

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

Publication
EP 1078215 A1 20010228 (EN)

Application
EP 00937503 A 20000310

Priority
• US 0006220 W 20000310
• US 12356999 P 19990310

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.

IPC 1-7
F41H 5/04

IPC 8 full level
F41H 5/04 (2006.01)

CPC (source: EP)
F41H 5/0442 (2013.01)

Citation (search report)
See references of WO 0055567A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 0055567 A1 20000921; AT E256853 T1 20040115; DE 60007237 D1 20040129; DE 60007237 T2 20040527; EP 1078215 A1 20010228; EP 1078215 B1 20031217; ES 2213021 T3 20040816

DOCDB simple family (application)
US 0006220 W 20000310; AT 00937503 T 20000310; DE 60007237 T 20000310; EP 00937503 A 20000310; ES 00937503 T 20000310