

Moving at the speed of technology

Pier Parisi embraces the brave new data-driven world

Pier Parisi's career path gave him a front-row seat to the technological advancements of the natural gas industry. He spent the earlier part of his career with Bently Nevada and GE before joining Dover and, currently, Apergy.

In September 2019, Compressor Product International (CPI) and Windrock, an Apergy company, began a commercial partnership, allowing the two companies to collaborate on monitoring and analytical technology (see **COMPRESSORTECH²**, November 2019, p. 23).

The two companies have flagship devices built on the premise of monitoring, predicting and preventing equipment failures. CPI has Proflo EOS, a lubrication monitoring system for reciprocating compressors and Windrock has Spotlight, which monitors the health of compression equipment.

With the recent partnership and the plethora of technology around him, **COMPRESSORTECH²** spoke with Pier Parisi, vice president of business development, digital, Apergy, on how he views the rapid technological changes in the industry.

HOW IS THE NEW PARTNERSHIP WORKING OUT BETWEEN CPI AND WINDROCK?

We are off to a great start. There has been an immediate positive response from several customers, some of whom placed initial orders within weeks of the announced partnership. As a result, we've been able to provide some excellent insights to customers. In one case, we were able to detect a chronic problem in a compressor valve that is now being replaced with a better design by CPI. In another case, we were able to show a customer the different performance of two valves that were being



Pier Parisi

evaluated. CPI's commercial team is also very complementary to ours, giving us global service and sales coverage that will help expand the reach of our Spotlight Enterprise product lines.

ARE THERE ANY COLLABORATIVE EFFORTS OR PRODUCTS COMING IN THE NEAR FUTURE AS A RESULT OF THE PARTNERSHIP?

Absolutely. While we are working on linking our sales and service efforts, we are also combining product roadmaps so that CPI's product offering is more tightly integrated into our Enterprise platform and our AI predictive analytics offering.

HOW IMPACTFUL HAVE THE TECHNOLOGICAL ADVANCEMENTS IN THE PAST DECADE BEEN FOR THE GAS COMPRESSION INDUSTRY?

Quoting Victor Hugo, "nothing is more powerful than an idea whose time has come." This resonates a lot with us in regards to our Spotlight product line. Until just a couple of years ago, it was very difficult to install accurate dynamic pressure sensors in reciprocating compressors and have them last more than six months. The cloud was not as pervasive as it is now and data transmission via LTE was less secure,

less available and more costly than it is today. We now have a set of tools at our disposal that enables true IIoT Edge devices to provide great machinery insights at an affordable price. This enables AI analytics and expands access of machine health information to a much larger population. This concept is not necessarily new, but it is possible today due to technological advantages that surround us.

WHAT CHALLENGES DOES THE WEALTH OF DATA AND ADVANCED TECHNOLOGY BRING TO THE INDUSTRY?

I would say that the benefits far outweigh the challenges. We provide value by increasing the amount of data and insights exponentially. We have now surpassed one million hours of operation with Spotlight, which means that we've gone from data stranded in proprietary systems and reports to terabytes of smart data that enables predictions. In one swoosh, we've gone from having limited data such as temperatures and pressures from a PLC to true prediction of a valve-impending failure with a week's notice. Just as Google maps predicts when

you are going to get to your destination with increased precision, we are now able to do the same with machine data. Of course, there are some key qualifiers: you need clean data that is validated, time-stamped and available. And once you do, you need SMEs to train models so your AI knows how to find failures. It's not just data crunching. You need to guide your systems.

TECHNOLOGY SEEMS TO EVOLVE AT A SWIFTER PACE THE FURTHER WE GO INTO THE FUTURE. ANY THOUGHTS ON WHAT WE MIGHT SEE ON THE HORIZON IN TERMS OF TECHNOLOGICAL ENHANCEMENTS?

We honestly don't know what we don't know, so it's really difficult to come up with a long-term prediction. One constant is Moore's law, as our ability to deliver value doubles every year, with cost decreasing as well. I think that means more affordable edge devices and smart sensors, leveraging emerging technologies such as dust networks to provide even more data to AI engines. The days of complex and bulky electronics in expensive cabinets are counted. Edge devices are clearly in the immediate future,

let's say in the next five-year horizon.

IS THERE SUCH A THING AS TOO MUCH DATA?

I don't think so. Again, as long as data is reliable, our ability to store it, interpret it and transmit it is improving every day. Data analysts who design AI models love data. It wasn't too long ago that "data overload" was a favorite slogan in the industry, especially in the fast-paced environments of control rooms where operators need actionable information to make quick decisions during abnormal situations. But this is changing very quickly. We have been using traditional physics-based AI models of pattern recognition for the past 20 years, and today we are leveraging newer machine learning techniques to detect and predict at faster rates than ever. Data provides insights and transparency to operators. Some of the early adopters have embraced this and understand the value that is provided by good data. Conversely, data that is defective due to bad sensor calibration, poor time stamping or simply the wrong application can have opposite effects.

An example of this is our new partnership with DCP Midstream, which was announced in January. We will jointly develop new predictive models that are now possible because of the vast amount of data that



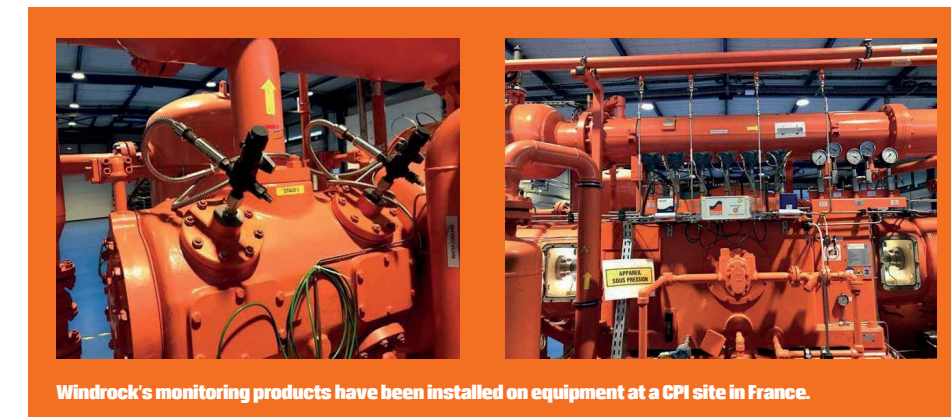
An Apergy employee works on a compressor.

is made available by our Spotlight system as well as their process historian. Several gigabytes of previously stranded and inaccessible data can be time stamped, contextualized and correlated to better predict future machine behavior that results from process changes. We are very excited about this partnership, which we believe will make an impact on our industry.

WHAT DO YOU ENJOY THE MOST ABOUT YOUR ROLE IN THE COMPANY?

I like solving problems that cannot be addressed by traditional commercial approaches. It is rewarding to find unsolved customer problems that are best addressed by a solution that involves more than one party. This gives us a chance to truly create new synergies, mostly by using technology you already have at your disposal, while also shrinking deployment cycle time. When you see this in action and a customer thanks you for the value they receive, it is truly rewarding.

CT2



Windrock's monitoring products have been installed on equipment at a CPI site in France.

COMPRESSOR **TECH²**
DEDICATED TO GLOBAL GAS COMPRESSION PRODUCTS AND APPLICATIONS

If you enjoyed this article, subscribe to the **COMPRESSORTECH²** magazine.
www.compressortech2.com/subscribe