

Abstract Submitted  
for the SHOCK07 Meeting of  
The American Physical Society

**Updated Cask for Prevention against Possible Accidental Situations** ANDREY DRENNOV, RFNC-VNIIEF — Design of an updated cask for transportation of hazardous substances is suggested. This method allows us actually to exclude totally any risk at fragment – bullet effect from outside. Namely, internal cavity of a standard cask with hazardous substance is filled with fine-dispersed loose material. An individual part of this material has high strength. At low velocities of a fragment ( $W < 1.5\text{km/s}$ ), kinetic energy of this fragment is spared for heating and motion of microspheres. At average velocities ( $1.5\text{ km/s} \leq W \leq 1.85\text{ km/s}$ ), kinetic energy of a fragment is spared for heating, motion, and work for collapse of some microspheres. At high velocities ( $W > 2\text{ km/s}$ ), the effect of super deep penetration occurs. If to connect the coordinate system with a moving fragment, we will get a steel target and several echelons of microparticles moving towards this target with high velocity. Since there are a lot of particles, the effect of super deep penetration occurs many times. Fragment is consecutively fragmented to sizes corresponding to sizes of microspheres.

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Date submitted: 13 Feb 2007

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