

## POWER GENERATION SYSTEM DESIGN ENGINEER

# Company Description

We are a European multinational company specializing in providing information technologies and engineering services to the main companies in the Spanish market. With a staff of more than 3,000 engineers in the country we have the ability to work bringing experience in different disciplines in energy, aeronautics, automotive, rail and telecommunications sectors.

"We are engineers working for engineers"

## Information

☐ Deadline: 2022-01-31
☐ Category: Business
☐ Province: Navarra

Company

**ALTEN SPAIN** 



## Main functions, requisites & benefits

### Main functions

We are looking for an Electrical engineer with high knowledge in design, control and modelling of Electrical Drives and Power Converters, dedicated to Wind Industry. Execution and leadership of development, modification, improvement, analysis, prototyping and testing of electrical hardware dedicated to Electrical Drives, Generators, Power Converters, power cables and busbars. System simulations, calculation, and development of technical documentation. Track costs associated with product design. Research new product concepts and propose new power generation topologies optimizing the LCOE and cost. Have a clear vision of components and system market evolution. Cooperate with other engineers of various disciplines towards solving complex engineering issues.

## Requisites

Passion for renewable energy and a sense for the importance to lead the change. We are looking for... Electrical engineer with high knowledge in HW design, control and modelling of systems dedicated to Power Generation. Minimum 5 years of experience in design activities related to Electrical Drives and Power Electronic Systems, with at least 2 years in wind industry or similar experience in educational sector. Expertise in AC-DC Power Converters design, circuit protection, power electronics, PCBs and drivers. Experience with design, prototyping and testing activities of various Power Converter topology and types. Experience with design of Electrical Machines. High knowledge in synchronous / asynchronous machines, insulation systems, control of generators with power electronics converters. Electrical drives specification, system integration, validation and testing, Experience developing detailed specifications, selection criteria, test plans, analyzing component reliability and creating design flows. Experience in product cost optimization. Design Failure Mode Analysis (DFMEA) execution knowledge. Short circuits analysis. Transient stability (mainly LVRT and OVRT). Electromagnetic transients' simulation (EMT). Simulation/modeling of control and electrical systems. MATLAB and Simulink high level PSCAD - high level. Electrical engineering: Cables & Transformers, Voltage/Current protection, Transformers, Electrical studies: Harmonics and Power Quality, Mathematics: Numerical analysis, Signal processing: Filtering, interpolation, FFT, Optimization techniques. Simulation & Modeling: Wind turbines, desirable experience with DFIG technologies for transient stability studies, Wind power plants; or at least renewable energy power plants in which multiple components are included, Renewable systems: mainly wind turbines, but also PV and storage and Grid integration: Grid Codes and Grid Transients studies. Renewable Energy: Wind Turbine and Wind Farm engineering, Wind to electricity principles, DFIG and Full converter technologies, Grid Integration.

#### Benefits

Incorporation into a continuously growing competitive multinational company. Integration into a team of highly qualified professionals, with a good working climate, innovative and dynamic. Specialized training and continuous professional development. Social Benefits and Flexible Compensation Plan. Competitive remuneration.