Rule 279 mm. Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner fitted.  
 as fitted 305 mm. If the liner is in more than one length are the joints burned ✓  
 Is the after end of the liner made watertight in the propeller boss ✓  
 Does 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 Yes.  
 Type of outer gland fitted to stern tube Cedervall's gland. Length of stern bush 1600 mm. Diameter of propellers 3660 mm.  
 Pitch of propellers 3490 mm. No. of blades 4 state whether moveable No. Total surface 2 × 4/8 = 8.36 square met.  
 Method of reversing By H. system Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners Bottom 32.52  
 Are the cylinders fitted with safety valves Yes Means of lubrication Oil pumps fitted 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 155 mm. Stroke 175 mm.  
 Can one be overhauled while the other is at work Yes No. of auxiliary pumps connected to the main bilge lines 2 How driven By electric motors.  
 Sizes of pumps Diam. 165 mm. Stroke 930 mm. No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room Two 3" One 3" in tunnel well  
 and in holds, etc. Two 3" in No. 1, 2, 3 & 4 holds Four 3" in No. 4 hold. No. of ballast pumps 1 How driven By electric motor Sizes of pumps 100 tons plunger  
 Is the ballast pump fitted with a direct suction from the engine room bilges Yes Slate 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 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 small 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 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓  
 if not cl. from  
 No. of main air compressors 2 No. of stages 3 Diameters 150, 590 & 580 mm. Stroke 490 mm. Driven by Main engines  
 No. of auxiliary air compressors 1 No. of stages 3 Diameters 28, 285 & 318 mm. Stroke 290 mm. Driven by Aux. engines  
 No. of small auxiliary air compressors 1 No. of stages 2 Diameters 35 & 106 mm. Stroke 80 mm. Driven by Steam engine  
 No. of scavenging air pumps None Diameter ✓ Stroke ✓ Driven by ✓  
 Diameter of auxiliary Diesel Engine crank shafts as per Rule 162 mm. Are the air compressors and their coolers made so as to be easy of access Yes.  
 as fitted 162 mm. 2 removed 1138  
**AIR RECEIVERS:**—No. of high pressure air receivers 8 Internal diameter Two 558 mm. Three 197 mm. Cubic capacity of each 350, 175 & 35 liters  
 Material S. M. Steel Seamless, lap welded or riveted longitudinal joint Lap welded & seamless Range of tensile strength As per Rule.  
 Thickness 25, 21 & 9.5 mm. Working pressure by Rules 65 kg/cm<sup>2</sup> No. of starting air receivers 2 Internal diameter 850 & 1800 mm.  
 Total cubic capacity 15.25 cubic meters Material S. M. Steel Seamless, lap welded or riveted longitudinal joint Riveted longit. joints.  
 Range of tensile strength 49.6-49.6 kg/cm<sup>2</sup> thickness 25.5 & 25.0 mm. Working pressure by rules 25 kg/cm<sup>2</sup> 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 Yes What means are provided for cleaning their  
 inner surfaces The high pressure air receiver by means of compressed air & steam. Is there a drain arrangement fitted at the lowest part of each receiver Yes







Machinery of the motorship "ANNIE JOHNSON" N<sup>o</sup> 37930 in the Supplement.

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Shipping.

Machinery of the motorship "ANNIE JOHNSON" N<sup>o</sup> 37930 in the Supplement.

The dimensions are as specified and in accordance with the Rules and approved plans. The main engines were tested under full working power on a seven hours trial trip and found to work satisfactorily both ahead and astern.

The auxiliary engines have also been tested under full working power and found in good order.

The auxiliary machinery consists of:-

One 2-cylinders and two 3-cylinders, 4-stroke cycle, single acting Diesel oil engines of cylinder diam 310<sup>mm</sup> and stroke 350<sup>mm</sup>. The 2-cylinder engine works a dynamo of 66 KW, 220 volts and 300 amperes and each 3-cylinder engine a dynamo of 100 KW, 220 volts and 455 amperes,

One 100 tons double acting plunger pump for the ballast & bilge purposes, Two 3x20 " trunk piston pumps for the bilge & sanitary purposes. These pumps have three piston each of cyl. diam 165<sup>mm</sup> and stroke 230<sup>mm</sup>.

Two 150 tons centrifugal pumps for the cooling water,

Two 60 " rotary pumps " " lubricating oil,

One 20 " " pump for transferring oil to the daily fuel tanks,

One 75x40x75<sup>mm</sup> double acting donkey boiler feed pump.

This vessel has been fitted with wireless telegraphy of the Telefunken system.

Spare gear continued:

and nuts and 4 halves of top-end brasses, 4 connecting rod bottom-end bolts & nuts and 3 halves of bottom-end brasses, 4 main bearing bolts & nuts and 2 halves of main bearing brasses, 4 compressor connecting rod bottom-end bolts & nuts and one half of bottom-end brasses in same, 1 set of coupling bolts for the crank shafts, 1 ditto for the intermediate shafts, propeller shaft with nut, 2 propellers, 1 set of all working parts for a fuel pump, 1 set of springs for one engine and compressor, 1 set of piston rings for one compressor, 1 set of valves for one compressor, cam roller with pin of each size, 1 HP air cooling coil for the compressor, 6 bursting discs for the starting air piping, 1 spindle for the fuel valve overflow valve.

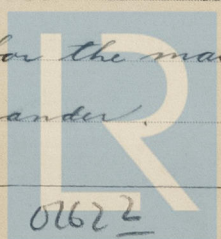
For the auxiliary engines:- 4 complete sets of discharge valves which also can be used as air inlet valves and 2 extra valves for same, 2 complete sets of fuel valves and 2 extra extra valves for same, 1 complete set of starting air valve, 2 sets of piston rings for one piston, 1 set of connecting rod top end brasses, 2 connecting rod bottom-end bolts and nuts and 1 set of bottom-end brasses, 4 main bearing bolts & nuts and 2 halves of main bearing brasses, 1 set of all working parts for a fuel pump, 1 set of springs for one engine, 1 set of piston rings for one compressor, 1 set of valves for one compressor, 1 HP compressor air cooling coils, 1 spindle for the fuel valve overflow valve.

Book For the auxiliary pumps:- 1 set of valves for the bilge & sanitary pumps, 1 ditto for the ballast and bilge pump.

For the donkey boilers:- 1 safety valve spring, 1 check valve, 1/2 set of valves for the feed pump, 6 water glasses.

A quantity of bolts and nuts and lengths of pipes with unions and flanges suitable for each for the fuel and air delivery for the main and auxiliary engines.

L. A. Anderson



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