

PROJECT

FAST TAPS

Cooled Fast-Response Wall Pressure Taps for Combustion Chamber Measurements

Funding: European (Horizon 2020)

Duration: Nov 2018 - May 2021

Status: Complete

Total project cost: €297,566

EU contribution: €297,533



Call for proposal: H2020-CS2-CFP07-2017-02

[CORDIS RCN : 218314](#)

Objectives:

FAST TAPS aims at designing, validating and put in operation 8 cooled fast-response wall pressure taps for combustion chamber measurements.

The project is based upon a three steps approach, the three technical work packages of the project, with two distinct iterative design and validation loops.

In the first step, the measurement devices will be designed according to the desired measurement performance (i.e. the required bandwidth), the environmental conditions (high-temperature and high-pressure flow) and the structural and mechanical constraints. The design candidates will undergo an internal experimental and numerical validation process prior to the submission to the topic leader.

In the second step, prototypes will be built according to the final design candidate and tested in engine-representative conditions. The analysis of the results will either provide the final approval for the machining of the final measurement devices or highlight some modifications to be further implemented.

The third step deals with the final manufacturing of the cooled fast-response wall pressure taps and their qualification tests (static and dynamic calibrations).

From a scientific point of view, FAST TAPS targets the definition of a new, complete and robust design methodology for fast-response pressure probes. Such knowledge is doomed to be made available to the scientific community through the FAST TAPS dissemination activities.

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Other programmes: JTI-CS2-2017-CfP07-ENG-01-31 Unsteady pressure sensor for high pressure and hot environment

Lead Organisation:

Institut Von Karman De Dynamique Des Fluides

Address:

Chaussee De Waterloo 72
1640 Rhode Saint Genese
Belgium

EU Contribution: €297,533

Technologies:

Alternative fuels

Combustion chamber for diesel/ethanol blend characterisation

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Multimodal transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Other specified

Geo-spatial type: Other