

CORONAVIRUS AFFECTS CERAMIC MANUFACTURING BUSINESSES—AND PRESENTS NEW OPPORTUNITIES



By David Holthaus

Faced with a rising number of COVID-19 coronavirus infections, Pennsylvania governor Tom Wolf, like so many other government leaders, issued a stay-at-home order for his state in mid-March. Not long after the governor's order, phone calls and emails started coming in at Du-Co Ceramics' headquarters in Saxtonburg, Pa.

Dozens of the family-owned firm's customers called wanting to know if the company would be able to continue supplying the components that are critical to making their products.

"The first call we got was from a company that makes ventilators," says Lora Cooper Rothen, Du-Co's CEO.

Ventilators, of course, have been in high demand as the respiratory illness spread and crippled the ability to breathe unaided for tens of thousands of people. The ventilators were needed to keep them alive, and Du-Co's ceramic components were essential to make the ventilators.

The ventilator maker wanted to double its usual order and wanted it expedited. "We were able to do that," Rothen said.

Rothen's company was able to pivot and meet the demands of its critical customer because of smart practices it had adopted long ago, practices that kept its operations running and its customers happy as the coronavirus pandemic affected the local, national, and global economies.

Manufacturers across the world were forced to respond quickly to business disruptions caused by a crisis unlike any other. Business

worldwide essentially came to a halt as companies were ordered to keep their workers at home, if possible, to avoid spreading the highly contagious coronavirus.

Company leaders scrambled to protect their workforces, sanitize their workplaces, put into practice new guidelines on physical distancing, and plan for an uncertain future.

Du-Co has made it its practice to stock up on raw materials, such as alumina and magnesium oxide, which meant it could continue supplying the ventilator manufacturer and its other customers.

"We decided a long time ago that we needed to have the material in-house to prevent any shortages," Rothen says. "We probably have a year's supply of most of our materials in-house."

Many ceramic and glass manufacturers were declared essential businesses during the shutdown, which was a first step in managing through the pandemic.

Columbus, Ohio-based Harrop Industries, for example, makes industrial kilns and other products that are key links in the supply chains that ultimately serve the aerospace, defense, and transportation industries.

When Ohio governor Mike DeWine closed businesses in Ohio in mid-March, Harrop's offices and plant closed for two weeks, and everyone who could work from home did so.



At Du-Co Ceramics, managers served a pizza lunch to employees to boost morale. From left, Mike Crytzer, VP operations; Brell Saiber, general manager; and Tom Arbanas, president. Credit: Du-Co Ceramics

When the workplace reopened, physical distancing guidelines were in place to keep employees at least six feet from each other. In the plant, however, following those guidelines has been challenging and has slowed production, says Steve Houseman, Harrop president.

"When we're working on a kiln, building a kiln, there are times when people need to be close to each other," he says. "We've tried to adapt to that and keep people six feet from each other. That has slowed us down quite a bit."

To keep its employees safe, the company has reengineered some manufacturing tasks using only one worker where two were used before, or alternating workers, he says.

That's been difficult in the manufacturing areas at Reno Refractories, too, says James Hemrick, senior research engineer at the Morris, Ala.-based company.

The company produces refractories as well as finished shapes, mainly for the cement and steel industries. In the shape shop, it's been difficult to keep workers six feet from each other and still do their jobs, so the company adopted other safe workplace practices, including having the shop's employees wear full respirators and disposable clothing, Hemrick says.

Employee safety, always paramount in a manufacturing environment, became even more critical in light of the contagion's ability to spread easily. Employees tasked with looking after worker safety took on far-reaching new responsibilities.

"We've had to comply with other companies' safety requirements—our customers'," Hemrick says. "Our safety people have been tasked



Steve Houseman
Harrop president



At Harrop Industries, some manufacturing tasks have been reengineered. Credit: Harrop

with that. That's been a whole other layer of added responsibility for those guys."

Reno is considering implementing a companywide COVID-19 testing program offered by Alabama's industrial health council. "Being a small business, it's feasible for us to get everyone tested and follow



Reno Refractories is considering a companywide COVID-19 testing program.
Credit: Reno Refractories

up in a few weeks," Hemrick says. "That will give our employees a little bit of peace of mind."

In fact, compassion and promoting employee peace of mind has become a smart business practice that took on extra importance as employees navigate their workplaces and their daily lives with an invisible germ lurking.

"We're trying to be compassionate to everybody," Houseman says. "People that don't want to be here, we're not going to force them to be during this time."

Some chose to take unused vacation time all at once and stay home, he says.

Like other employers, Blasch Precision Ceramics is checking in more frequently with workers to make sure they feel healthy; has staggered breaks and lunch hours for all three shifts to keep workers at a distance from each other; has asked office staff, engineers and others who can to work from home; and has placed hand sanitizer stations around the office and plant.

"We want to make sure they're not overly stressed," says Keith DeCarlo, vice president of technology at the Menands, N.Y.-based company.

His company, like others, increased the frequency and intensity of plant and office cleaning done by a vendor and has accelerated the plant workers' use of N95 masks and P100 respirators that were already in stock.

The economic disruption caused by the pandemic and the uncertainty over how long it will last made business planning for the long-term difficult. Unnecessary travel was put on hold. Sales calls are being done remotely.



James Hemrick
Reno Refractories

Reno Refractories has shelved a couple of capital projects it had planned for this year, Hemrick says. "We're definitely watching our capital and our funds," he says.

The company is focusing on existing business and meeting its current customers' needs, he says.

The same is true at Blasch Precision Ceramics, where the team keeps in touch with customers at least weekly to understand their needs and estimate future orders.

Long-term planning has become nearly impossible. "An annual forecast of markets is a very difficult thing right now," DeCarlo says. "That's a dynamic piece of paper as opposed to something we work to."

At Du-Co Ceramics, the company expanded the number of directors on its board and authorized considerable decision-making to a five-member executive team that is reaching out to insurance brokers, consulting with safety experts, and consulting with attorneys on potential personnel issues, Rothen says.

Because of the upstream position of ceramics manufacturers in the supply chain, many are still working off backlogs of orders. That may change as they look ahead to the second half of the year and the business slowdowns being experienced in the automotive, aerospace, steel, and other industries is felt.

"We've seen this before with a downturn in the economy where we're insulated for a couple of months, but eventually it does catch up with us," Hemrick says.

"Looking down the road, we're certainly going to plan to have less business than we have," says Harrop Industries' Houseman.

Some positive business developments have emerged from the crisis, although, as De Carlo says, "You definitely have to look for them."

Staff at his company became more efficient at administrative tasks, handling paperwork electronically and offsite.

In the production arena, they saw an opportunity to move into the medical equipment market with new high-purity materials its researchers have developed in the last year, he says.

With daily operations slowing, there's more time to focus on innovation.

Researchers at Reno Refractories have been working on a new product line for a couple years and that's taken on a new importance, Hemrick says.

"It's given us a little time to focus on some of that activity on the R&D side, where we don't have to support the day-to-day operations so much," he says.

Du-Co Ceramics prioritized a goal of becoming more self-sufficient, Rothen says. Its executives decided to manufacture more of the firing fixtures it uses and purchased equipment to do that.

That focus on finding new products, processes, and practices is one positive impact that may come about from the COVID-19 crisis.

"It's finding that opportunity," Hemrick says. "There is opportunity here even in the midst of all this." ▽



Keith DeCarlo
Blasch Precision Ceramics



At Blasch Precision Ceramics, employees practice safe physical distancing. Credit: Blasch Precision Ceramics



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A CHECKLIST FOR REOPENING SAFELY

By J. Douglas Jeter, PE, CSP

Here are some suggestions to help with initial reopening and longer-term preparedness planning in the wake of the COVID-19 pandemic. Best practices are ever-evolving, so be sure to follow current guidelines as set by your local, state, and national health departments.

UPON REOPENING:

1. Post signs at the entrances to your facility to remind people that social distancing protocols are in effect.
2. Make hand sanitizer available around building entry points, shop floors, lunchrooms, office areas, and other gathering spots. Be sure sinks are well supplied with soap.
3. Doors that can stay open without violating local fire codes should remain open, eliminating the need for touching them.
4. Sanitize frequently touched surfaces (light switches, copier, and microwave touch pads, remaining doorknobs and handles, etc.) at least daily.
5. Let employees who can continue to work from home do so, especially those with COVID-19 comorbidities such as stroke, lung, heart, or kidney conditions, or those in an age demographic representing increased risk.
6. Stagger shifts to limit exposure of overlapping crews at shift change.
7. To the extent possible, reduce nonemployee access to your facility. Move locations for inbound receiving (including mail) to the periphery of your building.
8. Provide masks, gloves, and hand sanitizer for employees whose role requires public contact, such as field service and delivery personnel.
9. Anyone who travels by air should wear a mask for the duration of their time onboard the aircraft.
14. Update disaster recovery and business continuity plans to include pandemics.
15. Beyond normal succession planning, consider how the role of key contributors and those fulfilling key positions would be covered in the event of their temporary or long-term absence. This takes on heightened importance for “essential” businesses.
16. Document processes and procedures for any critical functions.
17. Review your Employee Assistance Program. Does it adequately serve the mental health needs of employees in the current environment?
18. Put agreements in place now to secure supply chains in the event of future pandemics.
19. California has an occupational standard (the Aerosol Transmissible Diseases (ATD) standard, Title 8 CCR; Section 5199) for the prevention of worker illness from infectious diseases that can be transmitted by inhaling air containing viruses, bacteria, or other disease organisms. Depending on the work environment, it might be helpful to implement the measures called out in this standard. <https://www.dir.ca.gov/title8/5199.html>

ABOUT THE AUTHOR

J. Douglas Jeter is director of sales and marketing for Harrop Industries.



J. Douglas Jeter at work. Credit: Harrop

LONGER TERM: Since the 2003 SARS epidemic and 1918 Spanish Flu came in multiple waves, it is not unrealistic to expect that there will be some uptick in cases as restrictions are eased and the virus mutates over time. The following steps will help prepare your company should stay-at-home orders be reimposed:

10. Restock the supply of N95 masks, hand sanitizer, disinfectant, gloves, etc., and increase the minimum quantity of these items kept on hand.
11. Address any deficiencies in your remote IT infrastructure that surfaced during the March-April 2020 timeframe, such as issues with remote access to email or servers.
12. Provide training for those not yet comfortable with video conferencing.
13. Along with making your IT infrastructure more robust, make sure your IT security is up to the task. Computer viruses, hacking, and industrial espionage are all too prevalent.