

REPORT ON TREATMENT WITH XADO TECHNOLOGY, 19.02–05.03.2002

Compressor 202VO4R20/8A: operating parameters restored without teardown or overhaul

Agria AD, Plovdiv · plant commission: chief power engineer G. Angelov, chief mechanic P. Mihaylov,
compressor operator V. Barakov · treatment performed by distributor MAY OOD, manager A. Iliev
Plovdiv, Bulgaria · treatment 19 February – 5 March 2002 · report signed 6 March 2002

PRODUCT

Treatment with XADO
technology

carried out on the running unit,
without teardown or a
shutdown for repair

TEST OBJECT

Borets 202VO4R20/8A
compressor

capacity 20 m³/min · electric
drive 132 kW, 380 V · oil system
70 l

DOCUMENT TYPE

Plant report
with signatures and seals

UNIT	RATED DATA	CONDITION BEFORE TREATMENT
Borets 202VO4R20/8A compressor, in service	20 m ³ /min · drive 132 kW, 380 V · current 70 A at idle, 140 A under load · oil system 70 l	time to working pressure 30 min · oil pressure 8 atm · oil consumption through the lubricator 12 l/24 h · cylinder pressures 1.8 and 1.7 atm

The treatment ran for two weeks on the machine in operation; readings were taken before it began and on completion.

Key results

↓ **40 %**

time to working pressure, 30 → 18
min

↓ **50 %**

oil consumption through the
lubricator, 12 → 6 l/24 h

↑ **75 %**

oil pressure in the lubrication
system, 8 → 14 atm

Readings before and after treatment

PARAMETER	BEFORE	AFTER	CHANGE
Time to working pressure	30 min	18 min	-40 %
Oil consumption through the lubricator	12 l/24 h	6 l/24 h	-50 %
Oil pressure in the lubrication system	8 atm	14 atm	+75 %
Pressure in cylinder I	1.8 atm	2.0 atm	+0.2 atm
Pressure in cylinder II	1.7 atm	2.0 atm	+0.3 atm

After the treatment the pressures in both cylinders became equal. Vibration and noise were assessed by the commission in words; the report contains no instrument readings for them.

Costs and savings as calculated in the report

ITEM	AMOUNT
Treatment with XADO technology performed, actually paid	1,107.32 BGN
Overhaul by conventional technology, plant estimate	1,500-2,000 BGN
Oil savings per 8 h shift	6.28 BGN
Oil savings per month	138.16 BGN
Oil savings per year	1,657.92 BGN

The economic section of the report was prepared by the distributor MAY OOD, which performed the treatment; the calculation rests on the measured reduction in oil consumption.

Conclusion of the plant commission

The commission of Agria AD — the chief power engineer, the chief mechanic and the compressor operator — recorded in the report that the treatment achieved: a reduction in the time to working pressure by **40 %**; a reduction in oil consumption through the lubricator by **50 %**; an increase in oil pressure by **75 %**; an increase in cylinder pressure by **10 %**; a considerable reduction in vibration and noise. The verbatim conclusion of the report: "the compressor runs better than those given an overhaul by conventional technology, and this was achieved in the course of operation, without teardown". The machine was neither opened up nor taken out of service: the treatment ran on the operating unit for two weeks and cost less than the plant had estimated for an overhaul of the same compressor.



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The results refer to the Borets 202VO4R20/8A reciprocating compressor with a capacity of 20 m³/min at the Agria AD site in Plovdiv; on other units and duty modes the figures may differ. The economic section of the report was prepared by the distributor MAY OOD, which performed the treatment. The original report with signatures and seals is published in full and available for download.