



Position Description

Job Title:	Finite Element Analyst
Office:	Pembroke Dock, Wales
Employment Type:	Full Time, Employee
Salary:	To be negotiated
Start Date:	March 2021
Line Manager:	Chief Technical Officer

Overview

Founded in 2012, Bombora is an award-winning ocean energy company with origins in Perth, Western Australia, now based in Pembroke Dock, Wales. Our innovative mWave converters deliver environmentally friendly, large scale energy for national electricity grids. Bombora wave farms can be deployed in coastal locations throughout the world. Bombora strives to create renewable energy solutions with a positive impact on our environment and our community.

In 2021 Bombora will deploy its first full scale mWave into the waters off Pembrokeshire.

Profile Description

Bombora is seeking an Engineer with extensive experience in conducting Finite Element Analysis (FEA) for structural design, preferably of composite elastomeric products. This role will be vital to the successful development of the company's ground-breaking wave energy technology. The successful candidate will be UK based, preferably in Wales or the south west. They will be able to work from home but should be prepared to travel regularly to meet other members of the team or the supply chain. They will be responsible for conducting FEA of the mWave membrane and other structural components to support the development of the next generation mWave.

Main Responsibilities

- Select appropriate modelling strategies based on the requirements of the design team, so that these requirements are met with high efficiency of effort without compromising validity.
- Identify critical validation requirements and assist in development of suitable validation tests and analysis. Conduct validation and report on uncertainties.
- Create FEA models and run simulations.
- Post-process and verify simulation results.
- Create modelling reports focussed on design team requirements and including advice on uncertainties.
- Establish and maintain robust QA processes.
- Manage FEA computing software, hardware, and the secure storage of FEA data.
- Maintain a simulation register that allows high accessibility to historical models and results. This tool, combined with secure data storage, must ensure repeatability of results.



Qualifications & Experience

- Degree in Mechanical Engineering or similar qualification.
- At least 5 years of experience in FEA of structural steel and composite products, preferably hyper-elastic and under fluid pressure boundary conditions.
- An excellent understanding of the FEA validation process (hand calculations and physical testing).
- Preferably, experience with a range of FEA software including Abaqus and ANSYS products.
- Experience of implementing user defined functions in FEA.
- Familiarity with numerical modelling of Fluid-Structure Interaction problems.
- Experience in new product development.
- Experience in FEA project management.
- Proficient with Microsoft Office applications, preferably Office 365.
- Full and Current EU Drivers Licence

Required Competencies

- Good communication skills. Good spoken and written English.
- Able to work as part of a team and organise own workload to meet deadlines.
- Very thorough and high attention to detail.
- Good analytical, communication, organisational and QA/QC skills.
- Ability to work independently, proactively and take guidance where necessary.

Line of Reporting

The Finite Element Analyst reports directly to the Chief Technical Officer.

How to Apply

Applicants should submit an up to date CV together with a covering letter explaining why you are interested in the role and what relevant experiences you have. You should also provide names and addresses of two people that will act as your referees, one of which should be a business/professional contact. We will only approach them if you are invited to interview.

Applications should be emailed to recruitment@bomborawave.com. Please list the job title in the subject field. All applications must be received by 5th February 2021.

Further Information

Bombora is an equal opportunities employer and has a proactive approach to parents with childcare responsibilities.

We also actively support Welsh language speakers and on request we can provide any of our documentation in Welsh. Please visit our website for further information.

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