

Press release, 11th November 2011

Sensor Coating System shortlisted for Technology & Innovation Award 2011

Now in its fifth year, this prestigious 'Technology and Innovation' awards scheme is run by The Engineer, the leading magazine and website, in conjunction with main sponsor BAE Systems. This year's competition will address the full breadth of the UK's technology landscape and reward outstanding examples of collaboration.

Among a shortlist of three major projects in the aerospace category is the collaborative project '**Sensor Coating System - SeCSy**' led by Southside Thermal Sciences (STS) – an Imperial College spin-out – in collaboration with RWE npower, Land Instruments and Cranfield University. This truly novel sensor system combines the advances observed in the development of today's high temperature protective coatings with the luminescence properties of materials used in TV screens or in energy efficient light bulbs. When illuminating the coating with light it starts phosphorescing and this phosphorescence can be used both to read temperature and detect evidence of ageing in the coating. This in return can provide valuable information on the operating conditions of the engine, allowing it to run at optimum levels and hence reducing maintenance costs and increasing fuel efficiency.

The successful completion of this 2 year project in 2011 marks a major milestone in the development history of the technology, which started in 2002 with the formation of STS. Sub-components of the technology were gradually developed through intense but steady collaborative research with UK, European and US partners.

During that time the technology received endorsement through several funding agencies such as The Carbon Trust, the DTI and the European Commission. The current SeCSy consortium successfully implemented all sub-components into a system on a Rolls-Royce VIPER jet engine owned by STS to measure precise temperatures while the engine was operating. The VIPER was specifically modified to enable optical access and allow a direct view into the engine. The work was co-financed through the Technology Strategy Board (TSB).

STS has released a video on YouTube ('*STSciences's channel*') including an animation showing a demonstration of the novel temperature measurement system in a live environment. http://www.youtube.com/profile?user=STSciences#p/a/u/1/_jLWNkYYr8U

Dr Jörg Feist, Managing Director at STS says: '*STS and its development partners feel extremely honoured to be shortlisted alongside some of the most reputed engineering organisations in the world. It demonstrates that what we have achieved is recognised as being truly innovative in nature and of high commercial relevance.*'

More recently, STS discovered that past temperature exposure can be ascertained when the component is back to room temperature. The new '**Thermal History Coating**' is now the subject of an international development programme and development partners are currently being gathered. For more information go to www.stscience.com and click on '**Thermal History Coating User Club**'.