

Title (en)
Ceramic pellets and composite armor panel containing the same

Title (de)
Keramisches Panzerelement für Panzerung

Title (fr)
Élément de blindage en céramique pour plaque de blindage

Publication
EP 1707913 B1 20080716 (EN)

Application
EP 06250310 A 20060120

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Abstract (en)
[origin: EP1707913A1] The invention provides a composite armor plate (61) for absorbing and dissipating kinetic energy from high velocity, armor-piercing projectiles, as well as from soft-nosed projectiles, the plate comprising a single internal layer of pellets (75) which are bound and retained in plate form by an elastic material, substantially internally within the elastic material, such that the pellets are bound in a plurality of rows and columns providing mutual lateral support, the pellets being made of ceramic material, wherein a majority of each of the pellets is substantially in contact with at least three adjacent pellets and at least a majority of the pellets are substantially cylindrical in shape with at least one convexly-curved end face (6,8), further characterized in that spaces formed between the adjacent cylindrical pellets are only partially filled with a material for preventing the flow of soft metal from impacting projectiles through the spaces, the flow-preventing material being in the form of an insert which is in contact with at most only one of the sides of three adjacent cylindrical pellets, or being integrally formed as part of a special insert pellet, the insert pellet being in the form of a cylinder provided with projections (10) extending only partially into the spaces formed between the sides of six adjacent cylindrical pellets, and blocking a major cross-sectional portion of the spaces, each of the projections being in spaced-apart relationship to at least one of the two adjacent cylinders towards which it projects, the pellets and the flow-preventing material being bound and retained in plate form by a solidified material, wherein the solidified material and the plate are elastic.

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Cited by
EP2202479A3; EP4170276A1; IT202100026858A1; EP2239534A3; EP2533006A3; EP2023072A1; US8893606B2; WO2009095903A1; WO2014075607A1

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