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Impact Study - Ceramicx - TCD

Infrared heat work research at Trinity College Dublin leads to licensing of software and know-how to Cork SME

Cork-based heat processing specialist Ceramicx developed the Herschel, a world-first infrared energy mapping machine using software and know-how licensed from Trinity.

The Herschel is now being used extensively by Ceramicx in the design of its products, components and infrared systems engineering recommendations supplied to process and packaging companies worldwide.

"The Herschel has given Ceramicx a stronger research capability, which in turn gives confidence to our customers. We can present reports on the materials they present to us for testing that subsequently lead to them purchasing equipment, components and machinery from us," said Cathal Wilson, director of Ceramicx.

"With increasing numbers of our customers in the thermoforming industry reassessing their heat technology and production efficiency, we wanted to develop a scientific method for rapidly measuring the intensity and distribution of infrared heat required for particular processes," said Wilson.

The exclusive licence arose from a research project with heat transfer expert Tony Robinson, Associate Professor in the Department of Mechanical and Manufacturing Engineering in Trinity's School of Engineering, supported by Innovation Partnership funding from Enterprise Ireland.

The success of the Herschel project has led to a second Innovation Partnership Programme between Ceramicx and Trinity's School of Engineering, led by principal investigator Dr. Garret O'Donnell, which is focused on improving the product test and validation system for the Ceramicx infrared heating elements.

"The Herschel and the knowledge transferred to us have facilitated a lot of testing work which leads to larger industrial clients showing up at our door. We can advise which types of ovens to use and in which configurations to yield the best energy savings and productivity."

Ceramicx' turnover has grown 15 per cent per year on average over the past five years and is on target to achieve the same by the end of 2015. Its staff numbers have grown from 26 in 2009 to 63 people by September 2015.

"Not only was there technology transfer, but there was a transfer of knowledge and skills through people as well," said Dr. McMullin. "Trinity researcher Dr. Gerard McGranaghan joined Ceramicx in August 2013 as their senior development manager."

For more information on Ceramicx, see http://www.ceramicx.com/

For more information on the School of Engineering at TCD, see https://www.tcd.ie/Engineering/