
Job Description

Job Vacancy : Electrical Engineer

Date: 05/11/2023

Location: Boston, Massachusetts

Salary: Highly Competitive Plus Benefits

Hours: Full Time

Contract Type: Permanent

Reporting to: Chief Technology Officer and VP of HTS Magnet Program

About Type One Energy

Fusion energy is the clean power at the center of stars. Mastered here on earth, its unique advantages will rapidly disrupt carbon-based fuels to become the primary form of baseload power on the planet.

Type One Energy is a fusion energy startup applying innovations in additive manufacturing, quasi-symmetry, and HTS magnets to commercialize an economical stellarator power plant. The stellarator is an innovative marriage of elegant physics, engineering artistry, and practical utility.

Founded by experts and technology from the University of Wisconsin, Type One Energy is a world leader in stellarator R&D with the mission to provide clean and affordable fusion power to every city across the globe.

In collaboration with our public and private partners, we are uniting the outstanding operation of a stellarator with breakthroughs in theory, additive manufacturing, and high temperature superconducting magnets. We are producing an economical fusion power plant to be deployed worldwide in the shortest amount of time.

About the role

Type One Energy is seeking highly skilled Electrical Engineers to help design and building high-temperature superconducting (HTS) magnets from scratch. The ideal candidates will have expertise in designing and implementing high current power systems, high voltage insulation, high-frequency design, power supply design, CAD design, electromagnetic design or, microcontroller design.

You will collaborate with other Engineers to build HTS magnets from scratch and be involved with large metal structure design, stress limited design, electrical design, and additive/subtractive manufacturing.

Responsibilities

- Be part of a fast paced collaborative team designing and building high-temperature superconducting magnets from scratch.
- Develop and implement high-current power systems to operate HTS magnets.
- Design and implement high-voltage insulation systems for HTS magnets.
- Design high-frequency circuits to control and stabilize HTS magnets.
- Develop and implement power supply systems for HTS magnets.
- Create CAD designs of HTS magnet systems for manufacturing.
- Conduct electromagnetic simulations to optimize design.
- Work with robotics and automated machines for magnet assembly and testing.
- Perform circuit simulation to predict magnet performance and identify issues.
- Use LabVIEW for data acquisition and analysis during testing.

Required Qualifications and Experience

- Bachelors or Masters degree in Electrical Engineering or a related field.
- Proven experience of electrical design and testing on large scale projects.
- Proven experience with high-current power systems and high-voltage insulation is desirable.
- Expertise in high-frequency design and circuit simulation is desirable.
- Strong skills in power supply design and CAD design.
- Experience with electromagnetic design and microcontroller programming is desirable.
- Proficiency in Python programming is desirable
- Experience using LabVIEW for data acquisition and analysis.
- Knowledge of cryogenic and vacuum systems is desirable.
- Strong analytical and problem-solving skills.
- Ability to work in a fast paced team environment.
- Excellent communication and interpersonal skills.

To Apply

Please send your CV and cover letter to Sam Belazka at sam.belazka@typeoneenergy.com and for more information please visit our website at www.typeoneenergy.com.