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Title of presentation:
The roughness position influence on laminar aerofoil performance in transonic flow regime*

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Abstract:

The test with roughness application on laminar aerofoil have been conducted in the N-3 trisonic wind tunnel in Institute of Aviation. The main goal of tests was to investigate the influence of different transition positions between leading edge and shock wave position on laminar profile performance. As local roughness on upper model surface the the carborundum strip was applied. Investigation results shown that some of transition positions improves aerodynamic characteristic by reducing the drag coefficient value and decreasing shock wave unsteadiness onset in transonic regime.

*The research was conducted as a part of study of Transition Location Effect on Shock Wave Boundary Layer Interaction (TFAST project in 7th EU Framework Programme).