

THE DISTRIBUTION OF TEMPERATURE IN THE TILE INSULATING MATERIAL LI900 AT HYPERSONIC FLOW

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The paper presents the issue of aerodynamic heating and its effect on flying objects. In the second part a physical model of a protective layer has been presented along with data regarding the geometrical dimensions of the tested tile and the grid of finite elements. The further part of this work is a discussion related to the mathematical model used for the calculations. It also lists the thermal properties of the used materials. There are also presented the simplifications used for the determination of the flow of the heat flux in the protective layer. The results of the simulation pertain to the insulation of the protective layer, both damaged and undamaged. The actual parameters for the comparison of the here presented results with the ones provided in literature is the temperature on the surface of the insulating material.

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