

ene.field demonstration project: Vaillant and sunfire continue to advance fuel cell heating devices based on SOFC technology towards marketability

- **Sven Morlok, Saxon State Minister for Economic Affairs, Labour and Transport, inaugurates first fuel cell heating device to be installed in Saxony as part of the ene.field demonstration project**
- **Outstanding results achieved as part of the Callux project set to be fully exploited**
- **sunfire invests 4.3 million Euros in the expansion of its production facilities and the automation of SOFC production operations at the Sunfire Ceramic Center (SCC)**

Schildau / Dresden, 11.8.2014. **Fuel cell heating devices based on sunfire's solid oxide fuel cells (SOFC) have taken a number of important steps towards marketability: This Monday, the technology firm joined Vaillant GmbH, Energy Saxony e.V. and Sven Morlok, Saxon State Minister for Economic Affairs, Labour and Transport, in inaugurating the first fuel cell heating device equipped with SOFC technology to be installed in Saxony.**

The European demonstration project ene.field provided the framework for the supply of the device to a customer in Schildau (near Torgau), who will now benefit from innovative, efficient, environmentally friendly technology based on the principle of combined heat and power (CHP). Natural gas will be used as the energy source for the local generation of electrical power and heat. Saxony is a pioneer in the field of fuel cell technology, and uses funds provided through Sächsische Aufbaubank SAB to subsidize systems such as fuel cell heating devices as part of the "Innovative Local Power Generation and Storage" programme. ene.field is set to see over 100 Vaillant fuel cell heating devices installed at locations in Germany, Austria and France.

sunfire is Vaillant's most important strategic partner in the field of high-efficiency fuel cell technology, and ene.field represents an expansion of the intensive cooperation between the two companies. Their fruitful partnership has already seen over 100 fuel cell heating devices successfully installed as part of Callux, a nationwide German field testing programme during which the two partners gained over 600,000 hours of operating experience. The heating devices impressed with their excellent average level of reliability (>97 per cent), and have already delivered cost reductions of over 50 per cent.

sunfire invests in additional production capacity

In addition to Vaillant, sunfire also supplies its SOFC technology to other prestigious German fuel cell system manufacturers including ThyssenKrupp Marine Systems. To keep pace with demand, sunfire is currently investing around 4.3 million Euros in the expansion and automation of production facilities at its Dresden site. Over the last few years, sunfire has consolidated its position in the supply chain by establishing a strong pool of in-house cell manufacturing expertise at its Sunfire Ceramic Center (SCC).

“The outstanding Callux results and satisfaction amongst our customers confirm that we were right when, some years ago now, we decided to focus on the high-temperature fuel cell and the efficiency benefits it brings with it” explains Dr Jens Wichtermann, Director of Corporate Communications at the Vaillant Group. “In sunfire we have a partner whose blend of first-rate expertise and commitment is a perfect match for the development and production of stacks for our fuel cell heating device. Our longstanding partnership has already been highly successful.”

“We are delighted by the success achieved during these initial testing phases” enthuses Christian von Olshausen, CTO at sunfire. “Our strong, long-established relationship with Vaillant is making a decisive contribution to the industrialization of SOFC technology. We are highly optimistic that marketability will be reached by 2017.”

ABOUT SUNFIRE

Founded in 2010, sunfire GmbH develops and produces high-temperature solid oxide electrolysis cells (SOEC) and solid oxide fuel cells (SOFC).

sunfire’s SOFC technology facilitates the highly efficient generation of electrical power and heat according to the principle of combined heat and power (CHP). Local CHP at the lower end of the output range is regarded as one of the energy concepts of the future, as it sees electrical power and heat generated on-demand at the point of consumption.

High-temperature electrolysis splits steam into hydrogen and oxygen. It offers excellent efficiency and is powered by renewable electricity. The hydrogen produced can be efficiently converted to fuels using sunfire’s Power-to-Liquids process or used directly in the H₂ mobility sector or by industrial consumers.

sunfire was founded by Carl Berninghausen, Christian von Olshausen and Nils Aldag. The firm is supported by Business Angels, Bilfinger Venture Capital, the KfW bank’s ERP-Startfonds fund, Total Energy Ventures, EDF Group and Allianz.

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