

# PRINCIPAL/SENIOR STRUCTURAL ENGINEERS – OFFSHORE WIND FOUNDATIONS

## THE COMPANY

Empire Engineering is an international engineering consultancy providing specialist services to the renewable energy sector. Headquartered in Bristol, with offices in London, Edinburgh, Marseille, and Beijing, we have been working exclusively in offshore renewables since our inception in 2014.

As a company we aim to provide the very best technical expertise to our clients and provide a stimulating and enjoyable working environment to our staff. We have established a company culture based on striving for technical excellence, providing exceptional customer service, and enjoying what we do along the way.

We are rapidly growing private company, run by engineers. We choose to work within renewable energy because of the technical challenges it presents to us as engineers, and the benefits it offers to humankind.

## THE ROLE

The Principal/Senior Structural Engineers for Empire Engineering is in a client facing role, working on a range of world leading offshore wind projects.

They are expected to perform various analyses relating to the design of offshore wind turbine foundations, including hand calculations, finite element analysis and fatigue analysis, to applicable codes and standards.

They are also expected to be involved with project management, both internally to Empire, as well as managing external projects for Clients. There is potential for secondments to Client offices to be offered.

Some travelling for the position is expected, primarily within Western Europe, to attend meetings and perform site visits or inspections.

The role will also involve elements of business development. This person will be comfortable representing Empire Engineering in commercial meetings, preparing proposals and in engaging with key accounts. Empire Engineering have in-house marketing and business development support to assist in this process

We have a number of openings, and the role can be based in our Bristol, London, Edinburgh, or Marseille office.

## THE INDIVIDUAL

The candidate should hold a degree in structural, civil or mechanical engineering, with at least 5 years of experience in the offshore engineering sector, the majority of which spent in the offshore wind industry.

They should have a practical knowledge and experience of the following aspects:

- Offshore wind foundation design and analysis, primarily monopiles and jackets
- Finite element analysis
- Integrated load analysis
- WTG foundation fabrication

- offshore transport and installation process
- working with certification bodies
- Extensive use of structural analysis/FEA software e.g., SESAM, BLADED, ANSYS etc.

The candidate is also be a strong communicator (both written and in meetings/presentations) and works well in a team.

## KEY RESPONSIBILITIES

- Concept and detailed design and analysis of offshore wind bottom-fixed foundations (primarily monopiles and jackets), including both primary and secondary steel
- Concept design of floating wind structures
- Advanced 3D finite element analysis
- Compile Basis of Design for WTG foundations
- Quantitative evaluation of foundation solutions
- Cost estimation of WTG and OSS foundations
- Provide ad-hoc solution for specific problems being faced in the offshore wind industry
- R&D projects and in-house software development
- Project management of large offshore wind development projects
- Proposal writing