XADO

IE A128 | PRODUCTION CASE | INDUSTRIAL PLANT | ELECTRIC MOTOR · BEARINGS

PLANT PROTOCOL · 20 DAYS OF OPERATION AFTER TREATMENT

Vacuum pump electric motor: bearing treatment reduced the current draw

Brilyant AD, Sofia · the protocol was signed by the head of the Power Engineering department Eng. Iv. Kolev and power engineer Eng. Iv. Shingarov · treatment performed by the distributor MAY OOD

Brilyant AD, Sofia, Bulgaria · protocol issued in Plovdiv on 3 February 2004

PRODUCT

Treatment with XADO technology

applied to the electric motor bearings; the unit was not taken out of service

TEST OBJECT

Vacuum pump electric motor

rated 22 kW · current measured on all three supply phases

DOCUMENT TYPE

Plant protocol with signatures and stamp

UNIT	CONDITION AT START OF PERIOD	WHAT WAS MEASURED
Vacuum pump electric motor, 22 kW, bearings treated	Phase currents 30 / 28 / 28 A	Current on the three supply phases at the start of the period and again after 20 days of operation
Units of the same plant left untreated — control group	Phase currents 30 / 28 / 28 A	The same over the same period; the protocol does not state the size of the group

Both rows were recorded at the start and at the end of one and the same period — 20 days of operation.

Key results

↓ 10.48 %

motor current draw, 28-30 → 25-27 A

on the untreated units the current did not change over the same 20 days

Phase currents: treated motor and control group

PHASE	START OF PERIOD	AFTER 20 DAYS, TREATED	AFTER 20 DAYS, UNTREATED
I	30 A	27 A	30 A
II	28 A	25 A	28 A
III	28 A	25 A	28 A

Measurements were taken on equipment in service; the protocol does not name the instrument. The right-hand column covers the units that were not treated: their current did not change over the period.

Conclusion of the plant commission

The Brilyant AD protocol, signed by the head of the Power Engineering department and the plant power engineer, states verbatim: «the measurements taken show that consumption has fallen by **10.48 %**, which in turn will lead to lower electricity costs and a longer bearing service life». The treatment was applied to the bearings of a running vacuum pump electric motor rated **22 kW**, and the repeat measurement was made after **20 days** of operation. The same table in the protocol contains a row for the units that were not treated: their current over the same period remained unchanged — **30 / 28 / 28 A** across the three phases.

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The results relate to a 22 kW vacuum pump electric motor at the Brilyant AD site in Sofia after 20 days of operation following bearing treatment; on other equipment and under other operating modes the figures may differ. The original protocol with signatures and stamp is published in full and available for download.