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ENGAGING IN HIGH-END SOLUTIONS

Euro-Tech Corporation has been offering quality spline gaging, hydraulic expansion arbors and chucks, as well as custom engineered solutions for a quarter of a century.

By KENNETH CARTER, Gear Solutions editor

Euro-Tech Corporation prides itself as having a limited number of highly-engineered solutions in the fields of profile gaging and workholding.

Those high-end solutions often translate into working with its customers from the beginning of a challenge, essentially starting from scratch more often than not.

“Our philosophy is not to have a book or catalog of products,” said Jerry Kowalsky, president of Euro-Tech. “That’s why we have only a one-sided, one-page line

card. The philosophy of Euro-Tech is to handle boutique-style companies. They’re smaller companies, normally in the 75-and-under number of employees, and we are their applications engineering and sales office for the United States.”

FRENCO AND MYTEC

Euro-Tech has two primary product lines for the gear industry: Frenco and MyTEC.

“Frenco makes spline gaging and gear-gaging products,” Kowalsky said. “They have primarily specialized in splines until about 10 years ago, when they realized that their expertise in the toothed profile gave them some good credibility to do very high-end double-flank gear measurement. They have a software that’s second to none in the industry for gear measurement and analysis.”

MyTEC’s owner created the first brazed hydraulic expansion tool, a technique still used today, according to Kowalsky. This technique is used instead of O-rings, sleeve seals, and grease.

“We truly are not a grease arbor,” Kowalsky said. “This is a major difference from other methods of construction.”

“The primary advantage is that we’ve created a rupture-proof tool that you can expand with no fear of damage or blowing itself up,” he said. “To my knowledge, only two other German companies are producing tools using this technique. While it’s propagated to two other companies in Germany, still to this day this method of construction is not produced in the United States as a



Frenco concentricity ring for runout checking.



rupture proof hydraulic expansion tool, giving it a great deal of hardness, stability, and longevity for manufacturing processes.”

In addition to the Frengo and MyTEC product lines, Euro-Tech has an additional product it manufactures in house: the PG1000. It’s designed to measure cutting tool geometries.

CUSTOM DESIGNS

If the customer has exhausted their options with “off the shelf” products, Euro-Tech will work with a customer to provide a custom design and build a solution, according to Kowalsky.

“The solutions that we look for are problems with ‘toothed profile’ gaging and part workholding,” he said. “Each solution that we develop with our suppliers is actually a prototype because there’s no catalog to open up and choose a product from. So, in most cases, everything that we make is a prototype, and it’s made only once. Unless it’s reordered, we never make another one identical to it. Whether it’s measurement of a spline, a gear, a shaft, or something more unique like maybe a gerotor (a generated rotor used in pumps), we always start with a clean sheet of paper and begin the design there.”

In order to start a proposal from scratch, Euro-Tech has to know each and every detail of the part and processes, according to Kowalsky.

“We have to gather a lot of critical information about

the product that we’re quoting on a workholding or gaging request, and we send it on to the manufacturer to create a solution to the problem,” he said. “As we have no off-the-shelf solutions, we are never going to be the cheapest solution or the fastest solution. But we have a core group of customers who understand this and are willing to come to us early in their project and to give us the time we need to create something that we know, in some cases, may produce product that lasts longer than the amount of time that someone’s actually working at a company. This is especially true with our aerospace applications where the yearly production of a part may be quite small compared to something like hobbing at a transmission plant. The production rate in aerospace is quite limited, yet highly demanding in terms of quality. We’ve seen tools come back to us that are 35 years old as well as tools that, in under 1 year old, have produced hundreds of thousands of gears. In both cases, they are just now needing a first repair.”

FRIENDLY AND APPROACHABLE

Kowalsky said, in addition to the products and services Euro-Tech offers, he is proud of his company being approachable, friendly, and customer-service oriented.

“We have no voicemail,” he said. “When you call, we answer almost immediately. Our seasoned staff, some with us over 25 years, are cross-trained employees who can pitch in on all the aspects of the company. When you reach out to us, we’d like you to be able to finish

A Frengo tech works on the final assembly of a cluster shaft checker. (Photos courtesy: Euro-Tech)

“We’re going to be very honest about our abilities and what we’re going to be able to do or not do.”



MyTEC hobbing arbors with 74 Rc carbide coating.

with an answer to the reason you called no matter who answers the phone.”

Part of that approachable nature of Euro-Tech comes from having a factory-trained technician at the company’s headquarters who can perform necessary repairs on the hydraulic expansion arbors and chucks, as well as the spline gaging hand tools, according to Kowalsky.

“Many of those can be repaired right in our facility in Menomonee Falls,” he said. “That, in many cases, will circumvent the need to send the product back to Germany. That round-trip transportation can be very costly and time consuming just to have a repair that can be done in Menomonee Falls. We’ve actually had customers, local customers in the Menomonee Falls/Milwaukee area — a major one like Harley-Davidson — who have actually had a hydraulic expansion arbor used for hobbing needing an adjustment. They will hand-carry it in, enjoy a cup of coffee in our lunchroom while our service tech gets the tool back up to snuff so it goes back into immediate service when the guy leaves. It’s only about 10 minutes from us to the Harley plant.”

EUROPEAN SUPPLIERS

That extra mile is the domestic part of Euro-Tech, but

Kowalsky is not shy about boasting of the quality of his European suppliers.

“The expertise of these suppliers like Frenco and MyTEC — both companies have founders who created companies with the core values of quality, precision, and technical expertise — just doing unique things in the industry like creating a brazed hydraulic arbor or sitting on a worldwide standards committees that set them apart around the globe, not just in Germany or America,” he said.

Both Frenco and MyTEC have rich, 40-plus year histories. The founder of Frenco, Rudy Och, has sat on nearly every standards committee for splines that exist in the world, and to this day, even in retirement, he still writes publications, according to Kowalsky. He was involved in ISO and ANSI and AGMA.

The founder of MyTEC, Gerhart Horn, is also still involved in every aspect of his company.

“If you were to visit MyTEC in Germany today, you would still find Mr. Horn in a shop coat down on the floor doing whatever it takes to get hydraulic expansion tools out the door, each and every day,” Kowalsky said. “He has actually called us from his vacuum furnace at midnight his time because he’s waiting for a brazing

process to finish over there. He's an amazing man."

And locally, Euro-Tech has a proud history with its "neighbor," Harley-Davidson, according to Kowalsky.

"Going way back to when we first started business in the mid-'90s, we were contacted by a man who was the gear lab manager at Harley-Davidson," he said. "Being local to us, it was easy to visit regularly, and we successfully presented our hydraulic arbors and chucks to Harley. Armed with our product information, the lab manager decided to try an interesting design with wobble washers, which allow the locating bore to ignore a non-perpendicular face and greatly enhance the repeatability of the inspection. He loved them so much that he asked me one day if it would be possible to actually produce gears on these tools rather than just have the light duty job of inspection."

Euro-Tech jumped at the challenge, Kowalsky said.

"We developed a full line of hobbing, shaving, and grinding arbors," he said. "To this very day, they are still using many of the same arbors, and when a new project comes up, they will buy updated versions of the same arbor for the new gears in their next transmissions. The neat thing is that the man who was the gear lab manager rose all the way up through the ranks to ultimately become the plant manager of the Pilgrim Road Powertrain facility. We started so early in life together, that this is how far we've proceeded. That was a very, very rewarding achievement for us to see a fellow who was a gear lab manager become the plant manager of the Harley Powertrain facility."

SPLINE SEMINARS

With product supplier Frenco, Euro-Tech helps promote that company's technical spline seminars, according to Kowalsky.

"I'm very proud of the fact that Frenco offers technical spline seminars," he said. "Gear seminars are very commonplace. You can open up any gear technology book and find an AGMA or equal offering of a gear seminar, but only Frenco offers technical spline seminars. These in-plant seminars, taught by Norbert Weiss who has spent his entire 37-year career with Frenco, are typically two days of extensive spline training, with day one being designed for anyone who touches a spline. If you are a person on the shop floor and you're asked to do a go-and-no-go check of a spline, many of them only know the go gage is supposed to fit and the no-go doesn't, but they have no idea why that is or what happens if a go gage doesn't fit or a no-go gage does. What are the ramifications down the line on potential assembly or failure of that spline once it's in a gearbox or wherever it's going to live?"

At the end of the class, they understand perfectly why this inspection is important.

Day Two of a spline seminar gets much more technical with topics such as backlash, classes of fit, data field creation, and international standards. These and other topics allow for the proper production of splines due to a better understanding, according to Kowalsky.

"We have actually trained thousands of workers in spline technology over the last 20 years. It's a unique product for us and one we're quite proud to offer," he



A MyTEC technician checks the runout of a large clamping tool.

said. "It's not a Frenco advertisement; it's a true technical spline seminar. At the end, people in some cases didn't even know it was Frenco teaching it because they did not make it an infomercial. You don't want to charge people for attending a seminar that's an infomercial; you want them to leave with very good technical knowledge. It has helped so many companies to have their workers understand what a spline is, because, in a lot of cases, it's the heart of a product."

COMMITMENT AND HONESTY

With all that Euro-Tech can offer, customers are appreciative of the company's overall honesty and integrity, according to Kowalsky.

"I'm going to tell someone honestly if I think there is someone out there with a better, faster, more reasonable solution," he said. "I mentioned 'boutique solutions' earlier because we aren't for everybody. We actually love the challenges where someone is having an issue or a problem and they come to us because we've been providing solutions for so long. We're going to be very honest about our abilities and what we're going to be able to do or not do."

And part of that honest reliability comes from the quality products that Euro-Tech offers, according to Kowalsky.

"Someone once said that these products coming out of Germany are usually so beautiful, that if they didn't weigh 35 pounds you could put a chain on them and wear it around their neck for jewelry," he said. "It's usually a fantastic solution that gets us a lot of kudos when the product arrives and gets opened up and put out on the shop floor. We've had people say, 'It's actually too pretty to use.' They're not your run-of-the-mill 'open up a catalog and order an item' products." 📧

MORE INFO

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