

Nondestructive Testing of Composite Armours by IR Thermography Method

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Abstract:

The composite armour is preferred solution against military and paramilitary threats at present. It was rather aimed to reduce the weight of battle vehicles and provide a possibility of air-transport which is now not only a tactical requirement but also enables the transport of equipment to distant parts of the world at the realization of military missions. Regarding the above a process may be observed to replace thick monolithic steel armours by composite materials. The composite armours have to be resistant against impacts of fragments and bullets and also mines and grenades. Except visible external damage of composite armour very essential is its internal damage. In Military Institute of Armament Technology an active IR thermography nondestructive testing method was used to designate the delamination areas in composite armours. The results of these testing are presented in the paper.

Key words: nondestructive testing, IR thermography, composite armour