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Experimental and Numerical Study SAMUIL BAKHRAKH, RFNC-VNIEF — Oblique collision of metal layers is accompanied with wave formation at interface, if certain conditions are fulfilled on values of collision angle and velocity of contact point motion. Kelvin-Helmholtz instability is growing at the interface. In some cases, the process of Kelvin-Helmholtz instability can influence negatively on work of various systems. So, experimental studies were performed for searching ways to suppress instability by covering the surface with special cover. It was obtained that aluminum cover causes elimination at interface of aluminum samples. Perturbation amplitude is up to 20 times reduced. Numerical simulation was performed by the finite difference technique using regular counting grid, and by the concentration method for description of strongly deformed interfaces. All calculations were performed with use of Euler (immovable) grid. To explain the stabilizing effect of the cover made of material (aluminum) the same as for colliding plates, the supposition was made on localization (narrowing) of the zone of intensive plastic strains. When a cover is used, its substance is involved in intensive flow, and contribution of the plates is reduced. As a result, deformation localization occurs.

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