

In one year alone, we have watched the world face many drastic changes: societal changes, economical changes, and environmental changes.

After 100 years in business, Cameron, a Schlumberger company, has seen and experienced its fair share of changes as well, as the valve and flow control industries endlessly adapt to meet current needs and standards.

One thing Cameron has not changed is its vision: To create the flow control technology that energizes the world. Through an extensive portfolio of valves and automation services, manufacturing capabilities, and quality assurance, as well as its focus on innovation and keeping environmental initiatives and solutions in the limelight, Cameron continues to be a leader in the valve and flow control market by consistently listening to its customers' needs and working to exceed their expectations, time and time again.

By Catarina Muia and Sarah Bradley



100 years of Cameron and counting

Since 1920, Cameron has been associated with advanced technology and reliability, as founders John Smither Abercrombie and Harry Cameron combined forces to develop the first successful blowout preventer for oil and gas wells. Throughout the last century, Cameron continued to grow and climb its way to the top of the valve and flow control industries to be considered a top-tier manufacturer and service provider in today's market.

In 2016, the company made an important move to become part of the Schlumberger family, which opened an entire global service network to Cameron, allowing the company to broaden its services portfolio for its customers. "We have professionals on the ground wherever and whenever our customers may need us," said Aaron Jacobson, Valves and Actuation Product Line Manager for Midstream Production Systems. "No matter what our custom-

ers' needs may be, whether maintenance, installation, or designing a project, we have the broadest service footprint in the energy services industry, providing our customers with the experts and expertise to support the industry's challenges."

Providing extensive options

Cameron is one of the world's largest oil and gas valve original equipment manufacturers (OEMs) and offers a full suite of products and services for drilling, production, processing, refining, petrochemical, liquefied natural gas (LNG), transmission, storage, and industrial market segments. The company produces a broad range of valves, specifically isolation 'on/off' valves, covering multiple designs such as:

- Ball valves
- Gate valves
- Plug valves



A closer look at Cameron's markets

Offshore and Subsea includes:

- Manifold and isolation
- Chemical injection
- Flowline isolation
- Pressure reduction

Onshore Production includes:

- Drilling mud isolation
- Storage tank isolation
- Gathering line isolation

Transmission and Storage includes:

- Liquid and gas
- Storage tank isolation
- Pipeline isolation

Processing and LNG includes:

- Gas dehydration
- Process shutdown
- Process isolation

"A single offshore drilling application can require a multitude of different isolation valve types; Cameron is often able to offer all types," explained Jacobson.

Cameron understands the importance of not only continuously broadening its product offering but also ensuring its customers receive high-quality products, on time, and optimized for their economics. "If a customer needs various types of valves and services from us, we can leverage our portfolio to offer them an integrated, bundled solution," said Jacobson.

As a one-stop shop for isolation valve needs, Cameron prioritizes customer experience for procurement, engineering, and construction. "Instead of coordinating with many different vendors for the valves required, our customers know they can come to us with any request, which saves them time and money and will bring much improved efficiency to the entire procurement and execution process," he stated.

100 Years of reliability and innovation

Although Cameron still carries product designs dating back to the 1930s and '60s—still prevalent in today's market—it continues to innovate with a focus is on solving customer problems. "When we come up with a product that is new, disruptive, and innovative it tends to survive and thrive for a very long time," said Jacobson. Innovations often include reliability and operational features that contribute to a product's long-term cost of ownership. Rather than focusing on



- Butterfly valves
- Check valves

While some companies outsource products and capabilities for specific proj-

ects, the breadth of the Cameron valves and actuation portfolio facilitates rapid integration of its products into customer projects.

Some of Cameron's most innovative, disruptive valve products, include:

- Rising stem ball valve (1935)
- Expanding gate valve (1944)
- Expanding plug valve (1952)



short-term CAPEX gains, customers understand that with more robust valves, they can gain up to ten times the original cost in operating benefits over the valve's lifetime. "Our customers are paying for the long-term reliability and the long-term quality of that specific product," Jacobson continued. "We focus on the total cost of ownership (TCO): not just on the upfront capital cost of the valve, but the overall lifetime operating savings. This includes maintainability, reliability, and predictability."

TCO is just one of the driving forces behind the innovation in valve technologies. As the market continues to evolve towards new requirements, Cameron must meet the latest industry standards, including new certifications for fugitive emissions, wellhead service, and pipeline service.

"The market conditions are a driving force for our innovation and have demanded new technologies and solutions in areas such as higher pressures and higher temperatures, or extra sour service," Jacobson explained. "TCO, meeting industry standards, and adapting to new market conditions are the three driving forces behind the innovation of our valves and solutions, and that requires a significant amount of research,

qualification and testing to ensure safe and high-quality new products."

This year, Cameron has expanded its technology development portfolio based on three main customer themes:

Emissions management

This theme is focused on supporting customers' license-to-operate and preventing downtime events by qualifying all relevant valves to the strictest fugitive emissions levels. This requires extensive testing as well as focused improvements in sealing systems. "By the end of 2021, a majority of Cameron's relevant valve portfolio will be fugitive emissions-certified," Jacobson stated. In addition, Cameron is delivering products and solutions to digitally monitor fugitive emissions and greenhouse gases (GHG).

Asset management

Focused on digitalization and surveillance, the developments in this theme will allow Cameron to support customers with condition-based maintenance, shutdown time reduction, maintenance predictability, and long-term savings for the asset and the facility. "By digitally enabling our valves and products, not only can we increase our customers'

valve uptime and save downtime system costs, but also, we can optimize their operating processes," Jacobson explained.

Capital efficiency

For this theme, Cameron is helping customers improve their project costs with design changes such as reducing the weight, size or footprint of a valve. "For example, on an FPSO, weight of a valve can be an issue, as it can lead to many other costs on the operator's side," Jacobson explained. "In some cases we reduce the weight of the valve and in others, we might reduce the footprint of the valve and actuator; this saves space for the operator, further saving costs."

Expanding its international presence

Cameron knows no borders, having primary valve and actuation manufacturing facilities in Italy, China, and the United States of America (USA), as well as a new facility in Saudi Arabia set to open in June 2021. As localization requirements become more prevalent, Cameron must consider production activities and joint ventures in areas it never has before. "More and more, we are seeing local content and localization requirements from customers. As a result, Cameron now





has several local joint ventures and new manufacturing operations, the new facility in Saudi Arabia is our best example,” Jacobson continued. Similar ventures are being considered in Kazakhstan, India, and Brazil. “This is a major theme in the valve world today; it has completely changed the competitive landscape of the valve industry, and we cannot compete unless we have a local presence.” In fact, localization requirements created an incentive to bring more competition to a location.

“Customers do not want just one or two companies to take on this challenge and create new facilities and ventures in their countries. The more competition in that country, the more opportunity there is to employ local people, use local, raw materials, and overall increase local content,” Jacobson explained. “This is where Cameron has the ability to consider these partnerships anywhere, at any time. This is where our size and breadth give us the flexibility to explore new ventures.”

In addition to its major valve and actuation manufacturing plants, Cameron also has local service centers across the globe, specializing in spares, services, repairs, and smaller manufacturing projects. The company has made it a priority to have local service and aftermarket facilities wherever its customers operate. “Thanks to its strength and size, Cameron is capable of providing services no

matter where our customers’ projects are located in the world,” Jacobson stated. “Not only that, but we are able to assist on the ground. We do not need to assemble a special squad from elsewhere in the world; we already have people there, we have a shop available, and now more than ever, being part of Schlumberger and having such a wide network, we have people on the ground to provide services whenever and wherever our customers need it.”

Services to fit customer needs

Servicing oil and gas operators, distributors and EPC companies is a top priority for Cameron to ensure that customers receive the services they require, as soon as they need them. Post-manufacturing services offered by Cameron include:

- Product warranty (two-year warranty for most valves)
- Parts and field services
- Repair, testing, and maintenance
- Remanufacturing
- Site and asset management
- Installation and commissioning

“Additionally, when we sell a new valve in new condition, the customer may experience challenges with handling, storage, installation, and properly setting up the valve,” Jacobson started. “This is where Cameron offers leak-free start-up services, assisting with the operational, installation, and commissioning stages.”

These services often lead to new digital services. “If we are there to help with installation and commissioning of the valve, we may also install the system to provide monitoring and surveillance for the lifetime of the valve.”

Cameron is also able to provide service and maintenance for non-Cameron valves. “Since we operate across a broad portfolio, we typically have the training and expertise within that valve application or product type, so we are able to service valves that have been manufactured and provided by other companies,” said Jacobson.

Looking at 2022 and beyond

Looking toward the future, Jacobson explained that the focus is on customer needs. “Whether that means minimizing or eliminating fugitive emissions from their plants or projects, optimizing the life of their asset through our digital offerings, or reducing their TCO in general by driving not only the upfront cost but helping them optimize the cost of the asset throughout its entire life, we look to provide whatever our customers may need of us.” Equally important, Jacobson explained that meeting its customers’ reliability, quality and delivery expectations will remain a priority. “That is where the Cameron brand and name gets its strength from, and we can never forget how important that is.”