

Abstract Submitted  
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**Peculiarities of high-rate deformation of copper at convergence of cylindrical channels under effect of shock waves** OLGA IGNATOVA, VITALIY GLAZKOV, ANDREY MALYSHEV, SERGEY NADEZHIN, ALEKSEY PODURETS, VIKTOR RAEVSKY, OLGA TYUPANOVA, RFNC-VNIIEF — This work presents a new method for study of peculiarities of metal deformation at micro- and meso scale levels at strain rate of  $10^5$ - $10^7$ s<sup>-1</sup>. A copper liner loads test copper samples pressed into copper guide rings behind which one can find a substrate made of the same material. The loading parameters, such as the intensity  $SX$ , and the pulse duration  $t$  are specified by the liner's thickness and speed. Cylindrical holes of various diameters ( $D_0=0.5$ - $2$ mm) in the test samples are produced beforehand. Coarse-grain annealed copper M1 was chosen as the subject of the study. The loading parameters were chosen in such a way as to realize the decrease of the holes diameter and complete compaction in the recovered samples.

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