

PT BINA MEGAH INDOWOOD · COMPRESSOR TREATMENT REPORT

ELGI Neuron II compressor: a worn unit became more efficient without teardown

PT Bina Megah Indowood, Gresik, Indonesia · treatment performed by PT XADO Indonesia; report signed and stamped by both parties

Gresik, Indonesia · full treatment cycle 02.06–02.07.2019 · repeat measurements after 50 h of operation

PRODUCT

XADO Gel-Revitalizant® for hydraulic equipment

industrial line · 6 tubes of 9 ml, 54 ml total for a 20 l oil system

TREATED UNIT

Oil system of a screw compressor

screw pair and bearings · ELGI Neuron II / 30 HP / Direct Drive

DOCUMENT TYPE

Treatment report signed and stamped by both parties

EQUIPMENT

ELGI Neuron II / 30 HP screw air compressor, direct drive; electric motor **22 kW**

CONDITION AT THE START OF TESTING

In service since **2012**; elevated oil temperature, noise and vibration, longer air pump-up time due to considerable wear of parts

WHAT WAS MEASURED

Motor current on all three phases and air working pressure — before treatment and after **50 h** of operation

Rated data of the unit: capacity 241.2 m³/h at 0.7 MPa, oil system volume 20 l, air receiver 1,500 l.

Key results

↓ **8-10.3 %**

motor current under load, 35.1-35.8 → 32.1-32.3 A

↑ **6.1 %**

air working pressure at idle, 4.9 → 5.2 bar

Motor current draw under load

PHASE	BEFORE TREATMENT, A	AFTER 50 H, A	CHANGE
Phase I	35.8	32.1	-10.3 %
Phase II	35.6	32.1	-9.8 %
Phase III	35.1	32.3	-8.0 %
Total over three phases	106.5	96.5	-9.4 %

The reduction was reproduced on all three phases. In the report summary, power consumption is stated as reduced by 10 % on average.

Air working pressure

MODE	BEFORE TREATMENT, BAR	AFTER 50 H, BAR	CHANGE
Idle (Unload)	4.9	5.2	+0.3 bar (+6.1 %)
Under load (Load)	6.3	6.4	+0.1 bar

The rated working pressure of the compressor is 0.7 MPa (7 bar).

Report conclusion

PT XADO Indonesia and PT Bina Megah Indowood placed on record: «A new metal-ceramic coating has been formed on the friction pairs. As a result, the operating parameters of the ELGI Neuron II / 30 HP / Direct Drive screw air compressor improved after the application of XADO revitalizants without conventional repair, which demonstrates the effectiveness of the XADO technology and makes it possible to extend the remaining service life and operating reliability and to reduce operating costs significantly thereafter». Before treatment, the unit ran with elevated oil temperature, noise and vibration, and a longer air pump-up time — a consequence of considerable wear of parts. The compressor was neither dismantled nor taken out of production: **54 ml** of gel were introduced into the oil system in six stages over a month, with the unit running.

XADO

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The results refer to an ELGI Neuron II / 30 HP / Direct Drive screw air compressor with a 20 l oil system; on other units and in other operating modes the figures may differ. The original report signed and stamped by both parties is published in full and available for download. The treatment was performed by PT XADO Indonesia.