

Wave energy converter

EMU, Denmark, is offering a run-up type floating offshore wave energy converter. In the Wave Dragon unit, waves are focused by two wave reflectors on to a patented doubly curved ramp. The waves run up the ramp and into a reservoir, where the resulting pressure height is utilized for power production through a series of propeller turbines.

The hydraulic performance, turbine development and operation strategy, regulation strategy, power generation and grid connection, structural layout and feasibility aspects of the Wave Dragon were studied under the European Union Joule Craft project. Some of the conclusions arrived at during the project include:

- It captures 10-12 per cent of the wave energy in the reservoir;
- It exhibited good survivability in harsh wave conditions, even in case of malfunction; and
- It can use a number of relatively small propeller turbines with fixed runners and guide vanes, utilizing variable speed;

A 1:4 model of the Wave Dragon is to be deployed in Nissum Bredning Denmark for extensive testing, before the first full-scale prototype is built in 2005-6. The first generation prototype is expected to have an annual output of 6 GWh. *Contact: EMU, Blegdamsvej 4, 1.tv: Kobenhavn N, DK 2200, Denmark. Tel: +45 (3) 5360 219; Fax: +45 (3) 5374 537; E-mail: emu@ emu-consult.dk.*

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