

Organisational Context

INEOS is a manufacturer of petrochemicals, specialty and intermediate chemicals and polymers. INEOS includes 68 manufacturing facilities in 14 countries throughout the world with approximately 15,600 employees. INEOS' annual turnover is around \$33bn making it the 3rd largest chemical company in the world. INEOS is a customer-focused company and our business mission is to be the supplier of choice to our customers.

INEOS Bio is an exciting new business that is commercializing a highly innovative technology platform for the production of clean biofuel and renewable power from a wide range of low-cost carbon materials including household waste.

INEOS Bio is currently constructing the first demonstration scale process plant using the INEOS Bio technology in Vero Beach Florida.

The Electrical and Instrumentation Engineer will be a key member of the engineering community in INEOS Bio, and as such he/she will help us deliver optimal business results on Capital Projects and Technology License Delivery.

The position will report to the Director of Projects and Engineering and is based in Lisle IL. However, the work may entail individual project assignments where the incumbent will be required to commute the project/contractor's work site for extended periods.

Job Description

This is a permanent role providing electrical and instrumentation engineering discipline leadership for projects, license support and the over-all development of the INEOS Bio technology platform.

The Electrical and Instrumentation Engineer will work to establish design requirements and electrical/instrumentation design packages. They will be responsible for helping the team execute projects and ensuring that project goals are met in areas of risk, cost, schedule, change management & safety.

The incumbent will be an electrical and instrumentation engineering subject matter expert in all matters relating to design and development including execution of projects, license agreements and future development of the INEOS Bio technology platform to ensure safe, effective and efficient designs are implemented. Specifically he/she will be expected to capture know how from the commercial demonstration plant project start-up and operation - and implement future designs and improvements based on these learnings. Ideally the candidate will be experienced in similar work in chemical plant processes/unit operations and bring in-depth knowledge of instrumentation and electrical systems - with a working knowledge of distributed control systems and PLC's.

Experience managing and directing contract engineering staff is required.

The successful candidate will be comfortable both managing and "doing". A hands-on approach and willingness/ability to work the details is considered key to successfully delivering on the expectations for this role.

Must be able to work in a diverse environment - working closely with mechanics, operators, engineers, contractors, vendors, consultants and management to solve problems, improve the technology platform, and further the business objectives of INEOS Bio.

The successful candidate will have a proven track record as an electrical engineering specialist (low/med voltage) for projects/consulting in operating chemical process plants (Conventional Ethanol, Waste-to-Energy, General Chemical or Petrochemical experience preferred).

Specific responsibilities and accountabilities are described in more detail below.

Responsibilities & Accountabilities

General:

- Active support of all SHE policies and procedures.
- Provide technical support and leadership solving issues in an integrated cross-functional team environment.
- Analyzing process configurations, unit operations, scale-up, equipment designs and optimization.
- Provide electrical engineering design guidance and technical leadership for the following industrial scale unit operations: biomass processing and handling, gasification, heat transfer, steam & power generation, fermentation, filtration, distillation, boilers, incineration, evaporation, effluent treatment systems, utilities.
- Works with License Support Contractor and Commercial Staff to effectively and efficiently deliver on technology license commitments.
- Works closely with the Project Manager and other key stakeholders to ensure projects are constructed on time and within budget. Liaises with contractor's staff, attends construction and/or design meetings and reviews detailed designs and specifications.
- Builds and maintains positive relationships with colleagues, consultants, and key stakeholders to ensure projects run smoothly and to resolve concerns promptly and efficiently.
- Researches and sources new systems and resources, analyzes processes, procedures and working practices to identify and implement changes to increase efficiency, productivity and overall profitability. Maintains familiarity with current techniques and developments to sustain and improve technical skills.
- Provides guidance and mentoring to junior engineering staff members on more difficult problems and methods of approach. Researches new methods and establishes departmental practices and specifications

Specific:

- Provide input on selection of equipment, review, and approval of specifications to support projects.
- Design input and review of engineering contractor and vendor packages for:
 - Power distribution ($\leq 69\text{KV}$), switching, grounding and usage (including variable speed drives and motors).
 - Direct current power supplies and circuits for instrumentation, DCS and PLC systems and safety interlocks/shutdowns.
 - Control and safety-relief valves
 - All instrumentation and field analyzers, both analog and discrete.
 - Process control systems architecture
- Understand company HSE practices, policies and procedures, including the impact of I&E equipment and operations. Participating in cross-functional teams to optimize plant designs for cost effectiveness, reliability, and maintainability.
- Participate in Process Hazard Analysis studies (PHA).
- Participate in testing and evaluation of process control hardware and software.
- Start-up support.
- Maintain ongoing awareness of new developments in hardware and software technologies.
- To provide owner coordination of all issues associated with the plant instrumentation and electrical systems. to ensure that designs meet the business expectations.
- To support the commissioning activities for Vero Beach plant to ensure systems are commissioned safely and to schedule.
- Detailed knowledge of various electrical Codes (e.g. NEC and ANSI / IEEE) and industry instrumentation standards as applied to chemical plant facilities, working with E&I designers, Process Safety Management (PSM), Management of Change process, and Capital Value Process (CVP).

Skills, Education, & Knowledge Required

Education/Experience

- Proven Electrical and Instrumentation Engineering experience (ideally 10 years minimum) in a chemical plant project/consulting environment.
- Degree in Electrical Engineering and professional engineering accreditation.
- Strong basic engineering skills with detailed knowledge of instrumentation and electrical equipment.
- Experience programming PLCs and DCS is desirable.
- Detailed knowledge of various electrical Codes (e.g. NEC and ANSI / IEEE) and industry instrumentation standards as applied to petrochemical facilities, working with I&E designers, Process Safety Management (PSM), Management of Change process, and Capital Value Process (CVP).
- General knowledge of process control hardware, software, and associated computer system and infrastructure.
- Thorough understanding of the engineering documents associated with electrical/instrumentation such as: P&IDs, loop sheets, specification sheets, electrical line diagrams, logic diagrams, installation detail drawings, etc.

Skills/Competencies

- Sincere commitment to safety
- Strong leadership skills

- Budgeting experience
- Strong organizational skills along with the ability to handle a fast paced environment.
- Good verbal and written communication skills
- Good computer skills

How to apply

Please submit your resume to biocareers@ineos.com and mention the job you are applying for in subject line.