

Multidisciplinary Approach for a Commercial Transport Aircraft Rudder with Morphing Characteristics

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ABSTRACT

This study provides the multidisciplinary approach to develop a new commercial transport aircraft rudder. The commercial transport aircraft has got engines wing podded, and it is changing its conventional rudder configuration to a more aerodynamic efficient non-conventional morphing one.

The aerodynamic enhancement, the structural that enables morphing, the actuation system power considerations and finally the effect on the overall aircraft stability, are studied and the most relevant conclusions are indicated.