



# ARCAM

Improvement of the corrosion resistance  
of martensitic steels for structural aircraft parts

BUDGET

€2,105K

GRANTS  
OBTAINED

€1,511K

FUI 7 FUNDING

2008 - 2012

## THE PROJECT

The latest generations of steel structural aircraft parts are designed with high performance corrosion-resistant martensitic steels with the aim of eliminating the need for complex protection systems. However, although these steels live up to expectations in terms of mechanical properties, they remain perfectible in terms of their behaviour in certain corrosive environments. Moreover, the most effective processes currently available which give them their corrosion resistance all contain Cr VI, which is recognised as a CMR substance (carcinogenic, mutagenic or toxic to reproduction).

As regulations now require that replacement substances be found, ARCAM's objective is to explore "green" anti-corrosion treatments that can be used on these grades of steel, such as SOL-GEL coatings and heat treatments. The impact of these solutions on the mechanical properties is explored, as well as innovative prevention methods such as non-destructive testing of the corrosion level of parts in use.

**ViaMéca**  
French mechanical cluster



### PROJECT SPONSOR

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