



“The prototype of the new autonomous WAVEGEM® platform moored at sea”

Saint-Nazaire, August 2019

A simple and efficient installation

On Wednesday, August 21st, 2019, the IHES consortium led by GEPS Techno deployed the prototype of the new autonomous WAVEGEM® platform on the SEMREV test site managed by Centrale Nantes. This is the beginning of an 18-months sea trial campaign. The operation to connect the platform to its 4 anchor lines took place in less than 6 hours with light intervention resources compared to standard operation type. The 4 anchor lines that hold the WAVEGEM® platform had been installed in July 2019 at the SEMREV test site during 2 days of operations.

This first installation, coordinated entirely by SERENMAR - Ship As A Service® for the maritime part, has highlighted the technology invented by GEPS Techno and in particular the simplicity of the anchoring systems used, thus demonstrating the perfect adequacy between the solutions chosen and the restraints of the targeted markets, namely the open sea far from any heavy deployment means.

The WAVEGEM® platform

The WAVEGEM platform developed by GEPs Techno is an autonomous hybrid energy production platform designed to supply maritime application or remote island which do not have access to the electricity grid and want to be supply by reliable and renewable power source.

The platform converts wave energy into electricity using the float's movements to create a closed circulation of seawater through a low speed turbine.



The next steps

The 18 months of planned sea tests will validate the performance, the reliability of the installation and calibrate the related conception tools. In the meantime, the platform will also carry out other subsystem tests (new generators, energy storage, etc.), which will benefit from privileged sea test conditions.

On the other hand, the platform will serve as a commercial demonstrator to allow future customers to have a better understanding of the platform's characteristics and its ability to meet their needs in terms of energy production and also hosting autonomous applications.

The targeted markets are, as auxiliary means of energy production, offshore oil & gas and marine energies but also small islands in combination or not with other power production systems.



The IHES project

This project, started in 2016, brings together 7 French partners, including **Geps Techno**, the leader of the program, which imagined, designed, built the floater and the energy production system, **Ifremer** which carried out the tank tests and the environmental survey of the sea trials, **SNEF** which carried out the auxiliary installations for the floater and the cabling operation, **Chantiers de l'Atlantique** which supervised the entire construction and coordinated the building logistics operations, **Centrale Nantes** which provided its test site, **Blue Solutions** from the Bolloré group which contributed to the definition of the storage system and provided the supercapacitors, **Icam** for the design and production of a prototype of the wave system. The project is financed by **Bpifrance** as part of the "Programme des Investissements d'Avenir", by the **Région Pays de la Loire** and by the European Union as part of the FORESEA program. It has been certified by the EMC2 competitiveness cluster.

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