# Press release

## Sensors to improve aeronautical safety

- *Tekniker is the leader of the European FluidER project in which other companies such as Safran Landing Systems and Element Sevilla are also involved*
- *Within the scope of this project, the aim is to develop sensors that can provide real-time condition monitoring for hydraulic fluids and electrohydraulic actuators used on planes to enhance safety and efficiency*

(Eibar, 13 Febreruary 2020).- The Tekniker technology centre is a member of the Basque Research and Technology Alliance (BRTA) and is currently leading a European project called FluidER which is an initiative focused on developing smart sensors capable of providing real-time condition monitoring for electrohydraulic actuators and fluids in the aviation sector.

The ultimate goal of this project is **to improve safety and optimise maintenance costs in the aeronautical sector**. In order to achieve this objective, Tekniker is working in this project together with Safran Landing Systems, a company specialised in manufacturing actuators and brakes for the aeronautical sector and a laboratory called Element Seville to develop a fully integrated and autonomous sensoring system that is able to perform on-line diagnoses for fluids used by aviation actuators.

Consequently, Tekniker intends to combine sensors that can measure the physical and chemical parameters of hydraulic fluids, as well as their viscosity, humidity, temperature, etc. Additional efforts are underway to detect particles, air or water by using pollution-sensitive sensors.

**Smart maintenance**

In order to trigger early alerts for signs of degradation before a hydraulic fluid surpasses its service limits, the approach used for a diagnosis of this kind is based on combining sensors that can measure the physical and chemical parameters of hydraulic fluids as well as sensors that can assess the degree of fluid pollution.

In addition to playing a leading role in this initiative, Tekniker is also responsible for developing a test bench for degraded fluids in a controlled environment to verify the capabilities of the sensors currently available on the market. By combining the best performing sensors it will eventually be possible to use artificial intelligence techniques to develop an algorithm that will provide real-time and on-line condition monitoring for fluids and actuators.

Safran Landing Systems, on the other hand, will contribute in-house expertise on its range of actuators, how they operate, their degradation, etc. and Element Sevilla will run all the trials involving sensors at their facilities to simulate real operating conditions.

Consequently, it will be possible to apply any knowledge resulting from of fluids to other sectors such as the energy business in an attempt to improve safety and reduce costs.

**Concerning Tekniker**

With nearly 40 years of experience in the field of applied research and knowledge transfer, Tekniker has achieved a high degree of specialisation in four major areas (Advanced manufacturing, surface engineering, product engineering and ICTs) and can now make available its cutting-edge technology to customers to meet their needs. The technology centre is a member of the Basque Research and Technology Alliance (BRTA).

**Further information**

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Tekniker | Itziar Cenoz
Itziar.cenoz@tekniker.es | Tel. 943 256 929
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GUK | Ane Roteta
ane@guk.es | Tel. 690 212 067
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