

Title (en)

MULTIPLE ELECTROMAGNETIC TILES FOR BOUNDARY LAYER CONTROL

Title (de)

MEHRFACH ELEKTROMAGNETISCHE FLIESEN FÜR GRENZSCHICHTKONTROLLE

Title (fr)

CARREAUX ELECTROMAGNETIQUES MULTIPLES POUR LA REGULATION D'UNE COUCHE LIMITE

Publication

EP 0706472 A1 19960417 (EN)

Application

EP 94923224 A 19940624

Priority

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Abstract (en)

[origin: CA2166067A1] The boundary layer of a fluid travelling in a mean-flow direction relative to a surface of a wall of a body is controlled by generating in the fluid a magnetic field B having flux lines along the surface of the wall and an electric current density J traversing the magnetic flux lines in the fluid to form a control region. The magnetic field B and the electric current density J create in the control region a force $J \times B$ that can stabilize or destabilize flow in the boundary layer. A plurality of such control regions can be arranged in a two-dimensional array (300) of control tiles that are actuated in a controlled, predetermined pattern at a critical frequency that provides boundary layer control over a given area.

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B64C 21/00

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