

Failure Analysis Engineer

MOSS LANDING, CA / FULL-TIME

Verdogy is creating a new class of very large-scale hydrogen electrolyzers that will help decarbonize some of the most difficult to abate sectors of our global economy. Our approach is to design large modular skid-mounted hydrogen electrolyzers that will be used to architect very large-scale hydrogen production plants.

Summary

- The failure analysis engineer is expected to determine failure root-causes of critical electrolyzer components within Verdogy's water electrolyzer system and contribute to the continuous improvement of Verdogy's water electrolyzer product.

ROLES & RESPONSIBILITIES

- Plan, schedule, and conduct hands-on failure analysis activities on existing failure replication, component lifetime and accelerated failure testing experiments.
- Perform materials analysis and identify failure modes of commercial size electrolyzer components from pilot plant operations.
- Expand the failure testing program by designing and conducting additional experiments.
- Validate product design and component selection with appropriate testing pipeline.
- Utilize multidisciplinary analytical tools, including but not limited to microscope imaging, elemental analysis, spectroscopy analysis, electromechanical and thermomechanical testing.
- Collaborate with other scientists and engineers to drive the solutions and countermeasures of the identified failure modes.
- Document test data, maintain analysis reports, and communicate the results effectively within the company.
- Contribute to the product development through identification of failure modes, de-risking, and validation of design.

Prior Experience and Qualifications

- BS or higher in Mechanical Engineering, Materials Science, Chemistry or applicable Science and Engineering fields.
- 3+ years of failure analysis experience, preferable with electrochemical systems.
- Demonstrated strong hands-on experience on at least one of the following areas: materials characterization techniques, accelerated failure testing, corrosion testing, design and fabrication of customized lab scale testing equipment.
- Familiarity of low temperature water electrolyzer, fuel cells or flow batteries.
- Knowledge of various failure analysis techniques such as microscopy, spectroscopy, electrochemical techniques, thermo-analytical techniques, and mechanical testing.



- Strong data analysis skills required. Experience in data communication with embedded systems (Arduino, Raspberry Pi, LabView, Python, MATLAB, etc.) is a plus.
- Excellent verbal and written communication skills required.
- Passionate about green hydrogen, decarbonization, and sustainability.

About VerdagY

The VerdagY team is a dedicated and innovative group of forward thinkers looking to dramatically change the hydrogen electrolyzer industry. VerdagY is a spinoff of green chemistry pioneer Chemetry Corporation. Our years of experience in electrochemistry and plant operations and engineering have provided us an opportunity to rapidly commercialize our innovative and novel approach to hydrogen electrolysis. We are backed by an incredible group of financial investors, renewable energy developers and Fortune 100 corporations. Our investor/partners are leading companies in the petro-chemical, industrial chemicals, energy infrastructure and mining industries, all sharing an extraordinary desire to deeply decarbonize their businesses at very large scale. This is where VerdagY's membrane-based, large aspect ratio cells, running at high current densities provides the scale solution needed for industrial decarbonization. VerdagY operates offices, laboratory and pilot plant facilities in Moss Landing, California, to further commercialize this technology platform.

Employee Benefits, Flexibility & Ownership

VerdagY provides generous health/dental/vision/disability insurance benefits for our employees and their immediate family. We know flexibility is important and we value and respect individual contribution whether it comes from work done at home, during odd hours, or at Moss Landing with teammates. Employee equity and ownership is our way to ensure everyone participates in the results and value creation of the company. We offer a 401k and an unlimited time-off policy.

Diversity & Inclusion

We value everyone and are actively seeking diversity as we grow. We believe a diverse team of people with different perspectives and lived experiences enriches the quality of our work and is fundamental to a positive, collaborative and inclusive culture.

Culture

We are building a people-centric culture where trust, respect and empowerment are built into every aspect of VerdagY and our way of working. If you want to do your best, most purpose-filled, meaningful work, come and join us – your contributions are needed now more than ever.

VerdagY is an Equal Opportunity Employer