Intelligent process control – launch of European technology project DISIRE

DISIRE-Distributed In-Situ Sensors Integrated into Raw Material and Energy Feedstock

The European technology project DISIRE aims to set new standards in energy efficiency for chemical, steel and mineral processing and for combustion processes.

The EU project “Distributed In-Situ Sensors Integrated into Raw Material and Energy Feedstock” (DISIRE) was officially launched in Brussels on January 28th, 2015. Top researchers and world leading industrial players involved in DISIRE will develop robust, yet miniaturized in-situ PAT sensors over the next 36 months. These process analysis technologies will provide real-time insights into dynamic processes. DISIRE researchers now intend to integrate the sensors in miniature into raw material flows. The acquired in-situ data will be compiled in a cloud for analysis, making it possible to control processes in real time to reduce energy consumption and increase process efficiency. This goes some way towards making the concept of “intelligent raw materials” a reality and opens up new possibilities for commercial applications in the chemical, steel and mineral processing industries.

Partners: ABB AG, Research Center for Energy Resources, Fraunhofer CIC – ITF, Fraunhofer Center for Sustained Competitiveness, Sweden, Spain, Italy, Germany, Poland

Duration: 36 months

The “Business Models: Engineering and Innovation” Unit of the Leipzig Fraunhofer Center for International Management and Knowledge Economy has been working on a research-based business model to promote electric mobility in Leipzig. In the frame of the strategic collaboration with the German Federal Ministry for Education and Research (BMBF), an electric vehicle charging infrastructure has been developed in Leipzig, based on using street lights fitted with charging units. Researchers from the Fraunhofer Center for International Management and Knowledge Economy carried out a study in this area, using the Delphi method to obtain opinions from experts in successive written surveys to identify a consensus. About 80 interviews with experts revealed trends and scenarios that were validated by the project team and further developed into a business model for Stadtwerke Leipzig (public utility). In the future, this local energy provider is set to offer a conductive, that is, cable-based, charging service for electric cars at city center street lights in Leipzig. The “Business Models: Engineering and Innovation” Unit of the Leipzig Fraunhofer Center will continue its research-based support of Stadtwerke Leipzig during the implementation of the developed business model.

Duration: 3 years

Light source for the streets, energy supply for electric vehicles: The street lights in Leipzig city center offer a good alternative for drivers of electric vehicles when it comes to charging their batteries. From street light straight to your car - research has been carried out into a business model that expands the urban energy supply and promotes electric mobility in Leipzig.

Urban dwellers with electric cars often have no parking space of their own where they can charge their vehicle. In Leipzig, street lights may soon provide the solution. Under the German government’s electromobility showcase program, a viable business model for a public electric-vehicle charging infrastructure is to be developed in Leipzig, based on using street lights fitted with charging units. Researchers from the Fraunhofer Center for International Management and Knowledge Economy carried out a study in this area, using the Delphi method to obtain opinions from experts in successive written surveys to identify a consensus. About 80 interviews with experts revealed trends and scenarios that were validated by the project team and further developed into a business model for Stadtwerke Leipzig (public utility). In the future, this local energy provider is set to offer a conductive, that is, cable-based, charging service for electric cars at city center street lights in Leipzig.

Duration: 11/2015 – 12/2016


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