

## Job Summary

Modeling research and design on projects related to fuel processors. Responsibilities include reactor configuration, heat exchange, flow dynamics and kinetics modeling of heterogeneous catalytic systems, experimentation to confirm simulation results, design optimization and validation, design down-selection, data analysis and reporting. The candidate is expected to interact effectively with other engineers and marketing managers to prototype reformer systems. Regular presentations and written reports on project findings are required. Develop computer programs to simulate fuel processors for gaseous and liquid hydrocarbons, and simulation strategies to identify promising vaporizer, mixer, and reactor designs.

## Responsibilities

- Responsible for the planning, designing, developing, and testing of fuel processor subsystems with focus on heat exchange, flow dynamics, thermal integration, and heterogeneous catalytic reactions.
- Lead the fabrication and testing of prototype processors based on simulation results.
- Interpret results and make recommendations.
- Report conclusions orally and in written format.
- Perform other duties as assigned.

## Knowledge and Skill Requirements

- PhD in Mechanical or Chemical Engineering with 2-5 years of industrial or post-doctoral experience in burner/reactor modeling using a CFD package.
- Additional industrial experience can be used for substitute a PhD degree.
- Solid background in heterogeneous catalytic reactions, flow dynamics, heat and mass transfer, burner and reactor designs and reaction engineering.
- Programming abilities and experience in the numerical solution of PDE.
- Strong hands-on experience in laboratory methods and procedures.
- Ability to work within a team and to communicate ideas and results orally and in written format.
- Upon hire, must meet requirement of a negative alcohol/drug screen.

## Work Conditions

- Work is normally performed in a typical/office work environment.