

## CONCLUSIONS

Thus, the study of the structure and mechanical properties of hard alloy WC + 20 (wt.%) Co, received an unconventional way in the temperature range of solid sintering shows:

- in the solid phase can be obtained almost without porous samples and keep smaller structures;

- mechanical properties of the samples obtained by sintering shock in the solid phase, have a high level, not inferior level properties of samples after sintering rarely phase and some properties (flexural strength) have higher values;

- solid Phase Sintering provides shock formation of strong interfacial boundary is very short (milliseconds) time compression, which is indirectly confirmed by the level of nearly all mechanical properties;

- investigation of the structure and mechanical properties of solid alloy WC+40 (wt.%) Co, received an unconventional way in the temperature range of solid phase sintering shows:

- based alloy containing tungsten carbide cobalt phase in 50 vol. % You can get virtually dense and strong boundaries at a temperature shock consolidation 1150 °C. You can still finer structure of the samples;

- mechanical properties of the samples obtained by sintering shock in the solid phase in the temperature range 1150-1250 °C, reaching a high level, not inferior level properties of samples after sintering rarely phase and some properties (flexural strength) have higher values;

- fine-grained WC-Co alloys with relatively high cobalt content and uniform distribution of carbide particles have higher performance and job destruction than coarse-grained alloys with lower content of cobalt.