

1MW Prototype for Kawasaki Tidal Project



Tidal energy experts from GL Garrad Hassan are aiding Kawasaki Heavy Industries, Japan, in the development and deployment of its 1MW prototype tidal turbine by providing technical information and guidance on tidal resources and technologies. According to official studies, the theoretical worldwide generation potential of tidal energy has been estimated at over 7,800 TWh/year.

In October 2011, Kawasaki Heavy Industries announced plans to install a 1MW prototype tidal turbine at the European Marine Energy Test Centre (EMEC) in Orkney, Scotland/UK. The technology is currently under development at Kawasaki's Akashi facility.

GL Garrad Hassan's tidal turbine design software, Tidal Bladed, and newly-developed site data analysis toolbox have helped to facilitate the project. From initially providing a tidal stream training course in March, its experts went on to deliver a number of work packages for Kawasaki which utilised GL Garrad Hassan's specially developed software tools to deliver analysis of site metocean data, support in load case definition and independent checking of load calculations.

Drawing on their prior field experience at the EMEC site, and knowledge of tidal stream foundations and installation processes, GL Garrad Hassan's experts also undertook a construction and installation review and continue to work on the development of a device controller. They are also undertaking a supply chain study.