

FORMULATION OF CERAMIC TILES FOR BODY ARMOR

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Body armor is normally worn as a protective measure against powerful bullets. The composition of body armor is usually a trade secret. An investigation was undertaken to formulate a ceramic body for the manufacture of bullet proof ceramic tiles. The finished product was tested at the Katunayake Air Force Base firing range using a supper rifle with a 7.62 mm NATO bullet. The product which was a vest styled body armor was certified as on which offers maximum ballistic coverage.

The composition of various materials used was determined by using sophisticated instrumentation which included X-Ray diffraction techniques, Scanning Electron Microscopy and advanced firing techniques. Results revealed that the materials most suited for body armour manufacture includes high refractory and high shock resisting mineral raw materials.