HYDROGEN PROCESS ENGINEER

Employment: Full Time | Reports To: Engineering Manager| Location: Poole's Corner, PEI

ABOUT THE ROLE

The Hydrogen Process Engineer is responsible for the design, analysis, and optimization of hydrogen production, storage, distribution, and utilization systems. The role supports projects from concept development through commissioning, delivering safe, efficient, and commercially viable hydrogen solutions for industrial, marine, utility, and renewable energy applications.

PRIMARY RESPONSIBILITIES

- Design hydrogen production, storage, compression, purification, and distribution systems.
- Develop process designs for electrolysis, fuel cell integration, hydrogen storage, and Power-to-X applications.
- Prepare PFDs, P&IDs, heat and material balances, equipment specifications, and process calculations.
- Perform process simulations, equipment sizing, and energy optimization studies.
- Develop process control philosophies and operating procedures.
- Conduct HAZOP, HAZID, and process safety reviews.
- Support feasibility studies, FEED, detailed engineering, procurement, commissioning, and startup.
- Review vendor documentation and provide technical support during project execution.
- Collaborate with multidisciplinary engineering teams, customers, and technology partners.

POSITION REQUIREMENTS EDUCATION & EXPERIENCE

- Bachelor's degree in Chemical, Process, or Mechanical Engineering.
- Professional Engineer (P.Eng.) designation or eligibility is preferred.
- Minimum 5 years of experience in process engineering within the hydrogen, industrial gas, renewable energy, or power generation industries.
- Experience with electrolysis, fuel cells, hydrogen storage, or Power-to-X technologies is highly desirable.

TECHNICAL SKILLS

- Experience with:
  - Aspen HYSYS or Aspen Plus
  - Process simulation and equipment sizing
  - PFD and P&ID development
  - Heat and mass transfer
- Process safety and risk assessment
- Knowledge of applicable ASME, API, CSA, IEC, NFPA, and hydrogen industry standards is considered an asset.

CORE COMPETENCIES

- Strong analytical and problem-solving skills.
- Excellent communication and technical writing abilities.
- Ability to work independently and within multidisciplinary teams.
- Strong commitment to safety, quality, and continuous improvement.

WORKING CONDITIONS

- Office-based with occasional travel to manufacturing facilities, customer sites, and commissioning activities.
- Domestic and international travel as required.

KEY PERFORMANCE INDICATORS

- Quality and timeliness of engineering deliverables.
- Compliance with safety and regulatory requirements.
- Successful project execution and commissioning support.
- Process efficiency and hydrogen system performance improvements.
- Customer satisfaction and contribution to standardized engineering solutions.

WHY JOIN AKA ENERGY SYSTEMS

Join a multidisciplinary team delivering innovative hydrogen and clean energy solutions for industrial, marine, utility, and energy applications. At AKA Energy Systems, you will contribute to the development of nextgeneration energy systems that accelerate the transition to a low-carbon future while working on challenging projects with leading customers and technology partners.

AKA Energy Systems

HEADQUARTERS
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LOCATIONS
Canada - Owen Sound
US - Houston
France - Belfort
Singapore

CAREERS INFO
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