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SILENCERS FOR FLOWBACK PISTOLS

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This paper presents the results of a research into the design and development of silencers for flowback pistols.

Practical experience in the use of pistols of this type equipped with silencers is generalized, and the available embodiments of silences and the features of their interior structure are considered.

The choice of the shape and location of baffles that form expansion chambers and govern the thermogasdynamic processes proceeding inside the silencer is substantiated.

At the Institute of Technical Mechanics of the National Academy of Sciences of Ukraine and the State Space Agency of Ukraine, a technology for making silencers from titanium and aluminum alloys has been developed. The silencers made by that technology compare well with their best foreign counterparts in their performance characteristics and outperform those produced by Research and Production Company Fort.

Flowback pistols with silencers are used by special units of law-enforcement agencies due to their design simplicity, ease of use, and relatively small mass and dimensions.

The results of firing range and shooting gallery full-scale tests of the silencers developed show that:

- in sound suppression efficiency, the silencers compare well with their best foreign counterparts and outperform the standard silencers of Research and Production Company Fort at comparable dimensions and mass,
- the silencers do not affect pistol automatics and sustain standard firing regimes,
- the silencers do not affect the shot grouping characteristics, and
- the silencers do not affect other performance characteristics either.

So the silencers for Fort or similar pistols developed at the Institute of Technical Mechanics of the National Academy of Sciences of Ukraine and the State Space Agency of Ukraine are efficient and reliable. The silencers were developed in close contact with representatives of the Ukrainian law-enforcement agencies with consideration for their requirements and feedback.

Keywords: *silencer, flowback pistol, baffle elements, shot sound intensity reduction.*

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