Company focus

An inside look at SPX Technology

At the ACHEMA 2012 show in Frankfurt earlier this year, World Pumps had the opportunity to review some of the latest developments at SPX Flow Technology. Bryan Orchard caught up with SPX to find out more about the business, its recent acquisitions and future strategy.

f the name SPX Flow Technology is not immediately recognised, then its brands certainly will be as they rank among the global leaders in their respective technologies. Bran+Luebbe, Plenty, Johnson Pump, Waukesha Cherry-Burrell, ClydeUnion Pumps, APV, GD Engineering, Copes-Vulcan, Airpel and Lightnin are just a few of the global brands with which pump users and process plant engineers and operators will be familiar.

SPX Flow Technology, a business segment of SPX Corporation, designs, manufactures and installs highly engineered solutions used to process, blend, meter and transport fluids, in addition to solutions for air and gas filtration and dehydration. Having been on the business acquisition trail in



Figure 1. SPX Waukesha Cherry-Burrell Universal 2 Series serves the food and beverage sectors.

recent years, SPX has brought together complementary technologies that are providing customers with more fluid and gas handling solutions.

The portfolio

"The SPX Flow Technology segment represents about half of the SPX Corporation's \$5 billion annual revenue," said Mike Brereton, vice president of sales EMEA. "We describe ourselves as operating in three market segments, namely food and beverage, power and energy and industrial. The food and beverage segment has really been pulled together in the past five years through an acquisition and integration strategy that has turned us into a provider of integrated processing solutions. Our portfolio of brands which serve the food and beverage marketplace include Waukesha Cherry-Burrell (Figure 1), Bran+Luebbe, Lightnin, APV, Anhydro, Gerstenberg Schröder, e&e and Seital. This very broad product offering together with the process engineering capabilities that the business has, means that we are now very much a turnkey solutions provider for the food and beverage marketplace."

"For the power and energy sector and industrial sectors, SPX Flow Technology brands include ClydeUnion Pumps, Plenty, Bran+Luebbe, Lightnin, Johnson Pump, M&J Valve, Copes-Vulcan, GD Engineering, Hankinson, Dollinger and Deltech to name just a few. We have a comprehensive range of products, each of which has some aspect that is an engineered solution," Brereton continued. "Our objective is to offer as many SPX products as we can, given the requirement of technologies and projects at any point in time."

Brereton cites Johnson Pump and Plenty as examples of this policy. "Johnson Pump has two main product lines outside our marine offerings, one being a gear pump primarily used in the power generation and oil and gas sectors for pumping down-hole water and circulating water for cooling. The other is a range of positive displacement pumps that find their way into the food and beverage industries in a similar way to our other products and for dosing applications."

"Plenty as a brand comprises three main product lines: side entry mixers (typically employed for bulk storage tanks in the oil industry), pumps and filtration solutions. Plenty Mirrlees pumps include triple and dual screw pumps used for pumping and controlling oil in blending and terminal charging and rotary vane pumps for bulk transfer duties. They also find their way in to the marine industry for lube oil circulation and power generation. There is a broad range of liquid and gas filters, strainers and separators which cover a great many industries. In the oil and gas sector, these products and systems are designed for specific applications. Engineered to order, some of these systems can be multi-million-dollar solutions for

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Figure 2. SPX Bran+Luebbe Novados DADD is typically used for methanol or glycol injection.

drying and/or filtering gas in areas such as the Middle East."

Acquisitions

ClydeUnion Pumps is a recent addition to the SPX fold, with the acquisition taking place in December 2011. This acquisition is seen as a very interesting and exciting move as it will broaden SPX Flow Technology's capabilities in the pump market. "Our main markets are power generation and oil and gas, both up and downstream. In the power generation sector, we provide a wide range of pumps for critical applications in all major fuel types, whether nuclear, coal, gas, oil, biomass or solar. Other markets we serve include minerals and mining, offshore and marine and water treatment," said Wolfgang Putzhammer, area sales manager, ClydeUnion Pumps.

Bringing diverse, yet complementary, products and technologies together provides the scope for SPX to invest in research and development through shared knowledge, experience and design engineering facilities. "SPX has a comprehensive new product development program which fosters collaboration between product brands," said Brereton. "Whether a product is generally enhanced or created as a hybrid of multiple SPX technologies ultimately depends on the needs of the customer. Our process captures these requirements at the initial stages in order to best determine market requirements and project feasibility."

Bran+Luebbe, one of the well-known pump brands within SPX Flow Technology, illustrates where ongoing investment in R&D has introduced developments that are influencing the market for positive displacement metering pumps.

"Bran+Luebbe has been around for 80 years and has played a major role in the development of positive displacement pumps and is highly regarded in its field," said Jens Voigt, director of sales & marketing and global commercial product manager, Bran+Luebbe. "The last 25-30 years has seen us concentrate on diaphragm technology. While there still remain a considerable number of customers opting for plunger technology, there are now many more customers specifying diaphragm pumps. One of the reasons for the continuing demand for the plunger pump is because it is easier to use and maintain and is lower in price at the outset. However, operating costs do increase as the pumps begin to age. Evidence exists to show that after about two to three vears there is a break-even point between diaphragm pumps and plunger pumps because the operational costs of the diaphragm pumps are lower.

"Diaphragm pump technology is a safe and reliable technology," Voigt added. "Many of our customers have to abide by third party and governmental regulations which stipulate specific pump safety requirements for their demanding applications. The oil and gas and petrochemical industries are typical examples of this."

What's new

At Achema SPX was showing pumps developed specifically for the oil and gas industry. Today the demand is for pumps that are more compact, yet still deliver the same – if not better – levels of efficiency and performance in terms of pressures and capacities. The Novados DADD (Double Acting Double Diaphragm) is a prime example of how Bran+Luebbe is meeting these new requirements. This metering pump uses just one gear instead of two, so it has a reduced footprint area and weighs less, which is significant on offshore rigs. Whilst the Novados DADD (Figure. 2) is a more compact pump, it actually delivers the same capacity of an equivalent duplex pump. Typically used for methanol or glycol injection, this single-head design also reduces capital costs. Its maintenance requirements are in line with a single gear, thereby reducing costs and service time.

"In regards to process pumps, we now offer the Novaplex Vector for the processing industries," Voigt added. "This new design of hydraulically actuated double diaphragm pump satisfies the requirements for API 4674 and 4675 and follows customer demands for smaller pumps. The Vector is an unusual design of multi-head pump, incorporating a purpose-designed crankshaft and most importantly giving the customer a single inlet and outlet. With this new pump, SPX



Figure 3. The Uniglide-e range is the most recent development from SPX ClydeUnion Pumps.

has extended the proven Novaplex process pump line and now enables us to offer larger pumps, with the Vector 320 being the largest B+L unit that SPX has ever supplied."

"Both of these pumps were born out of requests from customers," continues Voigt, "and they are engineered products, as opposed to being off-the-shelf pumps. We have a great number of standard modular components which we use to make these and many other engineered pumps and systems. It is this resource that enables us to consider unique process requirements and opportunities." Component modularity was also central to the development of new products at Clyde-Union Pumps. The Uniglide-e range comprises 48 individual pump frame sizes divided into seven modular shaft groupings with standard cartridge bearing and seal assemblies (Figure. 3).

These axially split double-entry pumps were designed using 3D and FEA analysis software which enabled the number of major parts in each pump to be reduced to just seven. And, as in the case of SPX Bran+Luebbe development programmes, there was considerable input from key customers. The end result of these endeavours is an award-winning high efficiency, low maintenance pump for applications in the water treatment, desalination and wider process industries.

Voigt is keen to stress the many advantages that accrue from being a part of SPX, both in terms of product investment and the opportunities to develop business opportunities. "With the combined experience and resources available within the company, it is much easier to provide customers with the most appropriate process solution from within SPX," Voigt said.

Contact:

Irene Constantin Marketing Communications Manager - EMEA E-mail: irene.constantin@spx.com Tel: +45 8922 8326 Website: www.spx.com

