

Media Release

Arctic Solar by Icade: from the Pacific to the Atlantic using only solar power

In the wake of the explorer Amundsen

Neuchâtel, 26 April 2018 – Anne Quéméré will tackle the arctic ice this summer in an attempt to navigate the North West Passage, the mythical link between the Pacific and the Atlantic. Fully aware of the environmental issues, this sailor from Brittany will undertake the voyage powered by ultra-performant solar-panel modules developed to her specifications by CSEM. Her vessel, the *Solarboat Icade* was christened today at Concarneau (France).

“The North West Passage is open. My childhood dream has now been fulfilled. A strange sensation gives me a lump in my throat. I am exhausted and my force is spent, but my eyes are filling with tears . . .” In August 1906, the Norwegian Amundsen describes his emotions in his log. He is the first sailor to have succeeded in navigating the North West Passage. Anne Quéméré now also dreams of repeating solo the feat of traveling this mythical maritime seaway. Powered by the sun, this sailor will strive, this summer, to navigate a passage through the arctic ice and travel the 3000 or so kilometers that separate the Canadian villages of Tuktoyaktuk and Pond Inlet.

Ultra-resistant solar modules

To achieve this, the boat used by the Brittany-based sailor to cross the Pacific in 2011 has been equipped with solar modules developed to her specifications by CSEM. “In 2015, in a kayak, I undertook a journey with the eco-explorer Raphaël Domjan, who is collaborating with CSEM on his stratospheric aircraft Solarstratos,” explains Anne Quéméré. It quickly became obvious that the Swiss center would be the ideal partner for developing a solution that would be resistant to impact and the extreme conditions of my adventure.” The result is the *Solarboat Icade*, a 20-foot light and flexible vessel, christened this Thursday at Concarneau. If the weather conditions are favorable, the yachtswoman will begin her adventure on board at the end of June, the journey having to be completed before the end of September.

Making better use of solar energy on water

“This challenge presented us with an opportunity to surpass ourselves in all the stages of design and integration of solar panels, but also for the implementation of an optimized energy management system. We were enthusiastic about the project because we are convinced that solar energy is under-utilized in the marine environment” explains Christophe Ballif, Director of the PV-Center at CSEM. “The tests we undertook showed that existing solutions could be improved, and today we are in a position to transfer our know-how to the companies involved in the sector and thus popularize its use.” The *Arctic Solar by Icade* expedition aims to contribute to confirming this potential, while enabling its owner to live an extraordinary human adventure. It also requires a large dose of humility. As an Inuit saying goes: “only time and the ice are masters here”.



Specially made solar modules have been developed by CSEM for the Arctic Solar by Icade expedition. Designed to resist to the extreme conditions of the voyage, they enable Anne Quéméré to move about in her vessel.

Marine solar energy at CSEM

CSEM's PV-Center can offer high-efficiency solar-energy solutions to both individuals and professionals. Light and flexible, ultra-robust and resistant in harsh environments, to frost, thermic cycles, UV, salt and human pressure, the panels are perfectly integrated in the boat. The materials are specially designed to adapt to the constraints of UV, salt, moisture and variations in temperature. Color and design are specified by the client. Development from A to Z including, on request, the management and storage of energy.

Technical data:

Weight from 1.5 to 2.5 kg/m²

Thickness from 1mm

Solar panels: Sunpower IBC (>23.5%)

Stress: Flexible range

Specialized tests, according to IEC 61215 standards

More information

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About CSEM

CSEM – des technologies qui font la différence

Le CSEM est un centre suisse de recherche et de développement (partenariat public-privé) spécialisé dans les microtechnologies, les nanotechnologies, la microélectronique, l'ingénierie des systèmes, le photovoltaïque et les technologies d'information et de communication. Le CSEM compte plus de 450 collaboratrices et collaborateurs hautement qualifiés, répartis entre les sites du CSEM à Neuchâtel, Alpnach, MuttENZ, Landquart et Zurich.

Pour en savoir davantage, consultez le site www.csem.ch

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