

Title (en)
USE OF METAL FOAMS IN ARMOR SYSTEMS

Title (de)
VERWENDUNG VON METALLSCHÄUMEN IN PANZERUNGSSYSTEMEN

Title (fr)
UTILISATION DE MOUSSES METALLIQUES DANS DES SYSTEMES DE BLINDAGE

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Application
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Abstract (en)
[origin: WO0055567A1] In a multi-layer armor system (10), useful for military vehicles, a metallic foam is provided as the shock energy-absorbing element. In a typical arrangement, the metallic foam shock-absorbing element (12) is sandwiched between a high strength strike plate (11) and a backing plate (13). Typically, the backing plate is a highly deforming metal, such a titanium, aluminum, or steel. However, the backing plate may comprise one or more layers of metal, ceramic or polymer-based composites. The high strength strike plate may be ceramic or metal. The shock-absorbing element is preferably a closed-cell metal foam with a high porosity that is effective in containing rearward deformation of the strike plate from a projectile strike. In preferred embodiment, the shock-absorbing element is an aluminum foam with a porosity of 80 percent by volume.

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