Active Pressure, Position and Temperature sensors for Turboshaft engines

Fact Sheet

Project Information

ACTIPPTSENS

Grant agreement ID: 255909

Status
Closed project

Start date
1 April 2010

End date
31 August 2012

Funded under
FP7-JTI

Overall budget
€ 799 550,20

EU contribution
€ 599 658

Coordinated by
FUNDACION TECNALIA
RESEARCH & INNOVATION
Spain

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Objective
ActiPPTSens consortium will establish the technology benchmark on smart sensors for pressure, position and temperature measurement, based on the specification of NEWAC, DREAM and TEENI. Sensor technologies and their main features will be analysed and captured into a Sensors Technology Comparative Matrix, after the specification definition. The promising sensors technologies will be chosen for the prototype development. ActiPPTSens project have been structured as follow: Specification definition - The specification will be based on the public deliverable of project NEWAC, DREAM, VITAL and TEENI (new turboshaft concept) and TURBOMECA guideline as leader of the SAGE5 ITD; Benchmark of technologies - analysis of the existing technologies in the sensors field. Emerging or critical sensors technologies of several sector will be consider; and Prototype fabrication - Smart sensors prototypes of the selected technologies will be fabricated for their test in IDT SAGE 5 demonstrator. The initial technologies that the ActiPPTSens consortium considers as potential candidates for the prototype fabrication are: - Contactless Torque Sensor CTS, develop and patented by CEDRAT as technology was initiated for PSA. The CTS Contactless Torque Sensor measures the torque and the rotation speed of either a stationary axle or a rotating shaft without contact. - Piezoelectric MENS sensors, underdevelopment by INASMET-Tecnalia and ICV-CSIC. Piezoelectric sensors based on electrospun PZT nanofibers show higher pressure sensibility, longer life cycle, easy integration under structural elements and complex geometrical shape capability. - FBG devices, Fibre Bragg Grating technology with high embedding capability is under study for rotor blades or disks for the monitoring of aerial vehicles engine. The impact of the sensors technology to be develop in ActiPPTSens project would extend far beyond the consortium because of their impact in the cost saving and their transference to aerial vehicle.

Programme(s)

Topic(s)

Call for proposal

SP1-JTI-CS-2009-01

Funding Scheme

JTI-CS - Joint Technology Initiatives - Clean Sky

Coordinator
FUNDACION TECNALIA RESEARCH & INNOVATION

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Parque Cientifico Y Tecnologico De Gipuzkoa
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Activity type
Research Organisations

EU contribution
€ 272 498

Website
Contact the organisation

Administrative Contact
Nieves Murillo (Dr.)

Participants (3)

CEDRAT TECHNOLOGIES SA

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Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

EU contribution
€ 220 519

Website
Contact the organisation

Administrative Contact
Line Roux (Mr.)

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Activity type
Higher or Secondary Education Establishments

EU contribution
€ 45 941

Website
Contact the organisation

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Spain
EU contribution
€ 60 700

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