

Investigation of mechanical properties of thermal barrier coating by tested on a 4-point bending

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Abstract

We have presented a new approach to determine the residual stress and energy characteristics of the deformation capacity of thermal barrier coating. This approach consist in obtaining deformation hysteresis that is determined in the deformation elastic zone in the four-point static bending. We have introduced a concept of estimation of relaxation energy density in the elastic zone of deformation of thermal barrier coating.

Keywords

4-point bending test, Elastic properties, High temperature test, Thermal barrier coating