

CENTRALE NANTES HOSTS THE THIRD FORESEA TEST ON ITS OFFSHORE TEST SITE

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On 4 and 5 August, FMGC installed the cast iron shells (IBOCS) - developed to ballast subsea electrical cables - at a depth of 30 metres on the Centrale Nantes SEM-REV offshore test site.

These tests are part of the FORESEA project (Interreg Europe funding), which aims to help bring Marine Renewable Energy (MRE) technologies to market by providing access to the North-European network of offshore test sites, which includes SEM-REV.



The FMGC shells protect, stabilize and restrict the bend of subsea electrical cables. The objective of the tests is to demonstrate the stability of the cables ballasted with these cast iron shells, including under heavy swell conditions. The shells will remain on site for several months and will be subjected to extreme winter conditions. These tests will

also provide comparative data, since three sections of test cables - two equipped with shells of different linear density and the third completely bare - were installed alongside each other. Through regular on-site measurements, current measurements and cable movements, the impact of the cast iron shells can be easily assessed. The FMGC and SEM-REV teams will observe how the shells bear up (resistance, corrosion, etc.) in order to gain unique feedback in an environment representative of offshore wind farm conditions.

Innosea, a Centrale Nantes spin-off, worked with FMGC on shell design methods to calculate the optimal mass required to ensure cable stability on the sea floor. FMGC also equipped the Floatgen foundation - the first offshore wind turbine in France - with clump weights, which are attached to the anchor lines, providing stability to the floating structure.

The FMGC is the third company to make use of the Centrale Nantes offshore test site, following on from NEREIS Environnement's acoustic



sensor and the Floatgen floating wind turbine - a European research project involving Idéol, Bouygues TP and Centrale Nantes.

About FMGC

FMGC designs, produces and markets grey cast iron ballast solutions for Public Works, Yachting, Agriculture and Marine Renewable Energy markets.

About Centrale Nantes

With research platforms ranging from digital simulation to ocean test facilities and on-site testing, Centrale Nantes has developed strong expertise in training, research and innovation in the maritime sector (shipbuilding, energy). Centrale Nantes started the SEM-REV project in 2007, with the aim of supplementing its skills and resources in the development and validation of Marine Renewable Energies. SEM-REV represents today an investment of €20M and it is set to play a decisive role in meeting the challenge of Marine Renewable Energy development in France.

The test site has all the necessary permits, equipment and measurement capabilities to develop, energy recovery systems (mainly from wind and wave sources) under operational conditions. It is the world's first multi-technology offshore test site designed specifically for marine renewable energies.



Pictures : Centrale Nantes / FMGC