Instability of an Interface Between Steel layers Acted Upon by an Oblique Shock Wave

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The calculations showed that perturbations develop only in the presence of a technological microgap of several micrometers between the metal layers. Unloading of the material behind the oblique shock front into the gap gives rise to considerable short–term velocity gradient ($t \lessgtr 0.2 \mu s; \Delta U \geq 3 \mu \text{mm}/\mu s$). Simultaneously, near the interface behind the wave front there is a short–term loss of strength of the material due to thermal softening and the heterogeneous nature of the deformation.