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Effect of structural factors on burning parameters of mixed energy materials

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Abstract

The results of studies of the effect of fillers (oxidizer, aluminum powders) on the burning parameters of composite energetic materials are presented. It has been shown that at a certain concentration of the components of composite energy materials, abrupt change is observed in the parameters of burning associated with the formation of coherent structures (percolation clusters) of the filler particles. Concentration limits for the formation of molten layer on the burning surface of nitrate materials, which determine the level of burning characteristics, have been revealed.