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NANO- AND/OR ULTRA-FINE GRAINED TIC-NiMO CERMETS IN ARMOUR APPLICATIONS

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It has long been accepted that ceramic materials can play an important part in ballistic protection. Their relatively low density, high hardness and compressive strength in comparison to other armour materials make them ideal candidates for applique armour systems [1].

Current presentation concentrates on the results of ballistic tests of TiC-NiMo cermets with Kevlar backing. The ballistic performance of the lightweight armour systems was examined to obtain an estimate for V50 and the global damage of the ceramic composite plates. All estimates were performed by varying the thickness of ceramic tiles, while maintaining equal areal density of the system. Trial results are demonstrated both in terms of deformation and damage of the laminates and ballistic performance.

References

1. P. J. Hazell. The Future Strategic Market Dynamics of Ceramic Armour Technology, *Defense Analysis*, **16**, (2000) 1, 53.