Efficient ice protection Systems and simulation Techniques Of ice Release on propulsive systems

Fact Sheet

Project Information

STORM
Grant agreement ID: 605180
Status
Closed project
Start date
1 October 2013
End date
31 March 2017

Funded under
FP7-TRANSPORT
Overall budget
€ 5 945 298,80
EU contribution
€ 3 868 672

Coordinated by
SAFRAN AIRCRAFT ENGINES
France

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Objective
Icing conditions are one of the most severe for aircraft and engines as experienced in the certification process and in-service events. Certification tests are never simple because icing phenomena is a very complex domain and designers have access to a very low level of prediction capability compared to other fields, mainly relying on a very fragmented knowledge based on empirical past experience. With the development of next generations of engines and aircraft, there is a crucial need to better assess and predict icing aspects early in design phases and identify breakthrough technologies for ice protection systems compatible with future architectures.

The STORM project will provide new advanced simulation methodologies in three specific fields: ice release, ice accretion with runback aspects and ice trajectory applied for aero propulsive systems to improve the knowledge of engine components behaviour under icing conditions. STORM will also increase the maturity (TRL4) of the most promising innovative technology for ice protection by developing and testing against selected representative engine & nacelle components, including rotating features. In particular, a step forward in ice phobic coating is a major objective of the project. This research work will greatly contribute to improving cost efficiency for future engines and in developing a higher level of competitiveness in the field of ice protection systems (IPS).

STORM is a 3-year collaborative project comprising 14 research and industrial partners from 7 European countries.

STORM has been identified by the WEZARD CSA as a priority research theme within the European R&D roadmap on actions against hazard weather conditions. STORM is also supported by Engines Industries Management Group (EIMG) cluster.

Field of science

/ engineering and technology / materials engineering / coating and films
/ engineering and technology / mechanical engineering / vehicle engineering / aerospace engineering / aircraft

Programme(s)

Topic(s)

Call for proposal

FP7-AAT-2013-RTD-1

Funding Scheme

CP-FP - Small or medium-scale focused research project
Coordinator

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Private for-profit entities
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Last update: 16 January 2017
Record number: 109175

Permalink: https://cordis.europa.eu/project/id/605180/

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