

COMPANY PROFILE ///

ROCKFORD COMBUSTION SYSTEMS

INDUSTRY LEADING COMBUSTION SOLUTIONS

Rockford's job is to ensure workers understand how to maintain the safety equipment as well as the functions of that safety equipment and what can happen if that safety equipment is circumvented.
(Courtesy: Rockford Combustion Solutions)

Rockford Combustion Systems offers expertise and experience to improve NFPA compliance, worker safety, efficiency, and air quality, while reducing the risk of fires and explosions.

By **KENNETH CARTER**, Thermal Processing editor

For industrial furnaces and ovens to do their jobs involves a lot of potentially dangerous and hazardous machinery and materials. To run this equipment, workers need to be trained properly in order to avoid injuries — or worse.

Rockford Systems takes those demands seriously and has been working with safeguarding mechanical equipment and, by extension, the combustion market, for decades.

“The two really go hand-in-hand; we’re big on safety; the basic philosophy of machine safeguarding — if you think about turrets and punch presses and other machines with pinch points or moving hazards — is the need to verify all conditions are individually proven correct before anything engages,” said Robert Sanderson, director of Business Development with Rockford Combustion Systems. “That is the underlying pinning of our safety philosophy. In the combustion market space, the same philosophies are there. You prove all the conditions are safe before igniting. You’ve proven your fans are ready. You’ve proven all has been fully purged. You’ve proven the fuel system ready to go.”

OSHA INSPIRED

Rockford Systems got its start in safeguarding mechanical equipment in the 1970s, shortly after the creation of OSHA.

“Back in the ’70s, upwards of 18 to 20 percent of the industrial workforce was injured or maimed,” Sanderson said. “A notable portion of those were deaths, actually. That was what really drove the creation of OSHA, to drive all that down and protect workers. Now, today, we are statistically much safer. OSHA is also a much larger entity. They look over a larger array of equipment and additional areas. The injury rates and statistics have really improved. So, the roots of Rockford Systems have been long established in safety.”

With an established record of protection devices and safety training for mechanical equipment, Rockford Systems expanded its safety offerings into the combustion market space, according to Sanderson. With that decision, Rockford Combustion Systems was created.

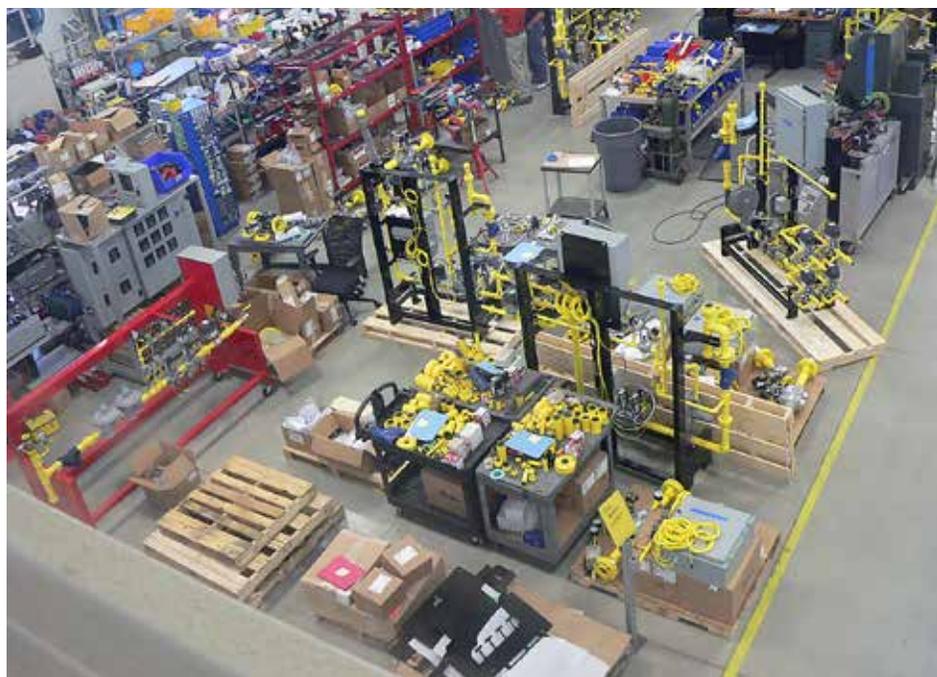
“The philosophies of mechanical and combustion safety — although you’re looking at different parts — are really hand-in-glove the same; it is a good fit with our customers,” he said. “Many of our customers need both sides of the business. It allows for holistic turnkey offerings, that we can go in and help them by improving safety to

all areas of their manufacturing facilities, and not just to the OEMs, but to the end users.”

CUSTOM SOLUTIONS

For the heat-treat industry, Rockford is a turnkey solutions provider, designing and delivering custom solutions as well as providing training, inspection, and annual reviews for its users so they can properly maintain, run, and operate their systems, according to Sanderson.

“Many people do not realize it, but the NFPA requires combustion systems be inspected at least annually and checked and tested, and



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that the operators review and are retrained annually as well,” he said. “The operators are your first line of defense, if you will, to ensure that the equipment is maintained and running in a safe condition. One of the big things that we can do is provide that training at the facility or here, in-house. We can also help inspect the equipment or train the people on how to inspect it themselves.”

VALVE SAFETY

Since much of the equipment in the heat-treat industry revolves around the use of different types of sometimes volatile gases, that equipment often relies on simple valves — valves to close, to provide



Rockford has a portable workshop that the company's experts can take with them directly into a customer's business. (Courtesy: Rockford Combustion Solutions)

safety, to provide throttling, and to provide control, according to Sanderson.

"Valves are mechanical devices," he said. "They wear out, and they leak. I like to say all valves all leak. It's just a question of how much, and is it an acceptable level? Is one drip a year out of a faucet acceptable, or are you willing to accept three drips a week or three drips a minute? All valves leak. So, when do you replace it? That is why you need to do annual inspections."

Rockford has a number of customers where they check and maintain the equipment, as well as provide an independent observation on how that equipment is running, according to Sanderson.

"One of the pieces of safety equipment used on fuel-fired equipment are pressure switches — high-pressure switches and low-pressure switches typically," he said. "The low-pressure switches basically are ensuring, at the front of the fuel piping, a minimum amount of gas pressure to safely operate is there. At the other end of the train is often a high-gas pressure switch to ensure that nothing between has failed, and you're not putting too much pressure, too much fuel, into the system — that you're not 'over-gassing' it. People have to check and maintain those devices. Some people have bad practices, however. They want to do what they can to keep things going and may not realize the consequences of their actions."

Those bad practices can result in damaged equipment or injuries when workers don't realize the hazard they are creating when they might be annoyed by an alarm and do something to bypass it, according to Sanderson.

"One of the key things we do is go through and make sure those switches are installed correctly; make sure that they are operating



"We view our customers as partners; we want them to have positive experiences and relationships, and build upon that to grow and move forward with us."

correctly; that they're arranged and set correctly; that the operators understand what those switches are for, and what to do if they're not working," he said. "Just because it's going off, doesn't mean that the switch is bad. It quite frequently is an indication that something else isn't right."

PROPER TRAINING

Rockford's job is to ensure workers understand how to maintain the safety equipment as well as the functions of that safety equipment and what can happen if that safety equipment is circumvented, according to Sanderson.

In order to properly teach these combustion safety procedures, Rockford has a portable workshop that the company's experts can take with them directly into a customer's business.

"We have a hands-on workshop that we can take with us," Sanderson said. "We've built it. It's portable. It's kind of a valve train in a suitcase. We bring it. We set it up, and we give the workers

hands-on safety training.”

During safety sessions, the portable workshop runs on compressed air to simulate how the system works when there is an actual fuel going through it, according to Sanderson.

“We can simulate faults and failures and show the workers exactly what’s going on, so they can understand and appreciate it and see how it’s supposed to work and what happens when it doesn’t, in a completely safe classroom environment,” he said.

COMBUSTION OPPORTUNITIES

Rockford was able to enter the heat-treating arena when a fuel burner and systems manufacturing company in Rockford, Illinois, went out of business, according to Sanderson.

“That was one of the ways that we were able to move into the market space,” he said. “There was a lot of knowledge and talented, experienced workers that were in the area. So, we took advantage of that.”

To that end, Sanderson said Rockford has matured with its customers, especially as COVID and other pandemic-related shortages and delays became a challenge.

“Being a fresh set of eyes, we bring a newer set of approaches to our offerings; we’ve developed a good number of partnerships with our suppliers,” he said. “I like to refer to them as partners, not suppliers, because we really do have fantastic working relationships with them. We work with them, and they bend over backwards to support us.”

And that includes finding alternate solutions for its customers as well, according to Sanderson.

“That’s something we are not shy about doing, is to help our customers by finding creative, voluntary turnkey solutions,” he said. “They may have always done it a particular way, but with COVID and other shortages — such as manpower — they may not necessarily be able to implement the same-old methods. We work with them to understand their processes and find other operations and other approaches with our turnkey offerings, to help get them out of painted corners.”

CUSTOMERS AS PARTNERS

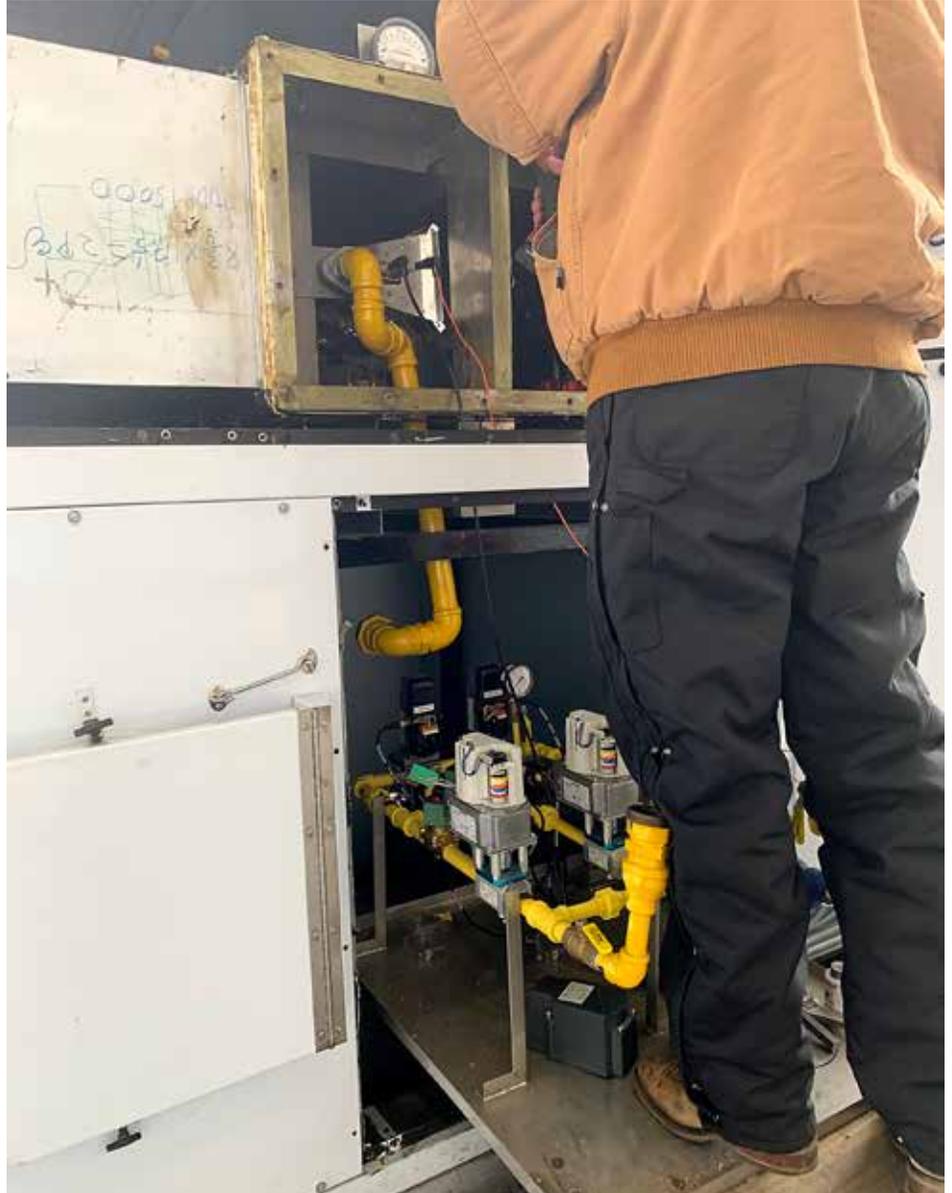
In essence, Rockford is in the business of wanting its customers to safely succeed, according to Sanderson.

“We view our customers as partners; we want them to have positive experiences and relationships, and build upon that to grow and move forward with us,” he said. “We try to find creative, suggestive solutions for other ways to accomplish their tasks. We’ll do it the way they want, but sometimes, there’s another approach, because we see a lot of other ideas and applications in the industry. Some of our employees are from paint, from furnaces, from air heating, from food and beverage industries. We’ve got a lot of different skillsets. We work to cross train those experiences and bring those ideas from other market spaces to help find turnkey custom solutions.”

Since starting the combustion part of its portfolio four years ago,

Sanderson said Rockford has grown tremendously and is eager to tackle any challenges the future may hold.

“I see the industry transitioning toward alternate fuels and more alternate sources of heat,” he said. “We will continue to be at the forefront of that, on the safety side, making sure people are properly addressing their fuels. Different fuels have different hazards. One can’t just switch from natural gas to propane or hydrogen without addressing the unique hazards that those different chemical com-



Rockford is in the business of wanting its customers to safely succeed. (Courtesy: Rockford Combustion Solutions)

pounds introduce. Users need to understand how each behaves and their unique hazards. We will be there to assist them with those transitions, educating them and working to ensure the workers are safe.”

Sanderson said Rockford will continue to push those turnkey solutions in order to ensure the safety of both its customers’ employees and their processes.

“That is the big driving factor for us — making sure everyone goes home safe every day,” he said. ♪

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