

***STAINLESS FOUNDRY  
& ENGINEERING, INC.***



# Restructured, Revitalized, Re-Invigorated

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#### Written by Nate Hendley

**A** comprehensive, multi-year restructuring process has revitalized Stainless Foundry & Engineering, Inc. of Milwaukee, Wisconsin. Founded in 1946 by John McBroom, the company manufactures raw and machined castings in both investment and sand.

“Seventy percent of what we do is pump and valve work,” explains President and CEO Jim Stachowiak.

These pumps and valves end up in products used by such sectors as the military, food and dairy, petrochemical, nuclear, and power generation. Other services Stainless provides include sand casting, investment casting, and machining with a focus on corrosion-resistant, high heat and wear-resistant steel, stainless steel, and high alloy parts. Stainless has also recently introduced a spectrum of new alloys, equipment, and processes.

And if COVID-19 hadn't struck earlier this year, 2020 would have also seen the company adding new staff. The reinvigorated company is currently in consolidation mode, preparing for a time when the virus is no longer a threat to individuals and businesses. ▶▶

## ► Back on a roll

Stainless Foundry is clearly on a roll, quite a switch from 2014 when Stachowiak joined the foundry as Vice President of Operations. At the time, Stainless was going through significant turmoil, due in part to the glitch-ridden rollout of a new Enterprise Resource Planning (ERP) system. The ERP installation did not go smoothly, and the company struggled to “get orders entered, orders through, orders certified,” recalls Stachowiak.

The ERP crisis compounded other issues plaguing the company. At the time, the market was softening, Stainless wasn't meeting revenue goals and infrastructure costs were too high, says Stachowiak. Stainless found itself in a precarious position.

Stachowiak was put in charge of the business in early 2015 and a restructuring process soon commenced. A series of meetings, internal audits, training sessions, strategic planning exercises and consultations with outside organizations ensued. Restructuring was an intense, lengthy process that covered all aspects of the business.

“One thing we learned was that we didn't have a good understanding of our cost structure. We had to do some work, fixing the cost structure, understanding which customers were truly profitable and which customers were not profitable. Then, for customers that weren't profitable, we put together a plan to figure out how to make them profitable,” recalls Stachowiak.



**Thomas Mueller** *Express Prototyping, LLC*  
2265 Star Court, Rochester Hills, MI 48309  
Office: 586 221 3230 | Cell: 248 824 3820  
tm@express-prototyping.com

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## Big cuts in lead time

It was also decided to cut lead times as a way to help Stainless stand out from competitors. The latter might be able to offer lower prices but took much longer to get products to clients.

“We looked at it and said in order for us to maintain a competitive advantage and maintain profitable growth we’ve got to be able to serve customers faster,” explains Stachowiak.

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To serve customers faster, the company launched an initiative called the Throughput Improvement Process. Investment and sand foundry processes were overhauled to reduce lead times. Instead of focusing on batches, the company switched to smaller lot sizes. New work flows were introduced, equipment was grouped in cells manned by employees cross-trained to handle multiple operations. New equipment was acquired. Newly purchased blast equipment was placed near the heat-treat area and shipping dock. Lead times were pared down to four to six weeks against an industry average of around eight to ten weeks.

Stainless continues to work on cutting lead times even further. “By improving throughput, we saw a corresponding improvement on delivery times,” says Stachowiak.

## Reaching out

While Stainless has an in-house machine shop with approximately a dozen CNC machine tools, a decision was made to expand the firm’s reach. Partnerships were forged with local companies, as another way to ensure short lead times and on-time delivery.

“We partnered with four local shops, that help supplement us from a capacity perspective,” says Stachowiak. Thanks to this arrangement, the Stainless machine shop can focus “on low-volume type of work and some of the complex higher-specification work,” he explains.

While restructuring involved making drastic changes, the management of Stainless was determined to preserve the company’s technical prowess. The foundry prides itself on being at the forefront of the industry.

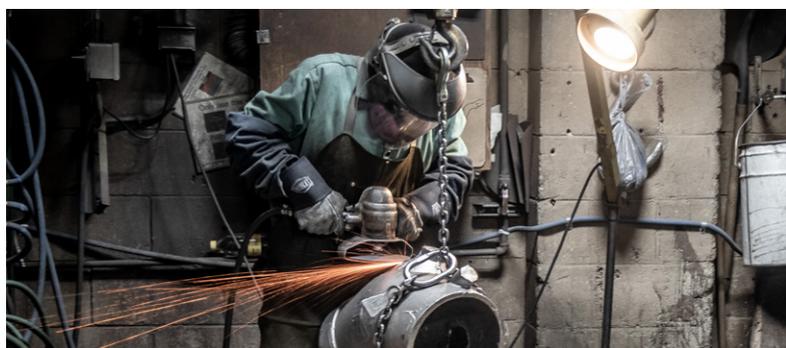
“Part of it for us was ensuring we could maintain our technical leadership position. Stainless Foundry has always been a technical leader, has always been doing challenging work and challenging assignments. It was important as we went through [restructuring] that we preserve the technical capabilities of the business,” Stachowiak says.

Stainless has successfully preserved its technical capabilities and continues to play an industry leadership role. To this end, the firm has embraced cutting-edge processes such as additive manufacturing (3D printing).

“We’ve purchased and implemented 3D printing for the investment foundry. We’re able to do 3D printed waxes for prototypes as well as some production operations,” says Stachowiak. He predicts the firm will expand its 3D capabilities “somewhere in the next six to 12 months.”

Stainless has also recently started working with new alloys including Ni-Resist D-5S, Ni-Resist 1, Ni-Resist 1B Cr, Ni-Resist 2, Ni-Resist D2, Ni-Resist 4, Invar, Sanicro, HK30Nb and 25CrFe.

“It’s not as much about, ‘Are we going to introduce new alloys?’ It’s really about understanding the customer and the market and seeing where there’s a need. We’re introducing some bronzes and brasses that are really focused on military high spec applications, as well as nuclear applications,” he says. ▶▶





## ► The people story

Employment at Stainless Foundry & Engineering stands at about 170 people, the same number as last year at this time. Stainless was poised to expand and rise to maybe 200 personnel this year, but COVID has temporarily put such expansion plans on hold. The company's reaction to the pandemic was comprehensive and thorough.

The company instituted "rolling furloughs" at the beginning of the pandemic, shutting down one part of the foundry at a given time and arranging for engineers and other staff to work remotely.

Being a foundry, many front-line workers at Stainless already wore protective gear, including respirators, when COVID struck. To ensure maximum safety, the firm introduced proven health-related protocols including hand washing, social distancing and mandatory face coverings when working indoors near other people.

Stainless management were also quick to recognize the human aspect of the COVID pandemic.

"We understand that our employees are going through some really challenging times. We've got some folks that used to be two income families but now it's only one. We've got some employees struggling with childcare because schools are not open. COVID has really pushed us to think a lot differently about how we show empathy for employees."

Stachowiak says they constantly ask themselves the question: "How do we find creative ways to work with [employees] so they can continue to be safe and continue to work and earn a living while not being overly stressed out about the rest of things happening in the world?"



## The future as opportunity

At present, the “biggest challenge facing Stainless is trying to predict when the markets are coming back and what’s going to happen with the pandemic the rest of the year. That’s anybody’s guess,” he adds.

Some things at Stainless haven’t been impacted by COVID. The ISO-certified firm still maintains a wide-ranging quality assurance program. Stainless has an on-site laboratory with spectrometers, Coordinate Measuring Machines (CMMs) and other inspection/measurement tools. The firm recently purchased a carbon sulfur analyzer to augment its inspection gear.

In addition to these in-house measures, Stainless is frequently audited by third parties. Such inspections are a requirement when working with the military and nuclear sectors. “We’ve got customers that are verifying and validating our quality systems on a regular basis,” says Stachowiak.

Stainless in turn audits its own suppliers. Suppliers have to pass routine inspections before they’re accepted by Stainless as an approved vendor. These audits are conducted frequently, to ensure Stainless suppliers are maintaining standards. Given the company’s strict quality assurance measures, it’s no surprise that Stainless is equally adamant about safety.

Front-line workers participate in daily safety discussions, supervisors are encouraged to continuously observe safety conditions, and the firm utilizes outside parties to ensure it meets regulatory mandates – “all the essential things we need to stay in compliance with the EPA (Environmental Protection Agency) and the Department of Natural Resources,” according to Stachowiak.

## The future for foundries

Asked where he sees Stainless five years down the road, Stachowiak offers some commentary on the foundry sector in general.

“In North America, the foundry industries really need some consolidation. In order for us to survive long-term I think there needs to be. We would like to be on the forefront of that as we strive to look for those opportunities and try to find ways in which we can grow and position ourselves as market leader from a technical and lead time perspective.”

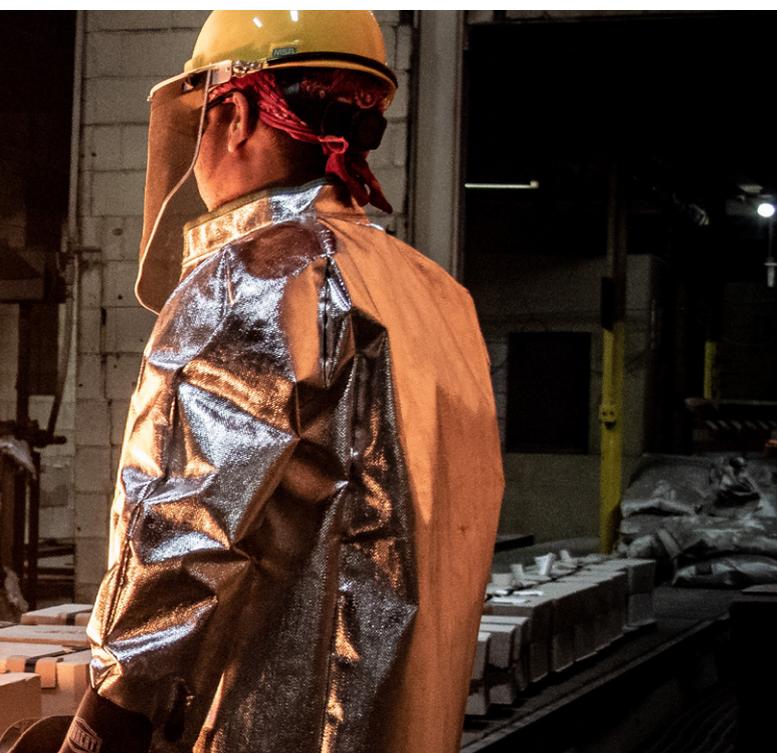
As for how far Stainless has come in achieving the goals set out during the restructuring process, Stachowiak reflects for a moment.

“I would say we’ve made some very good strides in improving customer service, with on-time delivery, and maintaining our technical focus within the industry. We’re probably 50 percent there when it comes to where we want to be for the lead time.

“There are some things we’re working on to separate our high-spec work from our commercial that we think will allow us to continue to drive the improvements on both sides of those product offerings and continue to reduce lead times.

“That’s really the challenge we have, driving to that next level,” he concludes. ■

Content Developed by Whitney McCoy | Designed by Severina Gachparova



# **STAINLESS FOUNDRY & ENGINEERING, INC.**

5110 N. 35th Street, Milwaukee, Wisconsin 53209 | P: 414.462.7400 | F: 414.462.7303

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