

## Senior Test Engineer

Tulum Energy is an early-stage technology company developing an innovative Turquoise Hydrogen pyrolysis solution for clean and inexpensive hydrogen production. Our platform technology will have a major impact in our world's attempt to decarbonize by reducing greenhouse gas emissions. As we race towards this critical goal, we are building a team of world class individuals that are comfortable working at a start-up company, are innovators and have a passion for climate change.

We are currently looking for an experienced and proven **Senior Test Engineer** to lead the testing of Tulum's Pilot and Commercial Plants (FOAK) initially at our host site in Monterrey, Mexico. In this role you will report directly to the Director of Field Deployments and have responsibility to test and optimize the Pilot and FOAK (First of a Kind) Systems to achieve key performance goals (KPIs). Specific details are below.

### Primary Responsibilities:

- Together with the Director of Field Deployments, help manage the planning, permitting, construction and commissioning and lead the testing of Tulum's proprietary, Plasma based Turquoise Hydrogen production plants
- Work with Tulum's strategic partners and stakeholders to assist in permitting and EPC selection
- Help manage the Construction Schedule and contractors for timely completion of the build and resolve issues as they arise
- Help generate key Intellectual Property to increase Tulum's Patent Portfolio and technology protection
- Lead the testing of the Commercial Pilot Plant activities in Years 2 and beyond (100 X Scale up in Production)
- Provide oversight, and direct involvement, in the following activities:
  - Preparation of process-related drawings and documents including PFDs, P&IDs, process schematics, datasheets, technical reports/specifications, equipment general arrangement drawings;
  - Under the direction of the Field Deployment Director, perform engineering analyses/calculations, mass & energy balances,

equipment, pressure safety, relief & control valves sizing to conform to operational and regulatory standards;

- Provide quality review(s) of project documents and drawings;
- Assistance with tendering packages, proposal development, and engineering estimates;
- Build and maintain client relationships and respond to client requests;
- Provide mentorship to junior colleagues/engineers;

### Minimum Experience:

- Bachelor's degree in Mechanical, Aeronautical, Chemical, or similar discipline
- Minimum of 10+ years of experience within a consulting and/or start up environment, with at least 5 years in a leadership role, specifically in industrial, chemical and thermal/combustion projects.
- Registered Professional Engineer (P.Eng or P.E.) in Canada and/or USA
- In-depth knowledge of heavy industrial processes, quality control, and regulatory requirements
- In-depth knowledge and hands on experience of the Industrial construction process from Conceptual Studies, Feasibility Pre-FEED, FEED, Detailed Engineering to Construction/Commissioning
- Demonstrated experience and success in leading game changing industrial projects in the clean tech field, specifically Pyrolysis and/or Gasification, driving process improvements
- Ability to read, interpret and generate CAD and P&IDs drawings
- Multi-disciplinary versatility; a dynamic, team-spirited, and quality-oriented approach; and a commitment to technical excellence
- Strong leadership, communication, and interpersonal skills
- Ability to think strategically and drive innovation
- Solid understanding of Methane Pyrolysis, specifically Turquoise Hydrogen Production
- Thorough understanding of thermodynamics and combustion including reacting and non reacting fluid dynamics
- Help ensure that product design and performance meets technical and functional requirements
- Ability to work independently and as part of a team
- Mechanical aptitude, hands on, and the desire and capability to lead a small team if needed

### Additional Experience Desired:

- Experience with process control system hardware and software (DCS systems, HMIs, PLC, National Instruments) including programming and troubleshooting
- Experience with CAD packages such as CATIA, Solid Works, AutoCAD, CREO or the like and associated GD&T standards
- Hands on experience using and operating flammable gases and operating high pressure combustion systems
- Low and high voltage electrical background
- Experience with both high and low speed instrumentation (dynamic pressure and temperature sensors), flow meters, regulators, gas emissions sampling, etc.
- General System trouble shooting

### Location

The position is based in Monterrey, Mexico, but some remote working arrangements will be considered with site visits as needed.

### Tulum Energy

Tulum Energy is an early stage and dynamic Start-up Company. Our Standard employment package includes a Base Salary, Bonus, Stock Options, Vacation and Health Insurance. For the current opening:

- Salary Range: \$90,000-\$120,000 USD
- Permanent Full-Time Position