

Press release

Challenges posed by Industry 4.0 and the latest developments in the field of high-speed machining are debated in San Sebastian

- ▶▶ *The Kursaal Conference Centre in San Sebastian has provided the venue for the 14th edition of HSM 2018, the International Conference on High-Speed Machining.*
- ▶▶ *The event, jointly organised by the Basque technology centres IK4-TEKNIKER and IK4-IDEKO, has featured outstanding experts dealing with industrial manufacturing processes*
- ▶▶ *It must also be stressed that IK4-TEKNIKER played an outstanding role with regard to the programme of technical presentations*

(Eibar, Basque Country. 19 April, 2018).- Leading industrial experts covered a number of challenges connected to industry 4.0 and future manufacturing practices during the 14th edition of HSM 2018, the International Conference on High-Speed Machining. The end result was an exchange of knowledge on new manufacturing techniques and details on how to implement them easily at production facilities.

The event, held on the 17th and 18th of this month at the Kursaal Conference Centre in San Sebastian, was jointly organised by the Basque technology centres [IK4-TEKNIKER](#) and [IK4-IDEKO](#) and brought together more than 150 participants from America, Asia and Europe.

Under the slogan “Productivity, Quality and Digitisation”, the forum addressed issues such as the impact of industry 4.0 on cutting systems, new technologies for high-performance and ultra-precision machining, optimisation of manufacturing processes, machine tool dynamics and monitoring, active damping and chatter prevention mechanisms, among other subjects.

The conference also covered disciplines such as stock removal using advanced tools, the application of IoT to machining processes and the implementation of cyber-physical systems.

During the sessions, a number of recent developments connected to the machining of advanced materials and sustainable processes such as eco-lubrication, cryogenic and dry machining were also addressed.

The opening ceremony was attended by the deputy regional minister for Technology, Innovation and Competitiveness of the Basque Government, ms Estíbaliz Hernáez and by the director for International business at AFM, Advanced Manufacturing Technologies, Mr Mikel Artola Both were joined on the panel by the IK4-TEKNIKER Market Manager, Mr Luis Uriarte and the person in charge of the Dynamics and Control research group at IK4-IDEKO, Mr Jokin Muñoa and members of the International Academy of Production Engineering (CIRP).

The extensive programme of technical lectures and discussions at HSM 2018 featured outstanding specialists in machining such as the director of the Institute of Production Management, Technology and Machine Tools from the Technical University of Darmstadt, Mr Eberhard Abele and the member of the board of the SYMG-Shenyang Machine Tool group, Mr Ömer Sahin Ganiyusufologlu.

The IK4-TEKNIKER presentations

IK4-TEKNIKER played an outstanding role in the programme of technical presentations. During the first day of the event, one of the presentations addressed “A methodology for the design of chip breakers for PCD tools based on FEM”, to explain new systems used to design chip breaking technologies based on the finite element method (MEF) focused on polycrystalline diamond tools (PCD).

On day two, the technology centre addressed several recent developments explaining how IoT technologies and cyber-physical systems are applied to machine tools in a paper entitled “Machine Tool: From the Digital-Twin to the Cyber-Physical System”.

This presentation was followed by another one called “High Speed Spindles: current status and trends” that addressed the vision and services offered by the manufacturer of components Goialde High Speed to the high-speed head sector and details on the work currently underway with IK4-TEKNIKER to further competitiveness in this field.

The last IK4-TEKNIKER lecture dealt with research actions focused on the machining of advanced materials, especially nickel-based alloys and hardened steel for use in sectors such as industry, transport, power generation or biomedicine. under the title “Development of a cryogenic machining device for milling operations.

The HSM Conference was born in 1990 with the goal of sharing knowledge and experiences connected to high-speed machining. Over the years, the event has become a major international conference that has brought about a greater exchange of knowledge related to technologies applied to advanced manufacturing.

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

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