

## ***Sensor Coating Systems Ltd. finalist at major spin-out award ceremony at the European Parliament***

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Sensor Coating Systems (SCS) achieved international recognition after being nominated as a finalist for the Academic Enterprise Awards (ACES). The 5th ACES conference took place on 4 June 2013 in the European Parliament. After a day-long conference celebrating and debating entrepreneurship and innovation in European universities, the winners of this year's Academic Enterprise Awards (ACES) were announced during an award ceremony opened by Jerzy Buzek, Member and Former President of the European Parliament and former Prime Minister of Poland.

The award ceremony was preceded by a month-long selection process involving the 100 best spin-out companies in Europe. The jury, consisting of a mix of representatives of global companies such as GE, SKF, BP and Microsoft as well as from business schools such as INSEAD, Alto university, ESADE and Imperial College, decided on a shortlist of two companies in the category 'Materials and Chemicals': Sensor Coating Systems and ABEO, a Danish concrete company, both being invited to travel to the European Parliament to present their businesses. Sensor Coatings Systems eventually achieved the runners-up spot.

Sensor Coating Systems is a leader in temperature detection in harsh industrial environments. For the development of its core sensing technology, a Thermal History Coating (THC) the company successfully launched a development club with four US and European OEMs in the aero engine and industrial gas turbine sectors. The User Club's objective is to generically develop the technology in a way that it can be applied in modern engine development programmes to significantly lower development costs and accelerate the introduction of new low-emission engines.

In parallel SCS also develops a water-based temperature memory paint for low temperature applications and a self-healing thermal barrier coating for high temperature exposures.

### **Advantages of the THC**

The THC will replace current industry standard thermal paints and offers very significant advantages to companies engaged in the development of aero engines and industrial gas turbines. The technology is robust and non-destructive, thereby enabling multiple tests of components used in the development process without the time and cost penalties of repeatedly dismantling the engine for analysis. A hand held reader is also being developed as part of the system and the assessment of test results will no longer rely on subjective judgement by development engineers. With greater accuracy in the judgement of test results added to very significant savings in costs and development timescales SCS is confident that its new technology will bring great benefits to all who use it.

SCS' THC, originally developed by a team at Imperial College, London, is based on the light emitting properties of a class of ceramic materials, which, when exposed to particular levels of temperature, undergo irreversible changes in the material structure or chemistry. When excited with a probing light the material starts to phosphoresce and this can be observed with specialised optical components to establish a correlation between the observed light and the past temperature. The ceramic material can be applied as a robust coating onto a component using standard manufacturing techniques such as atmospheric air plasma spraying (APS), or, for low temperature regimes, as a paint giving the end-user great flexibility over the coating application. The readout device can be bench based or hand held, the latter enabling in-situ temperature profiling on a component. Unlike existing solutions in the market, the reading of temperature does not require human subjectivity.

Dr Jörg Feist, managing director, comments: 'Being a finalist at the ACES 2013 is a great achievement for the SCS team. The jury looked for both technology transfer and global business potential and ranked us top two in Europe.'

### **About Sensor Coating Systems**

Sensor Coating Systems Ltd. (SCS) spun out of Southside Thermal Sciences ([www.stscience.com](http://www.stscience.com)) in 2012. SCS pioneers sensor technology based on luminescence materials for engineering applications in demanding environments. Its award winning technology enables accurate temperature detection, corrosion and erosion monitoring and life-time predictions and, in doing so, assists in optimising the operation of machinery, lowering

fuel costs and maintaining material integrity. The main industrial sectors for application are the power generation industry, aero engines, automotive and machinery operating in extreme environments such as oil & gas and petrochemical plants.

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