

Job Opening

Process and Project Engineer



Overview

Electrochaea GmbH is seeking an experienced Process/Project Engineer to support technology commercialization for its biological methanation process. The Company is developing a disruptive new technology for the conversion of carbon dioxide into methane, using renewable power and a variety of CO₂ feed stocks. Electrochaea's power-to-gas technology represents a commercially viable solution for utility-scale energy storage, grid balancing, and carbon recycling.

The core of the technology is a proprietary biocatalyst – an adapted strain of methanogenic archaea, a single-celled anaerobic microorganism – which efficiently converts hydrogen and carbon dioxide into pipeline-grade methane for direct injection into the existing natural gas grid.

The Company is commercializing this power-to-gas technology in markets with high penetration of wind and solar energy (Denmark, Sweden, Germany, Benelux countries, UK, California, etc.), where the intermittent nature of renewable energy sources leads to prolonged periods of excess electricity production. Favorable markets are also defined in terms of electricity prices, incentive schemes and existing infrastructure.

Description of Position

It is anticipated that the Process Engineer will contribute to future design iterations for next generation plants and to assist in knowledge transfer to and training of plant operators and engineers. This knowledge transfer will include close interaction with the engineering team at Electrochaea ApS in Denmark, the Business Development team and with the Technology Development team in Planegg. Other important duties involve design and layout activities during basic and detail engineering for new projects, definition of Electrochaea's scope of work in future project execution and interaction with EPC contractors and site owners.

Detailed Main Tasks and Activities

- Contribute to development of feasibility and FEED studies: Definition of process design scope; process flow diagrams; mass and energy balances; process and instrumentation diagrams; equipment sizing and budgetary estimates
- Work effectively with project teams to provide technical assistance in the early project development phase: Elaboration of RFQs; Invitation to bid and instruction to bidders; prequalification procedures, technical clarifications, and technical offers review
- Monitor EPC's engineering and design activities throughout the entire project execution including basic and detail engineering phase as well as during procurement and construction
- Monitor and review design documentation originated by the EPC contractor. Approve critical drawings and technical documentation
- Maintain effective communication with other company areas including Technology Development and Business Development, and provide technical assistance regarding process related information
- Participation in the materials acquisition process for in-house developments, including procurement (specifications, RFQ, vendor evaluation, etc.) as well as expediting, and inspection
- Further development of system control design and definition of new automation strategies for commercial plants including functional block diagrams, cause and effect matrices, HMI drawings and control narratives
- Elaborate maintenance and operations manuals, system control manual, and training materials for future system users
- Provide technical troubleshooting support for operations during project commissioning phase and early operations

Qualifications

The ideal candidate will have the following qualifications and capabilities:

- B.S. or higher degree in engineering (mechanical, chemical or a related discipline) and appropriate industrial or professional experience
- Strong technical background in continuous process operations (refining, chemicals, gas, pipeline, or renewable fuels processing) including process plant support experience

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- Thorough knowledge of process engineering documents including, PFD, M&E balance, P&ID, specification and data sheets
- Solid understanding of constructability and construction practices
- Profound knowledge of industrial automation standards and solutions
- Detailed knowledge of European Union engineering standards including the PED and ATEX codes
- Demonstration of performance in safety, health, and environmental management
- Participation in process hazard operations reviews
- Strong written and verbal communication skills
- Experience in writing operating procedures

Minimum requirements for the position will include:

- Fluency in written and spoken English and at least one other European language
- Ability to communicate effectively with multiple audiences and different levels of the organization
- Ability to develop and work within a budget
- Track record of interacting creatively, collaboratively, and productively with other disciplines

Additional details and requirements:

- Salary will be commensurate with experience and capability
- Letter of application/intent
- CV
- Names/contact information for three professional references
- Please send your application to jobs@electrochaea.com along with a brief statement of your interest in this position, career goals, availability, resume, and expected compensation.

All interested candidates irrespective of age, gender, disability, race, religion or ethnic background are encouraged to apply.