

Abstract Submitted
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On the Efficiency of Fluidic Oscillators for Aerofoil Performance Recovery¹ DIMA SARKOROV², AVRAHAM SEIFERT³, Tel Aviv University —
The paper describes a recent experiment in which the Suction and Oscillatory blowing (SaOB) actuator was used to control the flow on a thick, turbulent, trailing edge separating aerofoil. The Reynolds number range is 0.5 to 1.5 million. The experiment deals with performance recovery of a thick aerofoil in laminar and turbulent flow conditions. Performance was significantly degraded due to premature boundary layer separation. An array of 12 SaOB actuators was used to effectively restore lift and reduce drag. Overall system efficiency was increased in both turbulent and laminar flow conditions. The AFC outlets, located at 20% chord location were shown to supplement or even being capable of replacing a slat.

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