

REPORT

On the technical results and cost-effectiveness of XADO-technology treatment of compressor "Borets", model 202BO4P20/8A, installed at AD "Agria", Plovdiv, Bulgaria, performed on 19 February through 5 March 2002

I. Specifications:

1. Baseline data:

- type of compressor:	202BO4P20/8A
- compressor capacity:	20 m ³ /min
- oil system volume:	70 liters
- electric motor parameters:	
voltage	380 V
power	132 kW
no-load current	70 A
load current	140 A
- time of achieving working pressure:	
prior to treatment	30 min
after treatment	18 min
- oil pressure:	
prior to treatment	0.8 atm
after treatment	1.4 atm
- pressure in cylinders:	
prior to treatment	Cylinder 1 – 1.8 atm Cylinder 2 – 1.7 atm
after treatment	Cylinder 1 – 2.0 atm Cylinder 2 – 2.0 atm
- oil consumption through lubricator:	
prior to treatment	12 liters – 24 hrs
after treatment	6 liters – 24 hours

2. Results of XADO-technology treatment:

- The time of achieving working pressure decreased by 40 %;
- Oil flow through the lubricator decreased by 50 %;
- Oil pressure increased by 75 %;
- Pressure increase in cylinders was 10 %; and
- Noise and vibration reduced significantly.

Hence, after XADO-treatment of the compressor in the standard operating regime, the compressor capacity increased by 40 %.

II. Cost-effectiveness of XADO-technology treatment:

1. Due to the difference in cost when repairing with the conventional technology as compared to XADO-technology reconditioning:
 - the cost of repairing the compressor with the conventional technology and achieving of specified parameters is 1,500 to 2,000 lev;
 - the cost of compressor renewal with the XADO-technology was 1,107.32 lev.

2. Due to the difference in electric power saving:
 - increasing the capacity by 40 % reduces electric power consumption by 20 %, which for 8 hours of operation saves 21.82 lev; in one month – 436.40 lev; and annually – 5,236.80 lev.

3. Due to reducing oil consumption through the lubricator:
 - reducing oil consumption through the lubricator by 50 % during 8 hours of operation saves 6.28 lev; in one month – 138.16 lev; and annually – 1,657.92 lev.

These data point to that the XADO-technology compressor treatment payback period is 315 hours of operation in all.

City of Plovdiv
6 March 2002

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