

PRESS RELEASE

Non-destructive testing to boost competitiveness in European industry

- The IK4-IDEKO technology centre has a prominent presence at the 14th National Congress for Non-destructive Testing (NDT), which starts today at the Europa Conference Centre in Vitoria.
- In addition to sponsoring the event and forming part of the organising committee, the research entity is giving three technical presentations on the application of these inspection techniques in the manufacture of industrial parts.

Elgoibar, 12 June 2019.- Non-destructive testing (NDT) technologies make up a discipline that is increasingly important for boosting Advanced Manufacturing in Europe, as they allow the state and quality of parts to be verified without causing surface or structural damage. With the aim of looking further into the latest scientific advances applied to this field, the [IK4-IDEKO](#) technology centre is taking part in the 14th National Congress for NDT, an event that starts today in the Europa Conference Centre in Vitoria.

The research entity sponsors and forms part of the organising committee of the conference, which will go on till next Friday. The technology centre will also give three presentations that will cover the non-destructive inspection techniques applied in different fields such as machining through the use of robotic solutions and the railway sector.

Specifically, the person responsible for NDT at IK4-IDEKO, Ivan Castro, will be giving a presentation on the new non-destructive inspection strategies aimed at the railway sector.

In this regard, the expert will show how the use of advanced NDT techniques contributes to ensuring the absence of defects in key components and the compliance of strict safety requirements in the sector.

"Currently, the most common methods in the railway sector are conventional ultrasonic inspection (UT) and magnetic particle inspection (MT) for detecting volumetric and surface defects respectively. In our presentation, we will propose new strategies for carrying out non-destructive inspections both on axles and on wheels in the railway sector", added Castro.

Furthermore, in his talk, Castro will describe the development of new simulation models on CIVA for designing new approaches that increase the probability of detection (POD) and the reliability of the inspections, as well as the new ultrasonic inspection system concepts for the inspection of components in the railway sector.

For her part, the researcher Iratxe Aizpurua, a member of the same work team, will share a study on intelligent ultrasonic inspection using robots. The engineer, a specialist in materials, will present an intelligent automated inspection case aimed at industrial sectors that demand a high-quality level for their components and their maintenance.

"The inspection system that we are presenting has been configured for inspecting and recording results automatically. Once the results are recorded, algorithms are used to optimise the inspection procedure and control the manufacturing parameters for continuous learning", said Aizpurua.

Finally, the researcher José Luis Lanzagorta will present research that considers an intelligent inspection system for Zero Defect Advanced Manufacturing.

This presentation takes place within the framework of our R&D&I project called CONAN, in which IK4-IDEKO is taking part together with top Basque companies and entities, who are seeking to deploy new tools to achieve excellence in production within the Zero Defect Manufacturing paradigm.

Within its non-destructive testing specialisation, the technology centre has an advanced measurement system laboratory, which is a major boost in its positioning as a benchmark in Advanced Manufacturing.

A discipline with a future in Europe

Non-destructive testing is becoming increasingly important due to several factors, among which are the [European Union](#) directives that demand industrial products comply with a series of requirements.

This new NDT Congress event, promoted by the Spanish Non-destructive Testing Association (AEND), will disseminate the latest scientific advances in this field, as well as their practical applications in fields such as industry 4.0, process simulation and modelling.

"NDT is a tool that allows us to reduce risks, increase production efficiency and to respond quickly and safely to new European Union demands, which require industrial products to comply with a series of very demanding requirements", added Castro.

On this occasion, the AEND has entrusted the organisation of the Congress to the organisation's North Committee, which consists of Cantabria, the Basque country and Navarra, territories in which the implementation of these technologies is very advanced, especially in fields such as the manufacture of metal and non-metal components intended for the automotive, aeronautics, oil, railway and wind generation sectors.

In addition to plenary sessions and round tables, the Congress will have a large exhibition area where the firms can display their developments.