COMPANY PROFILE ///

NITREX

OFFERING A WORLD OF STRENGTH

Modernization of vacuum furnace controls pushes the limits in equipment performance and extends the furnace's useful life. In this photo, the new UPC control system based on the Protherm 710 controller includes chart recording and recipe control with specific programming for automatic leak test cycles and guaranteed soak for medical industry requirements. (Courtesy: Nitrex)

Having recently ushered in a comprehensive rebranding strategy, Nitrex continues to be a global partner offering modern nitriding/nitrocarburizing and vacuum heat-treat solutions, technologies, equipment, and services.

By KENNETH CARTER, THERMAL PROCESSING EDITOR

Nitrex, a leading global provider of fully integrated heat-treating solutions and technologies, has experienced rapid growth and expansion in its 35 years in the industry, and with that growth, the company has been able to offer a substantial range of services.

With all that it has to offer, Nitrex CEO Jean-Francois Cloutier essentially defines the company as a "solutions provider."

It might be a simple phrase, but what Nitrex has accomplished is anything but as it rolls out efforts designed to present itself under one brand.

"It was mainly to support the growth, and where we want to go," Cloutier said. "Because we want to keep growing."

THREE DIVISIONS, ONE COMPANY

Now, the company's various brands will operate under one umbrella company. Along with Nitrex, the new brand will include UPC-Marathon, but legally operating as United Process Controls, and G-M Enterprises, which is the newest addition to the Nitrex Turnkey Systems portfolio.

"The company operates with three divisions," Cloutier said. "One is called Nitrex Turnkey Systems, which designs and manufactures nitriding and vacuum heat-treating systems. Another division is Heat Treating Services, composed of multiple commercial services centers located in the U.S., Mexico, Poland, Italy, Canada, and China. Finally, United Process Controls, branded as UPC-Marathon from now on, is a controls and solutions provider — process controllers, oxygen probes, analyzers, automation software, electronic flow meters and controllers, atmosphere mixing panels, but also furnace upgrades and heat-treating plants' modernization projects."

Cloutier stressed that these three divisions help the company stand out among others in the heat-treating industry.

"It allows us and our people to go beyond selling the product," he said. "Because most of the time, when customers come to us, sometimes it's to buy a component or buy a furnace. But usually they come to us because they're looking for a solution. They're looking to solve a problem. And solving a problem or providing a solution requires some knowledge of the application, of the industry, even where the part will be installed and what it will do in the environment in which it's going to operate. It's broader than just selling a product."

PROVIDING SOLUTIONS

To that end, Nitrex is able to offer its customers services and products that run the gamut of heat treating, which include a wide variety of applications, heat-treatment processes, and industries. The company's potential-controlled gas nitriding and potential-controlled gas nitrocarburizing (ferritic nitrocarburizing-FNC) heat-treatment technologies are applied in the precision parts, automotive, aerospace, aluminum extrusion tooling, defense, gears, tool and die, machinery, and more.

"Our goal is to stay in the field of providing solutions — meaning that we see that our product portfolio as complementary, and we'll keep evolving it; we will keep investing in that complementary theme of products," Cloutier said. "We are in a big niche; we are investing only in high-end processes. We're in gas nitriding; we're in vacuum. We do have some other processes in our company. But we stick to high-quality complexity and work with companies that require more than providing a product."

Nitrex is a solutions provider that goes beyond traditional heat-treating services. While world-renowned for its nitriding expertise, Nitrex also provides a full suite of state-of-the-art vacuum, atmosphere, and LPC solutions to its many OEMs, Tier 1s and end-users from its nine service locations in the U.S., China, Canada, Mexico, and Europe. (Courtesy: Nitrex)

APPROACHING CUSTOMERS' CHALLENGES

And that means genuine attempts at understanding any challenge a customer brings to Cloutier and his experts.

"First, we try to understand the problem that they're trying to

G-M Enterprises vacuum heat treat furnaces are designed with ease of maintenance and a lower cost of ownership in mind. These furnaces are real workhorses, capable of meeting exacting standards with consistent accuracy and repeatable quality. (Courtesy: Nitrex)

solve," he said. "And by understanding the problem and the application and which component or part is being used, we can better understand the context. And because we have this internal library of knowledge and people with experience, we can rapidly find a path to what the solutions could be."

That internal library of knowledge and experts spans the globe, which enables Nitrex to quickly assign the necessary personnel to any problem the company may face, according to Cloutier.

"We have facilities in different countries, so we're able to respond quite fast to a request, depending on where it's coming from," he said. "We have a lot of people with a lot of experience not only in heat treating but also in material science and metallurgy, chemistry, mechanical design, and physics. We can pull on different people in different places to join. And we're starting to use some different tools to communicate. So, pretty soon we'll announce a new line of products to respond even better and faster to the customer, using technology and knowledge together."

With its multiple acquisitions, Nitrex has been able to expand globally in the U.S., Asia, and in Europe, and with the addition of G-M Enterprises, Nitrex has been able to grow stronger in the aerospace sector, as well as MIM, 3D printing, and defense.

HUMBLE BEGINNINGS

Nitrex began as a small service center back in 1984 offering its proprietary Nitreg® gas nitriding technology, before evolving into a company that designs and manufactures turnkey heat-treating installations, while its subsidiary, Nitrex Inc., offered commercial metal-treating services throughout the world.

The company started installing nitriding systems in the '90s. Soon after, the company began to grow through acquisitions, which continued onward through 2015, when it was acquired by Novacap, a Montreal, Canada-based private equity firm, according to Cloutier. Several more acquisitions sparked the need for the current rebranding campaign.

"Basically, we grew from a company controlling gas nitriding through computer and software, which at the time was quite innovative," he said. "But it kept innovating throughout the years and investing in that process, building a knowledge and different recipes or formulas for heat-treat."

As the company grew and flourished, a library of formulas and recipes and knowledge was created that became the heart of Nitrex, according to Cloutier, which spurred more growth until it was present in 16 sites around the world and selling in more than 60 countries.

But with that rapid growth under different brands acquired through the years, it was becoming difficult to truly express how large the company had become.

"Before the acquisition of G-M Enterprises, we had put a strategic plan together for a different orientation for the company," Cloutier

A Nitrex pit-type turnkey nitriding installation for treating stainless steel turbine components. Through the process of improving the durability and reliability of components, Nitrex also helped this customer meet their sustainability goals, reducing energy and gas consumption with a shorter cycle time. (Courtesy: Nitrex)

said. "We thought that it was the right time to start integrating our brands to support the growth strategy and make it clear to the market how we want to show ourselves. When that materialized, it was good timing to start integrating the brand under one umbrella."

EYE ON THE FUTURE

As Nitrex continues under its newly branded portfolio, the CEO said he sees the need to continue to keep a close eye on what the OEMs are doing since heat-treating is a larger part of the supply chain.

That will more than likely involve more digital implementation and the Internet of Things, according to Cloutier.

"When it comes to supply chain improvements and increased velocity in the supply chain, companies are connecting their assets and trying to make their equipment more intelligent so they can better predict maintenance, avoiding disruptions, and improving efficiency of those assets," he said. "What the OEMs are doing in the industrial segment or automotive spaces is something that the heat-treating industry will need to adjust to as well, and probably quicker than what people originally thought. They are probably pressed by what's happening right now in the industry with COVID-19. I think connectivity and the digitalization of products is definitely in the future."

In that vein, Cloutier feels that Nitrex's business model will continue to work toward that goal.

"I'm CEO of the company, but I've been in the supply chain for many years in large corporations, and supply chains are becoming more and more complex," he said. "As time goes by, especially right now under the circumstances we're operating in, this challenging economic context and the global supply chains will be pressured to be more efficient. So, I think our business model fits well with this new challenge coming. We are capable of serving different industries and different customers at different stages of their manufacturing phase, from the design on out. I think Nitrex is well adapted for what's coming."

SOLUTIONS PROVIDER

And that circles back to Nitrex, above all else, being a solutions provider.

"It's more than the manufacturing or designing of furnaces," Cloutier said. "The combination of those three divisions, plus the knowledge I was describing earlier, puts us in a unique position in the market. Actually, there's nobody else in the market that is vertically-integrated like that."

To that end, Nitrex's vision is to be a worldwide partner in offering metal heat treating solutions, always ahead of its customers' expectations by delivering innovative technology.

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