



INTRODUCTION TO WAVE AND TIDAL ENERGY CONVERSION

Date: 05 October 2010

Course location: Bilbao, Spain

TRAINING FROM THE EXPERTS IN MARINE ENERGY

Garrad Hassan offers professional training courses developed in-house, which are delivered by experienced trainers who have the support of Garrad Hassan's experience in both the wind and marine energy industries.

Introduction to Wave and Tidal Energy Conversion

A one day course for professionals who wish to increase their knowledge of the key issues associated with wave and tidal energy conversion technologies. A detailed overview of the fundamental principles behind the main technological solutions to convert wave and tidal energy into electricity will be given, along with the key methodologies to evaluate the energy resource, device site suitability and device data. In addition, hydrodynamic modelling techniques (both numerical and experimental), details of several power conversion mechanisms and an account of full-scale real seas experience to date will also be covered.

The course will provide a unique account of R&D and field experience in the wave and tidal energy sector, which can be used as a starting point for those who are new to the field or who wish to define a development strategy for their concept/company.

Course background

Garrad Hassan has been providing independent technical advice to the renewable energy sector for more than 20 years and has actively participated in the evolution of both onshore and offshore wind. The Marine Renewables team, formed in 2005, built on the accumulated in-house experience, tools and methodologies, offers services to the marine renewables sector which span from technical due diligence (owner's or bank's engineer) to resource assessment, and include numerical modelling, support to experimental test rounds, and strategic studies.

Joao Cruz (wave) & Mat Thomson (tidal) will lead the training. Joao and Mat have five years experience in this field, in both technology development and resource assessment and design tools; they head up Garrad Hassan's Wave and Tidal Energy teams, respectively.



Who should attend?

Project developers, device developers, lenders, network operators and regulators, R&D institutions, leading test centres and other professionals who wish to benefit from Garrad Hassan's technical and commercial knowledge of the field.

Course location: Bilbao, Spain

Price: €525 exc VAT

Registration Contact Details

Andrew Brown for general enquiries.

E-mail: training@garradhassan.com

For a booking form, please go to:

www.garradhassan.com/training





Programme

- 09:00** **Coffee and registration**
- 09:30 Wave I
- Wave energy fundamentals
- Characterisation of the wave energy resource
- 11:00-11:15** **Coffee**
- Wave II
- Hydrodynamic modelling of wave energy converters
- Full scale concepts
- 12:45-13:45** **Lunch**
- Tidal I
- Tidal stream fundamentals
- Characterisation of the tidal stream energy resource
- 15:15-15:30** **Coffee**
- Tidal II
- Modelling of tidal stream energy converters as single devices and within an array
- Full scale concepts
- 17:00 Q&A session
- 17:30** **Finish**