

**Job Title:** Mechanical Engineer

**Job Level:** Full-time or Part-time

**Job Summary:**

A mechanical engineer will participate in the technical design, fabrication, and testing an energy harvester (i.e. a heat-to-electricity thermoelectric generator), positioned for lasting impact in clean-tech for a variety of applications including automotive exhaust systems. This position requires technical and interpersonal maturity to work well within a multi-disciplinary environment as well as a pragmatic drive and hands-on aptitude to deliver results. This job may be full time or part time and is flexible in terms of when (e.g. days, nights, weekends) and how many hours per week. Expertise in SolidWorks and CFD including conjugate heat transfer is required.

**Major Job Duties and Responsibilities:**

- Design, analyze, fabricate, and test prototypes involving finned heat exchangers and thermal and fluidic performance. CFD expertise including conjugate heat transfer is required.
- SolidWorks is required for creating parts, assemblies, and drawings with tolerances.
- Model mechanical structures involving heat transfer (conduction, convection) from heat exchangers and mechanical and thermal stresses from thermal expansion and effects due to high temperature, materials, and their interfaces.
- Design, analyze, build, and instrument test stands to test prototypes and products.
- Define specifications for parts and system. Lead vendors and suppliers to deliver to spec.
- Participate within multi-disciplinary team and interface with external partners and vendors.
- Contribute to developing company's core technologies and intellectual property.
- Document designs and results in the form of detailed drawings, reports, and presentations.
- Manage technical tasks and projects in order to meet overall program goals.

**Required Skills and Experience:**

- Solid technical capabilities involving mechanical design (SolidWorks) and analysis and modeling of structural mechanics (i.e. FEA) and heat transfer (i.e. CFD). Experience with heat exchange and materials at high temperatures (i.e. 400 – 900 degC) is preferred.
- Product development experience involving rigorous technical activity is preferred. Design for Manufacturability and Assembly (DFMA) is preferred.
- Experience with heat exchangers, thermoelectrics, and vacuum-sealed devices is preferred
- Technical project management is preferred
- Good communication skills, verbal and written
- Good interpersonal skills with the ability to work well within a team environment
- Agility, adaptability, and resourcefulness within a dynamic work environment
- Strong desire to work in a start-up company is a must. Experience in a start-up is preferred.

**Required Level of Education and Experience:**

B.S. in relevant field -- plus industry experience

M.S. in relevant field -- industry experience is preferred

**About VECARIUS:**

VECARIUS, Inc. is an emerging leader in heat recovery systems, significantly improving the energy efficiency of engines. Conceived by MIT engineers, our proprietary technology is positioned to make a lasting impact in clean-tech.