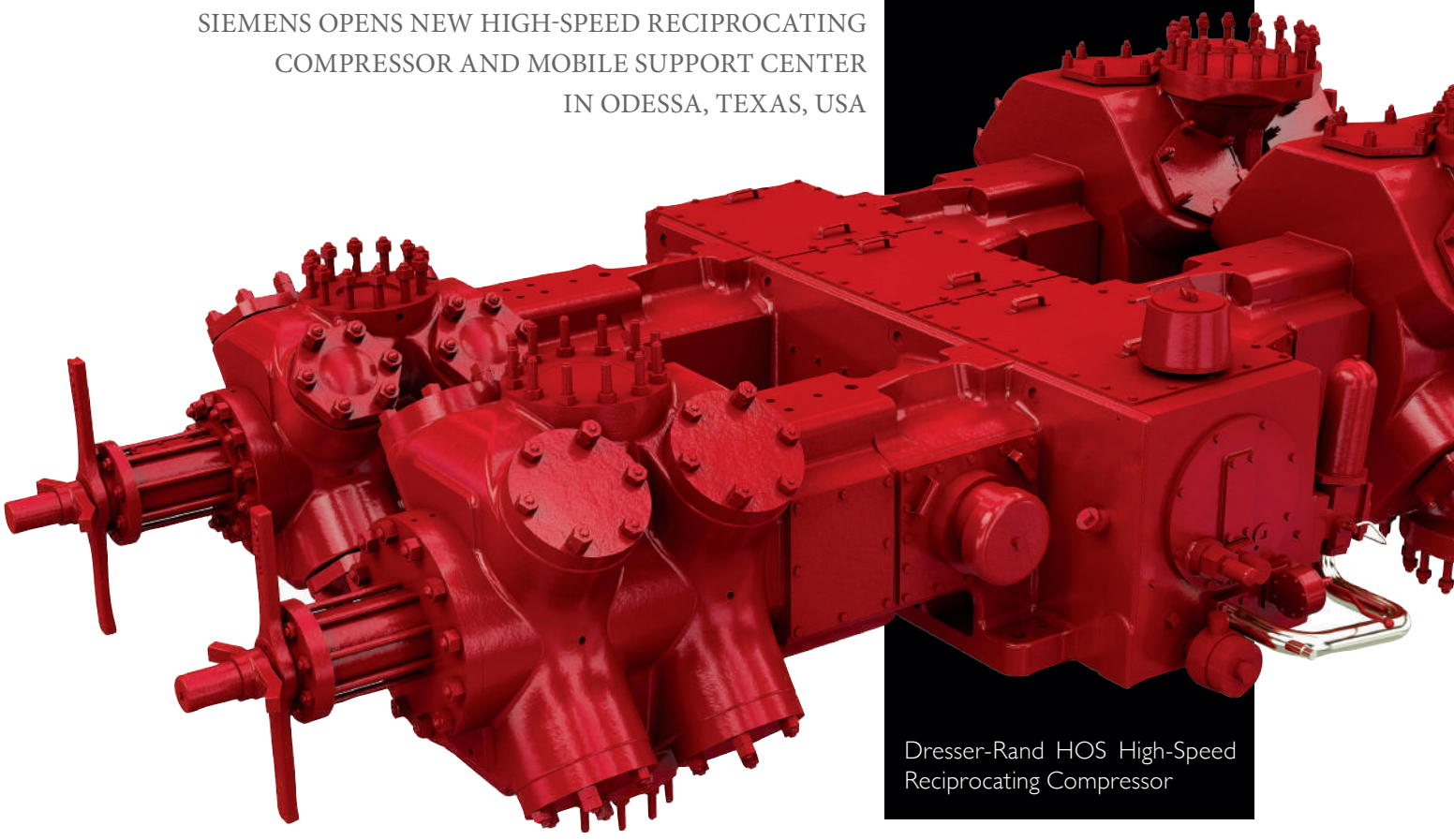
IN SUPPORT OF THE RAPID WEST

SIEMENS OPENS NEW HIGH-SPEED RECIPROCATING COMPRESSOR AND MOBILE SUPPORT CENTER IN ODESSA, TEXAS, USA



Dresser-Rand HOS High-Speed Reciprocating Compressor

BY DANIEL FOELBER

Siemens has opened a high-speed reciprocating compressor (HSRC) and mobile power support center in Odessa, Texas, USA. "Our HSRC support center in Odessa will better position us to serve a key customer base, both end users and packagers, in a significant region through a strategic parts stocking program," said Patrice Laporte, vice president for Siemens Oil & Gas Americas.

Gas Compression Magazine sat down with Laporte during the 2019 Turbomachinery and Pump Symposia in Houston, USA, to better understand the capabilities and design considerations of the facility, as well as how the support center fits into Siemens' broader North American strategy.

A MARKET LIKE NO OTHER

When asked what prompted the decision to expand rotating equipment support capabilities to the Permian Basin, Laporte responded with a grin, "Well everyone knows what's happening in West Texas." He continued, "We want to be closer to our customers in terms of high-speed reciprocating compressors, as this is a key element of our portfolio. Our primary focus now is to make sure that we can provide high-quality recip parts quickly and reliably to our end customers and packagers, and that means getting closer to where they need them most, the Permian Basin. The second reason is we want to get our people closer to where they will be needed in terms of field service supervision and training. The full scale of this expansion goes beyond just high-speed recip support."

Before expanding to Odessa, Siemens' closest support center to the Permian was in Houston. "We had to make the push," said Laporte. "Houston is an important area in the US of course, but the speed in which business is done in West Texas commands immediate service. It's a different region with a different mindset and different expectations."

THE NEW AND IMPROVED "RAPID WEST"

In Laporte's eyes, what used to be called the wild west is now the rapid west. Midland and Odessa aren't like the wildcat cities of the past that boomed before being abandoned. There's a sense of community that supports the foundation of the industry. "The big advantage is that business moves

so quickly," said Laporte. "People have the freedom to make decisions and do business quickly, respond quickly, and act quickly. That's why there's a sense of ownership and commitment that you don't find so easily anywhere else."

Top ownership at top speed does have its drawbacks. "What's less positive is the ability to see what is the best technique or solution, meaning it's so important to move quickly that techniques and solutions are simply repeated without question. That's not always the best solution."

Laporte makes a good point. Offering an alternative technology while also providing the parts and services needed to support existing operations is a realistic and effective technique for thriving in the current market while simultaneously positioning yourself to succeed as the market evolves and develops over the long term.

JUST THE BEGINNING

For now, Siemens is primarily focused on spare parts delivery. The next step will be to add fleet service supervision and training, as well as technical advice on what is best for the future. "Right now, we just want to be able to service all of our customers on the recip side, from the end customer to the support of all packing," said Laporte. This strategy matches Laporte's rapid West Texas paradigm. Build quickly for today's goals without sacrificing the ability for future expansion.

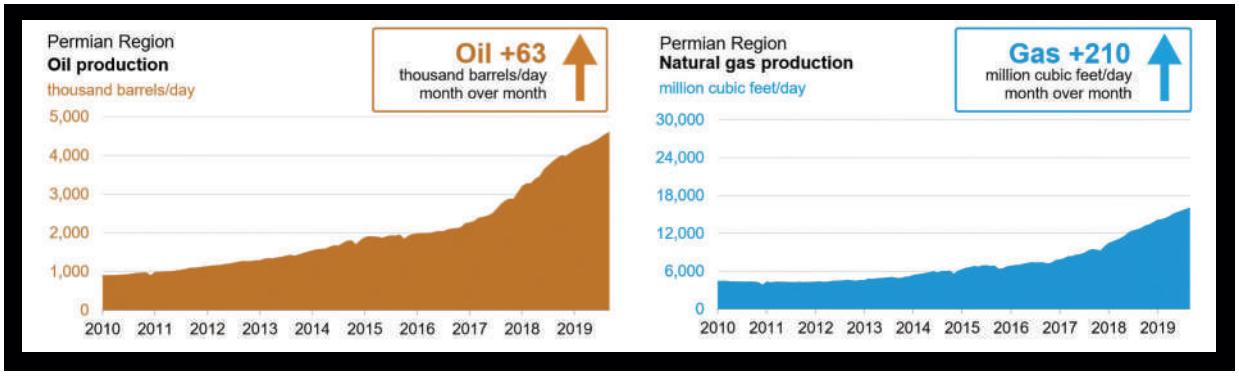
CHALLENGES

Infrastructure is progressing but is still quite challenging in the Permian. "Recently, I stayed in Washington D.C. and paid US$250 for a nice hotel, then flew directly to Midland and found myself paying US$350 for a cheap motel by the airport," laughed Laporte. "I think infrastructure is really a challenge. To find people with the right abilities to do the job is challenging as well. When we think about the alternative technology and how we are going to level up, we need to factor in all of these considerations," said Laporte. "The good news is, it's not a question of money, it's just time. The right people, the organization, the infrastructure … it will come."

RECIPROCATING VS. CENTRIFUGAL

The Permian Basin's natural gas business is still developing. Takeaway capacity is far below what the basin is willing and able to produce. "We have an immense focus on gas gathering and processing," said Laporte. "What we are seeing in West

The new Siemens high-speed reciprocating compressor and mobile power support center in Odessa, Texas, USA, will serve both end users and packagers.



Source: US Energy Information Administration (EIA)

Texas is an increase in the size of the gas block due to the amount of gas in need of treatment and transport. As a result, we are seeing technological shifts. We are just at the beginning of this shift. They are switching to centrifugals not because it's cheaper, although it is from a total lifecycle point of view, but because they can't find the people needed to manage the high-level maintenance needed on the reciprocating compression systems," said Laporte.

Natural gas prices at the Permian's Waha Hub turned negative in late April, and then again in late May and June due to a lack of pipeline development and a surplus of associated natural gas supply. Since then, prices at the Waha Hub have rebounded to a modest US$1.55/million British thermal units (MMBtu). Although still trading at over a 50% discount to prices at the globally tracked Henry Hub that drives future contracts on the New York Mercantile Exchange (NYMEX), positive prices at the Waha Hub signal growth for the suppressed West Texas gas market. "When you get above a certain size with the gas plant, the best solution is to go with the centrifugal since we know they need less maintenance, less footprint, and provide a lower cost of ownership without taking into account the reduction in emission," said Laporte. "This goes back to my initial point, that people are used to what they know and are comfortable with, so they go back to the HSRC even though a short analysis will show it is not the best solution."

Siemens is one of the few companies with the chance to have reciprocating and centrifugal compressors in its portfolio. Laporte discussed the ability for Siemens to complete a detailed analysis relatively quickly to come to the best cost solution for the customer. Laporte went on, "If the analysis concludes that centrifugal is the best solution, then you have to convince operations that centrifugal is not a new technology and it is easier to service. Often, you do not open the door to centrifugal solutions for several years!"

Siemens' analysis doesn't stop there. Once the customer selects the compressor, they must choose between a gas engine, gas turbine, or motor. If the customer selects a motor, they need to determine if it's best to go with their own power plant or connect to the grid. "Since Siemens has motors and gas turbines in its portfolio, we have the ability to make a detailed cost analysis of the gas plant, not only for the compression side but also for power generation. Very often we see that the issue is not the reliability of the grid but more the contractual agreement with the utility companies that penalize the gas processors. Therefore, it is key to go with the right technology to avoid 'cost surprise' later on," added Laporte.

"We are currently doing these analyses for several gas gathering and processing companies. Recently, based on such an analysis, one company decided to switch to centrifugal from a new greenfield plant in New Mexico, USA, with a capacity above 200 MMscfd (5 x 10^6 m^3/d)."

A SITE TO SEE

Laporte is confident that, while West Texas will keep its own spirit driven by speed and ownership, gas producers and processors will continue looking at the best cost solutions while ensuring reliable operations. Siemens' investments in the support center, and plans to integrate staff and training, speaks volumes to the company's confidence in the evolution and sustainability of the West Texas market.

When asked about his 1-to-3-year forecast for the West Texas/Eastern New Mexico market, Laporte responded, "One focus is processing gas and the other is the pipelines. And what they have in common is a clear need to increase the size of the compressor and the drive. Each operator, whether gas processor or pipeline operator, is competing with each other. The cheapest cost of ownership for the mechanical drive compressor and power generation will be a key factor of success for these companies. Our role at Siemens, having the whole portfolio of recip, centrifugal, motor, and gas turbines, is to be technologically agnostic and help our customer not to find a solution that fits our portfolio but to find the best solution to be competitive. If our customers are successful, then we will be successful." GCM

A typical Dresser-Rand HHE-VL reciprocating compressor installation utilizing an engine-type synchronous motor similar to the configuration of the three units that will be installed at a steam methane reformer in Texas.

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