

Press release

The ISEM 2018 conference held in Bilbao has addressed the most recent developments related to electrochemical machining

- ▶▶ *The IK4-TEKNIKER technology centre organises the last edition of the conference held on 23 - 27 April at the UPV/EHU auditorium*
- ▶▶ *With a programme featuring more than 100 technical presentations, the event has allowed knowledge to be exchanged in fields such as electrochemical machining, additive manufacturing or ultrasounds*

(Eibar, Basque Country. 27 April, 2018).- European industry is currently facing challenges with regard to how it can guarantee its competitiveness in a globalised context. This scenario requires that new manufacturing processes featuring state-of-the-art know-how be developed to allow the sector to occupy a leading position in terms of technology.

Hence, the growing relevance of a number of disciplines such as electrochemical or electro-erosion machining, additive manufacturing, electro-deposition or ultrasounds.

These fields of knowledge were covered by leading international experts in the areas of cutting-edge electro-mechanics and machining processes in the course of the 19th edition of ISEM 2018 (the Conference on Electro Physical and Chemical Machining), organised by [IK4-TEKNIKER](#), the Basque technology centre, in collaboration with the [UPV/EHU](#).

This year's conference took place from April 23-27 at the UPV/EHU auditorium (Bizkaia Aretoa) with more than 200 participants mainly from European and Asian countries. Discussions focused on the most recent trends and technologically advanced solutions currently available in the field of electroerosion and electrochemical machining.

The programme featured more than 100 technical presentations given by leading experts specialised in developing and applying cutting-edge technologies related to electrophysical and electrochemical machining. Some of the speakers were, among many others, Dr Xabier

MAIDAGAN chairman of the conference, Professor Masanori Kunieda (University of Tokyo, Department of Precision Engineering) or professor Luis Norberto López De Lacalle (UPV/EHU).

As far as IK4-TEKNIKER's participation is concerned, in-house researchers Manu Goigana, Joseba Pujana and Iker Garmendia explained electric ultrasonic-assisted discharge machining, height control during laser metal deposition and a study covering geometric constraints associated with the production of metallic by means of laser welding (LMD).

On April 24, technology centre experts gave a paper called "Ultrasonic-assisted electrical discharge machining for high aspect ratio blind holes", a case study addressing how ultrasonic vibration can be used to improve machining time.

On the following day, Wednesday April 25, the technology centre shared its expertise in the field of laser cladding technology used to build 3D geometries in steel with a presentation entitled "A Study of the geometrical limitations associated to metallic part manufacturing by the LMD process".

On that same day, IK4-TEKNIKER gave another presentation describing "In-process height control during laser metal deposition based on structures light 3D scanning" that explained a number of geometric control methods applied to additive manufacturing featuring direct metal deposition.

In closing the conference, participants will be invited to visit the IK4-TEKNIKER facilities today in Eibar and the Centre for Advanced Aeronautical Manufacturing at the Technology Park in Zamudio.

The next edition, to be held in Zurich (Switzerland), was presented during the conference by its host Professor Dr.-Ing Konrad Wegener (Head of the Institute for Machine Tools Manufacturing) at ETH Zurich.

The ISEM conference, initially classified as an "International Symposium on Electromechanics" was born in 1960 to strengthen ties between companies, bodies and academic experts specialised in advanced machining processes. Since 2013, this event has been alongside the International Academy of Production Engineering (CIRP), one of the world's most important forums in the field of Advanced Manufacturing research activities.

It was 15 years ago when the previous edition of this conference was held in the city of Bilbao.

Concerning IK4-TEKNIKER

With more than 35 years of experience in applied technology research that has been transferred to companies, IK4-TEKNIKER has achieved a high degree of specialisation in four major areas (Advanced Manufacturing, Surface Engineering, Product Engineering and ICTs). This means that its cutting edge know-how has been made available to customers to meet their requirements.

Further information

////////////////////////////////////

IK4-TEKNIKER | Itziar Cenoz

Itziar.cenoz@tekniker.es | Tel. (34) 943 256 929

////////////////////////////////////

GUK | Eider Lazkano

eider@guk.es | Tel. (34) 620 807 344

////////////////////////////////////