

# Report of Survey for Repairs, &c., of Engines and Boilers.

(Received at London office)

1 - MAY 1947

Date of writing Report 28th April 19 47. When handed in at Local Office 28th April 19 47. Port of Gothenburg.

No. in Survey held at Gothenburg. Date, First Survey 14th Oct. 46 Last Survey 24th April 1947.  
Reg. Book (No. of Visit) 48

69110 on the Machinery of the ~~Woodcock~~ Steel Twin Screw Motorship "A X E L J H O N S O N" Year. Month.

Tonnage (Gross 5018 Vessel built at Gothenburg By whom A-B. Götaverken When 1925 - 8  
 (Net 2878 Engines made at Gothenburg By whom A-B. Götaverken When 1925 - 8  
 Nominal 623 Boilers, when made (Main) --- (Donkey) 1925  
 Horse Power  
 No. of Main Boilers 0 Owners Rederi A-B. Nordstjerna Owners' Address ---  
 No. of Donkey Boilers 1 Managers Axel Axelsson Johnson Port Stockholm Voyage ---  
 Steam Pressure in Main Boilers --- If Surveyed Afloat or in Dry Dock Both.  
 in Donkey Boilers 85 (State name of Dock) Götaverken.

### Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

CHARACTER for Special Survey Date of last Survey and of Periodical Surveys.	Years assigned expired	Machinery and Boiler Surveys (including date of N.B., if any.)
+100A1		+LMC 8,38
with freeboard		DBS 8,45
5,46		OG
ssGot.No.3-8,38		P 2,45
Examined 12,45		SN 2,45
		RMC
		Ref. Mch.

OIL ENGINES CONTINUOUS SURVEY

Last Report No. --- Port --- Damage, LMC, DBS, Alterations and S.R.List.

**Particulars of Examination and Repairs (if any)**  
 In damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined. Offered to Owners, not req.  
 Was a damage report made by anyone else? If so, by whom? Yes, Underwriters' surveyor.  
 Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? ---  
 Did the Surveyor personally go inside each Donkey Boiler separately and make a thorough examination at this time? Yes  
 If this was not done, state for what reasons? ---

What parts of the Boilers could not be thus thoroughly examined? ---  
 What special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? ---  
 Latest date of internal examination of each boiler 28th March, 1947. Present condition of funnel Good

Did the Surveyor examine the Safety Valves of the Main Boiler? --- To what pressure were they afterwards adjusted under steam? ---  
 Did the Surveyor examine the Safety Valves of Donkey Boiler? Yes To what pressure were they afterwards adjusted under steam? 50 lbs.  
 Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? --- and of the Donkey Boilers? Yes  
 Did the Surveyor examine the drain plugs of the Main Boilers? --- and of the Donkey Boilers? None  
 Did the Surveyor examine all the mountings of the Main Boilers? --- and of the Donkey Boilers? Yes

Screw shaft now been drawn and examined? Port. Is it fitted with continuous liner? No Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? Yes  
 Shaft now been changed? No If so, state reasons ---  
 Is the shaft now fitted been previously used? --- Has it a continuous liner? --- Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? ---  
 Date of examination of Screw Shaft 27/3 State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft 2.25 mm

Engine parts, when referred to by numbers, should be counted from forward. Is electric light and ~~low~~ power fitted? Yes  
 Did the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes  
 Insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? Yes  
 Survey is not complete, state what arrangements have been made for its completion and what remains to be done Complete.

Damage stated to have been caused on the port propeller by the same touching the quay at Colorado, U.S.A., on the 31st 1946, when shifting berth.

The propeller, port propeller shaft, stern bush, oil glands and the sea connections and their fastenings examined.  
 All cylinders, covers with valves and valve gears, pistons, piston rods, guides, crossheads, connecting rods with top- and bottom end brasses, main bearings, crank-, thrust- and intermediate shafts and the gear of the port and starboard main engines examined. (Continued)

**Observations, Opinion, and Recommendation:—** The machinery of this vessel is in good condition and eligible for classification, to remain as classed with fresh records of LMC 4,47, DBS 4,47 and fresh notation of Port tail shaft seen without special conditions.

Fees applied for: Kr. 576:00 (per Section 29)  
 Damage or Repair Fee (if any) (per Section 29.) Kr. 60:00  
 Kr. 40:00  
 Received by me, Kr. 120:00 19 ---  
 Date: FRI. 13 JUN 1947  
 + LMC 4,47 without spl. con.  
 Port S. 3,47 DBS 4,47

*Stellan Johansson*  
 Engineer Surveyor to Lloyd's Register of Shipping.



Gothenburg  
 Office,  
 Surveyor  
 U.S.A.

Is a Certificate required? If so, to be sent to

responsible for any discrepancy  
 Book or other publication of  
 number thereof, or the Surveyor

machinery of the motorship "Axel Johnson", of Gothenburg, No. 69110 in the Register Book.

All three auxiliary engines with generators renewed (Please see Copenhagen Surveyors report No. 12085 and London Surveyors reports Nos. 114851/2 attached).

Two new electrically driven manoeuvring air compressors as per certificate attached have been fitted.

The small steam driven auxiliary air compressor opened up and examined.

Both main starting air receivers examined internally with mountings.

The auxiliary engine starting air receiver (previously used as spare for the auxiliary engines) opened up and examined.

Both main lubricating oil pumps, both main circulating pumps, ballast pump, both bilge- and sanitary pumps and the transfer pump opened up and examined.

The pipes, cocks, valves and strainers of the pumping arrangements examined.

The daily service tanks examined internally and externally with fittings and connections.

The main lubricating oil cooler examined and tested.

The main engines examined under working conditions and the manoeuvring of the same tested.

The electrical installation examined and tested as per Rule.

The donkey boiler examined internally and externally with safety valves and mountings and the safety valves adjusted under steam as above.

The oil burning installation examined under working conditions and found in order.

The fire extinguishing apparatus examined and found or put in order.

#### Repairs effected due to wear and tear:

##### Port main engine:

No. 6 cylinder liner renewed (worn and wasted).

No. 6 cylinder cover renewed (cracked between valves).

No. 1 piston renewed (worn in ring grooves. Owners' request).

All crossheads skimmed in lathe and all top-end brasses re-metalled. No. 4 main bearing lower half re-metalled (for the alignment of the crank shaft).

##### Starboard main engine:

No. 1 cylinder liner renewed (worn and wasted).

Nos. 1 and 6 cylinder covers renewed (cracked between valves).

No. 5 piston renewed (worn in ring grooves. Owners' request).

All crossheads skimmed in lathe and all top-end brasses re-metalled. No. 5 crosshead renewed (cracked).

No. 5 connecting rod bottom end brasses re-metalled.

All main bearing lower halves re-metalled. (for the alignment of the crank shaft).

Lower halves of thrust shaft bearings re-metalled.

The alignment of the crank- and thrust shafts of the port- and starboard main engines lined up.

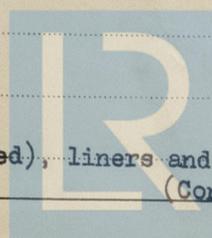
Engine seatings of the port and starboard main engines made good by means of electric welding.

##### Pumps:

Impeller shaft of the port main cooling water pump renewed (worn).

Ball bearings of the starboard main cooling water pump renewed (worn).

Forward and aft bilge- and sanitary pumps water end castings renewed (wasted), liners and plungers renewed (Continued)



machinery of the motorship "Axel Johnson", of Stockholm, No. 69110 in the Register Book.

(worn).

Main lubricating oil cooler:

1 cover renewed (wasted).

The electric installation

overhauled and cables renewed where necessary.

All motors overhauled.

Donkey boiler:

All 3 testcocks renewed (wasted).

Alterations:

All three old auxiliary engines removed and replaced by

1)- One new 3-cyl. 4 SCSA auxiliary engine, Bumeister & Wain, No. 3952 with generator Titan No. 156397 of 112 KW., 509 Amp., and

2)- Two new 5-cyl. 4 SCSA auxiliary engines, Blackstone Nos. 46748/9 with generators Mawdsley order No. 43795, Dynamo Nos. 260 R 111/112 of 110 KW., 480 Amp. (Please see Copenhagen and London reports attached).

Auxiliary engine compressors removed and replaced by two new electrically driven manoeuvring air compressors, Reavell and Company Nos. 99794/5 with motors Campbell Isherwood Nos. 35008/9 (Please see attached certificate). All injection air receivers removed.

Main cables to the new generators are 2 x 120 mm<sup>2</sup> per pole, paper insulated, lead covered and armoured, and to the new manoeuvring air compressors 1 x 95 mm<sup>2</sup> per pole, paper insulated, lead covered and armoured.

Electric heating has now been installed in the crew's accommodation forward (main cable 1 x 150 mm<sup>2</sup> per pole, rubber insulated, lead covered and armoured), in 3rd class passenger accommodation amidships (main cable 1 x 50 mm<sup>2</sup> per pole, rubber insulated, lead covered and armoured) and in crew's accommodation aft (main cable 1 x 50 mm<sup>2</sup> per pole, rubber insulated lead covered and armoured).

The pressure for lighting purposes altered from 110 V. to 220 V. and the transformer removed.

The port main engine direct driven bilge pump has now been removed.

Two auxiliary cooling water pumps, one for salt water of 220 litres per minute and one for fresh water of 335 litres per minute capacity have been fitted, motors for the same previously used for hydrofor pumps on board.

Repairs effected due to damage:

The port propeller removed, dressed up in shop and refitted.

The port oil glands overhauled.

S.R. List:

The port main engine bedplate has been repaired and re-inforced to my satisfaction, the feet of the columns of the starboard main engine examined and found in order and all auxiliary engines renewed. The machinery surveyed complete as above.

Note:

The insertion regarding the above may be removed from the S.R. List. Spare gear for new auxiliary engines supplied as per Rule.