

THE EUROPEAN MARINE ENERGY CENTRE
JOB DESCRIPTION AND PERSON SPECIFICATION
INSTRUMENT AND CONTROLS ENGINEER (ITEG)

Reports to: Technical Manager

Purpose: To deliver the instrument and control system for all EMEC's hydrogen and electrical assets within the ITEG (Integrating Tidal energy into the European Grid) project.

Responsibilities

1. Identify and specify the electrical, control and instrumentation engineering requirements, based on the ITEG scope and agreed with the EMEC operations team. Provide design system documentation and drawings in AutoCAD.
2. Interpret existing design drawings on EMEC hydrogen plant to assist in the provision and design of the ITEG hydrogen plant including identification of costs. Support the development of the integrated commissioning plan which will form part of a new Energy Management System for the EMEC test site on Eday.
3. Ensure that the ITEG system operations are technically fit for purpose from an electrical, control and instrumentation perspective and meet the statutory requirements, reviewing and approving 3rd party control and instrumentation engineering specifications as required.
4. Working with electronic control systems including microprocessors, sensors, and control elements used in automated processes to develop an integrated Electronics Data Acquisition and Condition Monitoring System for the Hydrogen Plant (encompassing ITM and AREVA electrolyzers) measuring levels, pressures, temperatures, flow, and analytical processes and feeding the data into a SCADA platform.
5. Optimize EMEC's existing SCADA system to integrate the Hydrogen plant or work closely with Operations team to develop a dedicated and integrated SCADA system for ITEG.
6. Provide control, electrical and instrumentation input to project governance reviews, technical written reports and creation of user manuals.
7. Identify, study, propose, and implement areas for improvement in the field of instrumentation engineering to enhance operation and improve EMEC's operations.
8. Ensure that the EMEC Integrated Management System is adhered to and assist the Quality Manager and others with identifying and progressing improvement

actions, supporting EMEC's accreditation by the UK Accreditation Service (UKAS) or other relevant body.

9. Work closely and flexibly with all EMEC staff from across the business, but with particular attention to establishing and maintaining a close liaison with the rest of the Operations Team.
10. From time to time carry out other assignments which may differ from the above as instructed by line management.
11. Ensure that data and learning from the project is captured and evaluated by EMEC.

Reports: There are no direct reports to this post.

Person Specification

Education

Essential – Degree or higher qualification in Control, electrical and Instrumentation Engineering (or equivalent)

Desirable – Chartered or working towards chartered status

Skills & Knowledge

Essential – A broad knowledge in Instrument and Controls Engineering practices and procedures. Experience in basic programming. Ability to work on multiple projects at one time.

Desirable – Experience with PLC or DCS control systems. Experience in or working knowledge of control theory. Good Knowledge on instruments for measuring Principle of Flow, Temperature, Pressure & level measurement of Steam, Air and other Liquids.

Personal Attributes

Essential – team worker; self-motivated; level of fitness associated with outdoor working and/or the marine environment.

Experience

Essential - Minimum of 2 years of experience in the specification and design of instrumentation and control systems

Desirable - Minimum 3 years of experience in electrical engineering within the refining/petrochemicals/gas industry

Special Conditions Associated with the Role

1. Some flexibility in hours is likely to be required.
2. Must be able to travel for some meetings, conferences, etc (as necessary).