

TEST REPORTS · APRIL 2004 — MARCH 2005

Compressor EK-7V: the receiver fills faster, the shop came back for more

Severstal OJSC, Coke Chemical Production, coke oven shop of batteries 5-6 · approved by: V. E. Germanov, Deputy Head of the Coke Chemical Production for Maintenance
Cherepovets, Russia · test reports of April 2004 and March 2005

PRODUCT

XADO revitalizant gel
for compressors and bearings ·
9 ml into the oil system, without
disassembling the unit

TEST OBJECT

Compressor EK-7V
coke oven shop of batteries 5-6
· the unit was scheduled for
repair with replacement of the
cylinder-piston group

DOCUMENT TYPE

Two test reports
Severstal OJSC, Coke
Chemical Production
signed by the plant
commission, seal of the
production unit

TREATMENT	UNIT AND INSTALLATION SITE	CONDITION BEFORE TREATMENT	REPORT
First, 9 ml	Compressor EK-7V, coke oven shop of batteries 5-6	Receiver filling 10 min 23 s ; repair with CPG replacement scheduled	April 2004
Repeat, 9 ml	The same compressor EK-7V, coke oven shop of batteries 5-6	Receiver filling 11 min 34 s	March 2005

In both tests the check measurement was taken after {{200 hours}} of operation; the compressor was not taken out of service and was not disassembled.

Key result

↑ **19-32 %**

compressor output, receiver filling time 10 min 23 s and 11 min 34 s → 8 min 45 s

Filling the receiver with air — both treatments of the same compressor

TEST	BEFORE TREATMENT	AFTER 200 H OF OPERATION	OUTPUT
First, April 2004	10 min 23 s	8 min 45 s	+19 %
Repeat, March 2005	11 min 34 s	8 min 45 s	+32 %

Both treatments brought the compressor to one and the same filling time — **8 min 45 s**, even though before the repeat treatment the initial time was worse.

Scheduled repair and the compound applied

TEST	REPAIR WITH CPG REPLACEMENT	COMPOUND APPLIED
First, April 2004	18 950 RUB	380 RUB — 9 ml of gel
Repeat, March 2005	18 510 RUB	380 RUB — 9 ml of gel

The amounts are quoted from the reports in 2004–2005 prices; the scheduled repair was not carried out, the compressor remained in service.

Conclusions of the Coke Chemical Production reports

Compressor EK-7V of the coke oven shop of batteries 5-6 was scheduled for repair with replacement of the cylinder-piston group because of low output. After **9 ml** of XADO revitalizant gel had been added to the oil system and **200 hours** of operation, the receiver filling time dropped to **8 min 45 s**, the repair was not carried out and the compressor remained in service. Six months later the plant repeated the treatment of the same compressor and obtained the same result — **8 min 45 s**. The commission of the Coke Chemical Production recorded: «which indicates the positive effect of the revitalizant gel on the condition of the compressor», «the compressor is in service, the process personnel have no complaints», and, following the second test, concluded that «it is advisable to extend the use of XADO revitalizant gels to other equipment of the Coke Chemical Production as well».



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The results refer to the EK-7V reciprocating compressor of a coke chemical production unit with XADO revitalizant gel introduced into the oil system; on other equipment and under different operating conditions the figures may differ. The originals of both reports, with signatures and seals, are published in full and available for download.