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Strength and destruction of flat ampoules during shock–wave tests OLEG DRENNOV, ANATOLY MIKHAILOV, ALEKSEY FEDOROV, RFNC-VNIIEF — Devices with nondestructive plane ampoules which permit testing specimens with volume up to 35 cm^3 under different conditions of explosive action with the intensity up to 100 GPa included are developed. Strength properties of ampoules made of different steels are evaluated under dynamic loading. These devices and ampoules are used for study of physical and chemical processes, which occur in substances under pulse effects of high strain rate, pressures and temperatures. The most promising materials are determined. Schemes are presented for flat recovery ampoule and loading devices required for providing the following loading conditions: 10 GPa $\leq$ P $\leq$ 100 GPa; 0.5 μs $\leq$ τ $\leq$ 5 μs. Peculiarities are described for application of the considered recovery ampoules:

- to test samples, which undergo volume reduction;
- to test fusible samples;
- to test samples when loading by oblique shock wave.

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