

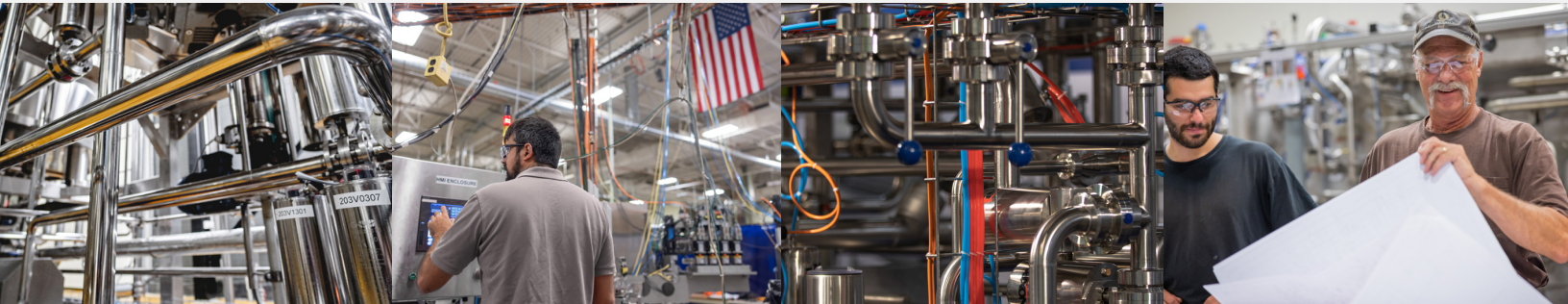


HYDROGEN & FUEL CELL SOLUTIONS

Custom Engineered and Manufactured Hydrogen and Fuel Cell Systems.

Re:Build Optimization has a decade-long history of the design and fabrication of equipment for the hydrogen industry, as well as other carbon-neutral fuels. Re:Build Optimization's team of engineers and skilled tradespeople fabricate and assemble pressure vessels, skid-based piping systems, control panels, and electrical systems to transform designs into functional systems. We have ASME Certification and experience with high-pressure piping and pressure vessel fabrication. Systems built include hydrogen generation, fuel cells, reformers, test systems, and dispensing systems. We work with the largest manufacturers and start-ups in the American fuel cell industry to build a variety of systems, including hydrogen generation, fuel cells, reformers, test systems, and dispensing systems.





Key Strengths

Engineering & Design

The Re:Build Optimization engineering team includes chemical and process engineers with decades of experience and PhD credentials for process modeling, energy, and heat balance and PFD development. Automation engineers design control systems, panels, and instrumentation for the necessary safety systems. We prefer to follow the Front-End Loaded (FEL) process or quality project management.

Process Safety

As part of our regular development processes and in separate consulting engagements, we are called upon for safety consulting. This includes electrical classification of affected areas, Hazardous Operations studies and reviews, and specialized process flows and corresponding instrument selection and specification. We are current and expert in national and international electrical and fire codes, as well as those of many state and local jurisdictions.

Test Equipment

We have developed fuel cell test systems at both the cell and stack level, in both Solid Oxide and PEM technologies. Our engineers and fabricators are well-versed and deeply experienced in the specifics and nuances of instrument and materials specifications for H₂ compatible construction and safe operation. We've built nearly 100 complex, integrated systems with priorities and emphasis on safety, innovation, and cost-effectiveness.

Membrane Equipment

Our media conveyance/roll-to-roll engineering and manufacturing capabilities are employed in development of equipment and processes for PEM fuel cell R&D. The very deep experience base of our team is leveraged in coating and dispensing strategies and equipment. This has been embodied in custom pilot coating process equipment for precision coating development.

PROJECTS:

- Proton Exchange Membrane (PEM)
- Fuel Cell Manufacturing Equipment
- Sheet Coating Pilot System Design & Build
- Solid Oxide Technology
- Design & Build of Test Chambers
- Process Oven Line Pilot System
- Fuel Cell Stack & System Test Stands
- Electrolyzer Equipment Fabrications & Installation
- Catalyst Reactor Design for QC Testing
- Anion Exchange Membrane (AEM) Electrolyzer Equipment



LOCATIONS:

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