Thermal Battery Corporation

Senior Mechanical Engineer

Thermal Battery Corporation (TBC) is a start-up company that is developing and commercializing an energy storage technology to enable the utility grid to operate fully on renewable energy (visit: www.thermalbattery.com for more details).

The technology was successfully developed over the last 10 years at the Massachusetts Institute of Technology (MIT) in Professor Asegun Henry's lab. Thermal batteries operate by storing heat in low-cost graphite blocks at extremely high temperatures. Liquid metal is pumped, and used to transport heat between subsystems, while thermophotovoltaics (TPV) are used to generate electrical power on demand. Thermal batteries provide roundtrip efficiencies of ~ 50%, with an installed cost ~ 30X cheaper than Li-ion.

TBC's ambitious goal is to significantly contribute to the fight against climate change by producing low-cost, large-scale energy storage facilities. TBC offers exciting opportunities to strong individuals seeking an exciting work environment. TBC has a culture of teamwork, continuous innovation based on first principles/physics, and fearlessness in tackling challenging problems. TBC is looking for highly skilled, experienced, and motivated individuals who share our passion for mitigating climate change.

Job Description

We are looking for a Senior Mechanical Engineer to join the Thermal Battery Engineering team, a highly motivated group responsible for designing a 1MWh thermal battery "Pilot" system that will be the standard building block of TBC's commercial product. This position will own a critical part of the "Pilot" system and will work closely with a group of talented engineers to optimize the design for reliability, manufacturing, assembly, and battery performance. The ideal candidate will create innovative mechanical solutions designed for robust industrial products.

Your Role:

- Lead the design of critical components
- Create state-of-the-art mechanical designs and professional drawings, select key components, closely collaborate with vendors and partners

- Hands-on experience with designing, modeling, and prototyping
- Hands-on experience debugging, testing, and successfully operating your own custom designed hardware and systems
- Define and execute validation test plans
- Write conceptual outlines, diagrams, and specifications

Qualifications:

- MS or Ph.D. required in Mechanical Engineering or related field
- (4+) years of experience in mechanical industrial design
- Expert in SolidWorks design software
- Expert knowledge in heat transfer and thermal fluid systems
- Proficient in using advanced modelling software (e.g., ANSYS or COMSOL)
- Experience with prototyping, machining, joining and/or other fabrication techniques
- Extensive experience with designing, building, debugging, and successfully testing systems from scratch
- Advanced knowledge of mechanics of materials, designing for thermal expansion, thermal stress, and thermal cycle fatigue is a plus
- Experience working with high-temperature applications and/or materials such as ceramics, graphite or refractory metals is a plus
- Familiarity to industrial design codes (e.g. ASME B31.3, NFPA 855, UL 1547, etc.) is a plus.

TBC is committed to fight climate change, and it is also committed to offer equitable compensation, stock options, and a competitive benefits package.

Please send resume to: hr@thermalbattery.com

Human Resources
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