Integrated Intelligent Bearing Systems for UHPE Ground Test Demo (I²BS)

Fact Sheet

Project Information

UHPE

Grant agreement ID: 717174

DOI
10.3030/717174

Project closed

EC signature date
23 June 2016

Start date
1 July 2016

End date
30 June 2022

Funded under
SOCIETAL CHALLENGES - Smart, Green And Integrated Transport

Total cost
€ 1 846 060,00

EU contribution
€ 1 490 891,88

Coordinated by
SCHAEFFLER AEROSPACE GERMANY GMBH & CO KG
Germany

Objective

Smart Bearings for Ground Test Demo

The overall objective of the I²BS project is to develop innovative smart bearings for an Ultra High Propulsion Efficiency (UHPE) Ground Test Demonstrator that not only meet the demo specification but also provide significant safety improvement compared to existing standards. I²BS pursues an integrated approach comprising the development of sensor technologies, energy harvesting, wireless communication, data management and algorithms to monitor bearing behaviour in challenging operating conditions (e.g. high temperature, high speed and high thrust). As part of

the UHPE Demonstration Project, I²BS will design, develop, evaluate and test interchangeable smart bearings for the UHPE demonstrator. The bearing design will fulfil all requirements and safety standards for aerospace applications. The 'smart' bearings will be able to deliver, in real time, information on the bearing's main functional characteristics and health including temperature, axial & radial load, ball or roller or cage speed, lubrication quality, radial clearance and premise of failure on each part of the bearing.

Fields of science (EuroSciVoc)

engineering and technology > mechanical engineering > tribology > **lubrication**

engineering and technology > electrical engineering, electronic engineering, information engineering > electronic engineering > **signal processing**

engineering and technology > electrical engineering, electronic engineering, information engineering > electronic engineering > **sensors**

natural sciences > mathematics > pure mathematics > **geometry**

Programme(s)

H2020-EU.3.4. - SOCIETAL CHALLENGES - Smart, Green And Integrated Transport

MAIN PROGRAMME

H2020-EU.3.4.5.5. - ITD Engines

Topic(s)

JTI-CS2-2015-CFP02-ENG-01-02 - Conventional and Smart Bearings for Ground Test Demo

Call for proposal

H2020-CS2-CFP02-2015-01

See other projects for this call

Funding Scheme

CS2-IA - Innovation action

Coordinator

SCHAEFFLER AEROSPACE GERMANY GMBH & CO KG

Net EU contribution

€ 778 725,63

Total cost

€ 1 133 893,75

Address

GEORG SCHAFER STRASSE 30
97421 Schweinfurt
Germany

Region

Bayern > Unterfranken > Schweinfurt, Kreisfreie Stadt

Activity type

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

Links

Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Participants (1)

UNIVERSITY OF SOUTHAMPTON

United Kingdom

Net EU contribution

€ 712 166,25

Address

Highfield
SO17 1BJ Southampton

Region

South East (England) > Hampshire and Isle of Wight > Southampton

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Total cost

€ 712 166,25

Last update: 6 September 2024

Permalink: https://cordis.europa.eu/project/id/717174