

TEADIT's global solutions are changing the valve industry

Since its establishment in 1958, the TEADIT Group has continued to grow as a leader in the development and manufacturing of innovative sealing products for sealing critical processes in such industries as refining, chemical process, power generation and many others. Valve World visited Teadit Group's headquarters and state-of-the-art R&D laboratories in Rio de Janeiro, Brazil, as well as the company's Campinas manufacturing plant. We spoke with Global Technical Director of The Teadit Group, José Carlos Carvalho Veiga, Engineering PhD, Ana Furtado and Chief Operating Officer Latin America, Renato Pizza to discuss the company's current growth plans, the importance of providing clients with innovative product solutions and how the company maintains its position at the forefront of sealing technology.

By Sarah Bradley

"Teadit has been in business for over 50 years, it is important that we remain at the forefront of the industry. We are continually investing in the development of our people and of new products; our hiring practices are focused on valuable people with progressive attitudes and drive, and we continually invest in R&D," reveals Renato Pizza.

Communication and innovation are at the core of Teadit's business and with over 25 product patents, Teadit's unique customer-driven R&D process is imperative to the company's mission to increase customer value. Working together with end-users to address their needs and proactively anticipate their future

challenges, Teadit is able to quickly and efficiently respond to customer demands. Teadit has been able to continue to grow with its customers through the ability to adapt and react quickly to the changing market. The company has been making great investments towards expanding and solidifying its presence globally, with

a production and distribution network currently spanning 52 countries. This includes manufacturing facilities in Brazil (Campinas and Rio de Janeiro), the United States (Houston, Texas), a European facility in Austria (Kufstein), a state-of-the-art metal gaskets plant and braiding facility in India (Vadodara) and service locations in Argentina (Buenos Aires and Bahia Blanca) and Germany (Koln).

"We are continually focusing on ways to keep progressing in both the domestic and international markets. Our focus is on development; building a more efficient and lean company, researching new products and exploring new markets. We are continuously restructuring and investing to improve product quality levels in order to reach markets that are more demanding. Relying on our core company values has enabled us to maintain growth in challenging market conditions, both in Brazil and global markets," says Pizza. Communication is the core of Teadit's business. With over 25 product patents, Teadit's unique customer-driven R&D process is imperative to the company's mission to increase value to the customer. Working together with end-users to address their needs and to proactively anticipate their future challenges, Teadit is able to quickly and efficiently respond to customer demands. One of Teadit's greatest strengths is that they can offer customers impeccable service. In order to have the ideal sealing solutions, it is important to work closely with the customers' maintenance and engineering team; by evaluating their needs and the problems they encounter, Teadit is able to provide the optimal solution. "Our customers' constant feedback is crucial for us as we can then focus on research and development in the field, where the client is facing problems, while also foreseeing any future needs they may have. That is a big priority for Teadit; being with our clients, listening to their needs and understanding those demands," Pizza says. Teadit's growth strategy is based on developing technology and products to reduce emissions and leakage. State-of-the-art laboratories are located at two R&D facilities, one located in Rio de Janeiro, and the second in Kufstein. Within these facilities, new materials and products are under continuous evaluation, designed to improve performance and offer practical solutions for their customers' most challenging fluid sealing needs. Using custom designed test rigs Teadit's engineers are able to simulate operating field conditions for rotating equipment, valves



Renato Pizza – Chief Operating Officer Latin America.

and flanges, in a controlled environment, which enables the company to have a high level of confidence in the performance of its new products, even before initiating field tests at customer sites.

"Teadit is a company that invests a great deal in research, development and technology within our industry. We are always striving to be at the forefront in the industry. Whenever there is a crisis or any other setbacks in the market, only the best can survive. That is why Teadit has always tried to be a step ahead of our competitors and be proactive for our clients," says Pizza. "We have been in the business for more than 50 years, and always managed to keep our outlook fresh, modern, up-to-date and focused on the future."

Teadit's commitment to research and development has played a great role in the ongoing success of the company. Investing in technology and innovation for over five decades has helped develop a strong foundation of knowledge, along with the engineering capacity needed to provide optimal service to their partners. "R&D is very important to our company," says Veiga. "In order to meet the new demands from the EPA and other regulatory agencies, we need to perform all the necessary testing and be able to simulate actual operating conditions on a small scale in the lab. Testing in the field is very difficult and dangerous, so simulating realistic conditions in the lab is needed to evaluate product performance before going in the field." Through the in-depth technical knowledge of its engineering and sales team, Teadit is able to effectively meet and react to



TEADIT R&D: API624 test rig.



customer requirements. The company's strong production capabilities and proven reliability make Teadit an ideal partner for end-users and OEMs, in achieving their product certification goals. "Our advanced testing capabilities can be a major asset for the valve manufacturer. By doing the testing here, we can accelerate the development cycle and help optimize valve design to achieve the emission standards required by EPA or other environmental agencies. So, beyond performing the testing procedures, we are also able to help them troubleshoot," Veiga adds. "We have engineers that inspect the valve prior to testing and can work together with the OEM to recognize any design issues that might prevent the valve from performing well. This partnership between Teadit and the OEM can be beneficial in helping manufacturers improve upon their product."

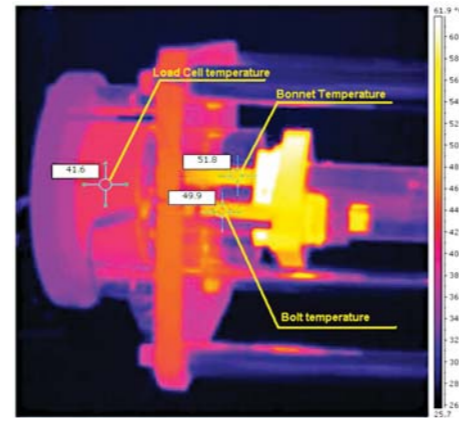


Engineering PhD, Ana Furtado and Global Technical Director of the Teadit Group, José Carlos Carvalho Veiga.

Teadit's world-class manufacturing facilities are equipped with the highest level of technology for testing devices and procedures relative to their products. State-of-the-art laboratories are located within and under the direct supervision of the primary Research and Development facility, located in Rio de Janeiro, where very sophisticated equipment is utilized by highly trained Product Development Engineers and Technicians. Within these facilities new materials and products are under continuous development, designed to improve performance and offer practical solutions to their customers' most difficult fluid sealing needs. Teadit's Engineers are able to simulate operational field conditions for rotating equipment, valves, flanges and flanged unions, using modern equipment in a controlled environment, making it the benchmark for R&D facilities.

"I think Teadit is one of the companies that invests the most in research, development and technology and we are always striving to be ahead of our competitors. Whenever there is a crisis or any other setbacks in the market, only the best can survive. That is why Teadit has always tried to be a step ahead of our competitors and be proactive for our clients," says Pizza. "We have been in the business for more than 50 years, but Teadit has always managed to keep itself fresh, modern and up-to-date, focusing on the future."

Teadit's commitment to research and development has played a great role in the ongoing success of the company. Investing in technology and innovation for over five decades has helped develop a strong foundation of resources including production and testing equipment, along with the engineering capacity needed to provide optimal service to their partners. "R&D is very important to our company," says Veiga. "In order to meet the new

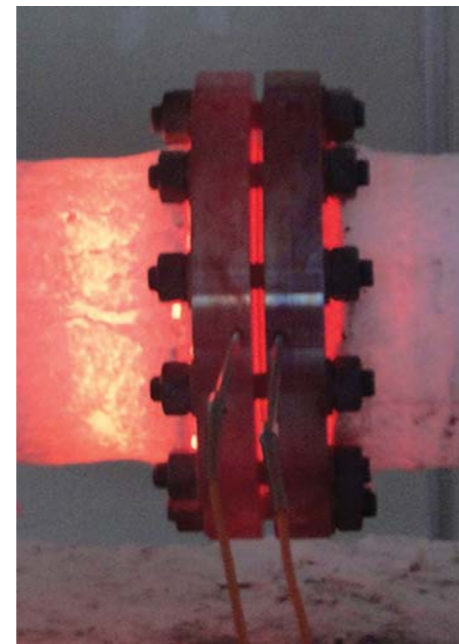


Infrared of valve test.

demands from the EPA and other regulatory agencies, we need to perform all the necessary testing and be able to simulate the actual conditions on a small scale in the laboratory. Testing in the field is very difficult and dangerous, so simulating realistic conditions in the laboratory is necessary to see the results before you go out to the field."

Fighting fugitive emissions

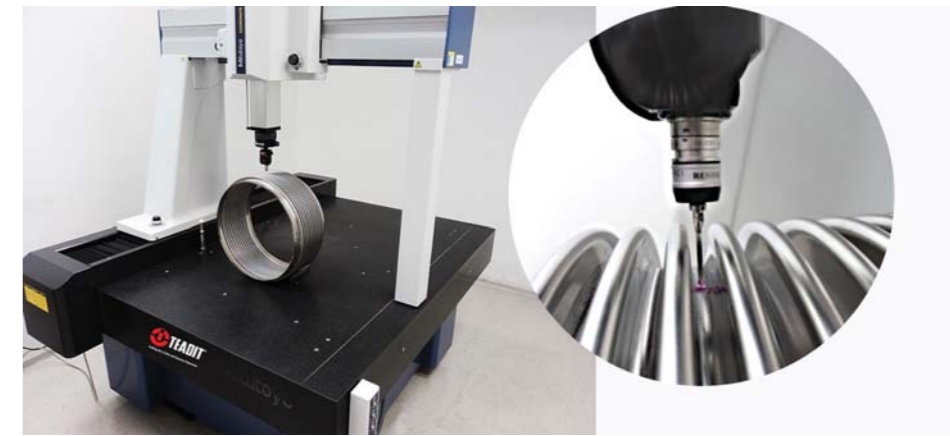
Teadit's innovative fluid sealing products have helped many industries to achieve an emission-free environment within their facilities. The company's flagship packing products, are designed and dedicated to specific applications for best performance. Teadit's 2236 valve packing for low emission is self-lubricating, non-hardening, dimensionally stable and resistant to gases and fluids as well as heat, pressure and chemicals. Its high temperature flexible graphite and Inconel® filament jacket affords mechanical stability, while its



advanced construction provides leakage control and high integrity in refinery and petrochemical service. The product's physical properties and ability to minimize friction, make Teadit Style 2236 ideal for valves within a broad range of applications. Teadit's Style 2235 is also ideal for valves in a broad range of industries including power plants, and other applications using high pressure and temperature in steam. Style 2238-OX was developed specifically for severe applications in oxygen services, where there are extreme restrictions due to the hazardous conditions that could result in plant explosions. Style 2238-OX has been BAM tested to levels that give Teadit and its partners confidence in its capabilities.

"We were requested to develop Style 2238-OX packing by a world leading energy group, based on their detailed requirements. Contamination of a packing in oxygen service can be extremely dangerous. We produce these packings from the raw materials to the rings. It is a vertically integrated process; we make the yarn, braid the packing, produce the rings and ensure there is no contamination, through all steps of the process," explains Veiga.

The variety of sealing solutions that Teadit has developed is fundamental in achieving the industry's leak-free goals. The company recently patented and released its new Dynamic Live Loading apparatus. When a major chemical company requested PTFE packing that would be capable of sealing to meet fugitive emissions requirements, Teadit began testing and found an issue with leakage due to thermal expansion. For that particular application it was necessary to have PTFE for chemical compatibility. Teadit's innovative solution to mitigate the thermal expansion issue, lead to the patenting of their Dynamic Live Loading product.



Coordinate measuring machine.

Innovation is the only way the company believes it is possible to not only meet, but exceed their customers' expectations. The company is continuously working on developing new ideas, investing in creating new products and continually working to improve existing offerings. Teadit places great emphasis on quality, which is reflected by the national and international certificates and approvals that the company's products have obtained. In order to ensure product quality, an independent laboratory is employed to evaluate and audit packing. As a third-party witness, Ana Furtado oversees the testing procedures and ensures that the recorded results are verified and approved. The quality and effectiveness of Teadit's solutions are based on management and innovation, which are the basis for all products manufactured at any of their plants. As a result of this continuous process of quality improvement, ISO 9001 has been obtained in Brazil, the United States and Europe, where ISO 1400 has been additionally obtained. Every Teadit product is developed, manufactured and installed to achieve the goal of ensuring leakage control and environmental preservation. In the maintenance market in Brazil and Latin America, decreasing fugitive emissions and maintenance efficiency is a significant priority. Recognizing this, Teadit believes there is a great opportunity for their value-added products to help customers achieve these goals. Pizza explains: "Teadit aims to work closely with our maintenance users. Currently, one of the biggest needs of our MRO clients is to improve process efficiency and reliability while spending less money. For packing, gaskets and expansion joints, our focus is on mapping our customers' processes, detecting potential improvements. Teadit's technical support team will visit customers,

specify optimal products for each service and make a change or upgrade proposal where appropriate. In most cases, customers experience significant economic gains through their partnership with Teadit."

Looking to the future

As with the investment in the future of their products, Teadit also recognizes the importance of educating young professionals in Brazil and investing in the training of young engineers. "As a teacher at the local university, my role allows me to keep up-to-date with the latest innovations and changes in the industry. I am able to transmit this knowledge to the students I teach. I think it is important to keep education and the industry close. If I understand the necessity of the industry, I have the opportunity to inform my students at the same time," explained Furtado. "We have a great internship program at Teadit. The company does a lot of work with the interns in all areas such as engineering, finance, marketing, production, etc. We regularly bring in new interns and hire many for full-time positions with the company." Looking ahead, the company is optimistic about the ever-changing industry and the role their products will play in the continued effort to minimize emissions. "We have growth opportunities in all markets we serve over the next 5 to 10 years. Our plan is to increase revenue through the introduction of new products and technologies and by increasing our presence and partnership with existing and new customers. For this to happen, we need to maintain an excellent level of service, both technical and logistical," Pizza tells us. "I am very optimistic about the future, and I believe that both the domestic and international market environment will improve over the next two years."