

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

Primary Responsibilities:

- Together with the Director of Field Deployments and Senior Test Engineer, help manage the planning, permitting, construction, commissioning and 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 generate key Intellectual Property to increase Tulum's Patent Portfolio and technology protection
- Help lead the testing of the Commercial Pilot Plant activities in Years 2 and beyond (100 X Scale up in Production)
- Participate 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;
 - Participate in 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;

Minimum Experience:

- Bachelor's degree in Mechanical, Aeronautical, Chemical, or similar discipline
- Minimum of 5+ years of experience within a consulting and/or start up environment, specifically in industrial, chemical and thermal/combustion projects
- Knowledge of heavy industrial processes, quality control, and regulatory requirements
- Knowledge and hands on experience of the Industrial construction process from Conceptual Studies, Feasibility Pre-FEED, FEED, Detailed Engineering to Construction/Commissioning
- Experience in 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 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, emissions gas 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: \$50,000-\$75,000 USD
- Permanent Full-Time Position