

Title:

SCS successfully continues working with the Advanced Propulsion Centre on developing thermal mapping technology for the automotive industry

Sensor Coating Systems advances to Phase 4 of the Technology Developer Accelerator Programme (TDAP) administered by the Advanced Propulsion Centre (APC). This programme aims at reducing carbon emissions in the UK by supporting emerging technologies and innovations in the automotive industry.

SCS's enabling technology will assist in the development of new more efficient component designs. The technology will provide thermal maps of component surfaces in the hot sections of engines and the entire power train such as turbochargers or catalysts. SCS uses paints or robust coatings with temperature memory capability reaching from 150°C to 1400°C.

After applying the technology in the power generation and jet engine sector the TDAP programme will provide technology awareness and focus for the automotive sector. SCS has worked with experts in the field to develop a better understanding and a business plan for automotive looking into R&D, motorsport and electrification as application areas.

The current TDAP project started in early 2018 and consists of four stages. The introductory phase is followed by the "concept evaluation" in which Thermal History Technology's viability has been thoroughly assessed and then approved. Going onto Phase 3, the company has set out the future business plan including, potential customers competitors and applications for ease the market entry, as well as opportunities for potential supply chain which have been positively evaluated by APC. SCS's Thermal History Technology is now in Phase 4, the last stage of the programme, where the potential benefits for the UK's economy will be assessed. An important step in this phase is the performance test, in which the Thermal History Technology will be applied and tested on a physical prototype. SCS has successfully attracted a major OEM and a large European tier 1 supplier for the implementation and testing in phase 4.

The APC funding will do both helping the development of the Thermal History Technology and assisting its commercialisation in the automotive industry.

Dr Jörg Feist, Managing Director at SCS stated: "After going through several Gateway presentations earlier this year, we are very pleased to be accepted to phase 4 of the TDAP programme. The APC enables us to work successfully with experts in the field and quickly focus on the key application areas and issues for initial commercialisation."

Jon Beasley, APC UK, Director of Technology & Projects, commented: *"The APC has been established to help turn low carbon propulsion technology into products developed in the UK. We are pleased to be continuing support SCS through the next phase of the Technology Developer Accelerator Programme"*

About Sensor Coating System Limited

Sensor Coating System Limited (SCS) spun out of Southside Thermal Sciences an Imperial College London spin-out and is privately funded. SCS pioneers sensor technology based on luminescence materials for engineering applications in demanding environments. Its award-winning technology (British Engineering Excellence Award, Royal Society of Chemistry, American Society of Mechanical Engineers) enables accurate temperature detection, corrosion and erosion monitoring and lifetime predictions and, in doing so, assists in optimising the operation of machinery, lowering fuel costs and maintaining material integrity. SCS relocated from Imperial College to Dagenham, London, in 2016. The larger facilities support the company's growth in production and development, making SCS more capable in catering to the aerospace industry's needs, a success as the company has attracted large clients from this sector which can be observed in SCS' case studies.

About Thermal History Technology

The Thermal History Technology is a unique luminescence-based sensing technology which enables engineers to record past temperatures on inaccessible components. The temperature measurement capability reaches from around 150°C to 1,400°C. This makes the technology very useful for the evaluation and design of mission-critical components in harsh environments such as a gas turbine or internal combustion engines.

The materials used in the Thermal History Technology have innate luminescence which permanently changes due to thermal exposure, allowing the temperature to be measured by non-destructive excitation and detection of the luminescence light. The measurement device can be scanned across the surface to produce an accurate thermal profile of the surface. The materials are deposited using techniques pioneered for the most challenging applications and can survive for a long duration under high thermal and mechanical loads, offering both short- and long-term measurement of thermal characteristics.

About Advanced Propulsion Centre

The Advanced Propulsion Centre (APC) was formed in 2013 from a commitment between the government and automotive industry through the Automotive Council to position the UK as a global centre of excellence for low carbon powertrain development and production. It is a central pillar of the Industrial Strategy created by the Automotive Council. The role of the APC is to position the UK as a centre of excellence for low carbon propulsion development and production. The APC team

brings together and supports those who have pioneering ideas in the form of innovative technologies, with those who can bring them to market as products.