

## REPORT

On the results of XADO technology-based renewal of the gear box in the headstock of lathe 16K20 No. 420699.

In the period of 05.12 2002 to 18.02 2002, according to contract No. 4626 of 28.11.02, the specialists of CJSC "Krivbassrudprom" performed demonstration renewal of the gearbox in the headstock of lathe 16K20, inventory No. 420669, at RMTs-2 UGM KGGMK.

Prior to repair (the report of the pre-repair condition is appended), the condition of parts was as follows:

1. Gear teeth and the gear shaft on shafts I-V had a wear of 0.05 mm, dents and longitudinal notches with a depth of more than 0,05 mm. The thickness of the gears' body was as follows:
  - gear m = 4; shaft IV – 6.3 mm; gear shaft m = 3 to 4.7 mm; gear m3 on shaft V – 5.5 mm.
2. The no-load current was: phase A – 8,2 A; phase B – 8.2 A; and phase C – 9.4 A.

After operating for 300 hours, the following **positive results** were achieved:

1. The gears' working surfaces developed a strong cermet layer; the surface became smooth and polished; and micro cavities and scratches disappeared. A scribe with the hardness of HRS-63 left no marks on the tooth's involute surface. The thickness of the layer formed (approximately 0.03 to 0.05 mm) could not be measured.
2. The no-load current dropped by 5 to 10 % and was: phase A – 8.2 A; phase B – 7.8 A; and phase C – 8.5 A.

### For mechanical repair shop:

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