

Solutions in Action



FEECO International provides state-of-the-art custom equipment and systems manufacturing through advanced material profiling and process testing in their Innovation Center.



Allen-Bradley ControlLogix Programmable Automation Controller



Allen-Bradley PowerFlex AC Drives

Innovation drives the success of most businesses. And that's especially the case for heavy industries where accelerating environmental concerns and regulatory requirements are having a significant impact.

Today, many entities must focus on new and better ways to use resources and drive profitability across their operations – from material handling and processing through waste and byproduct transformation.

“That’s what our company does,” said Lee Hoffmann, vice president and general manager, FEECO International. “In our Innovation Center, we help companies design, test and fine-tune new technology and processes. And then we manufacture custom equipment to implement those processes in production facilities.”

Founded in 1951 as an engineering and equipment manufacturing company, FEECO quickly became an expert in granulation and developed a reputation as a company that could solve a wide range of material challenges. From headquarters in Green Bay, Wisconsin, FEECO enjoys a global customer base that spans mining, agriculture, ag-chemicals, power and utilities, and specialty products.

LISTEN.
THINK.
SOLVE.

Over the past decade, FEECO has applied numerous solutions encompassing diverse applications – from enabling a mine to recover nickel in cellphone batteries to converting the nutrients in dairy manure into commercial grade fertilizer.

“No matter what the application, our customers typically approach us with an idea,” said Craig Peppin, customer services and laboratory manager, FEECO. “And they first want to prove that concept on a small scale.”

The company’s state-of-the-art Innovation Center is a unique facility that offers comprehensive testing options for both agglomeration and thermal processes. It includes an analytical laboratory and pilot plant – and runs on a Rockwell Automation PlantPax® distributed control system (DCS).

Based on an Allen-Bradley® ControlLogix® platform and EtherNet/IP™ network, the DCS incorporates intelligent motor control devices, including Allen-Bradley PowerFlex® AC drives for variable speed control and intelligent motor overloads for feedback and alarming. Local monitoring and supervisory-level visualization capabilities provide FEECO with the real-time information and reporting they need to control, monitor and document each step of their process utilizing FactoryTalk® View, FactoryTalk Historian and FactoryTalk VantagePoint® software.

“In the Innovation Center, we typically start with a proof of concept to determine if the idea is feasible,” Peppin explained. “Testing can also include proof of product, proof of process and product optimization.”

As part of the operation, FEECO performs end-product testing that can include bulk density, flow rate, compression strength, particle size distribution, moisture content, abrasion and hardness and sieve analysis.

The pilot plant can be set up for testing on a single piece of equipment, or multiple pieces of equipment as a continuous process loop.

“Our customers often continue testing and tweaking the formulations in our pilot plant,” Hoffmann said. “The Rockwell Automation system gives our customers an ‘aerial view’ of their process – so they can see exactly what’s working and what needs improvement.”

When customers are ready to move into commercial production, the Rockwell Automation platform can be scaled to the appropriate capacity.

“We can easily transition from the proof of process to a real project – and design a plant,” Peppin said.

To complete plant design and Factory Acceptance Testing (FAT), FEECO collaborates with the local Rockwell Automation Industrial Plant Services (IPS) group.

FEECO develops the process description, flow diagram, piping and instrumentation diagrams (P&IDs), control narrative, and motor and instrument list. Rockwell Automation provides the design package for the electrical drives and motor control centers (MCCs) – and develops the control logic and related documentation and graphics.

After Factory Acceptance Testing, FEECO teams with Rockwell Automation for plant integration and start-up. For some FEECO customers, Rockwell Automation provides remote support after the project is installed via secure Ethernet VPN connections.

“One of our customers was hesitant to contract for remote support, but now says it’s the best money he ever spent,” Peppin noted. “He recognizes that this relationship saves both time and money in the long run.”

Of course, for most customers the relationship with both FEECO and Rockwell Automation can be traced back to their experience in the Innovation Center.

“We are walking the talk in our labs,” Hoffmann said. “We are able to demonstrate to our customers that this is the value you can expect from us and through our relationship with Rockwell Automation.”

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