



Velan ABV: customized and innovative products

Italy has long played a strong design role in the flow control industry. In fact, even though the ancient Greeks and Egyptians are widely credited with first developing flow control devices, it wasn't until the Romans sophisticated the device that it became similar to what we would today recognise as a valve. That same technical expertise continues to exist in Italy today, and was one of the key reasons why Velan decided to strengthen its valve design and manufacturing presence in Italy by acquiring Italian valve manufacturer ABV Energy in 2011. In April of that year, Mr Tom Velan, President and CEO of Velan, and Mr Rob Velan, Vice President of Marketing at the company, sat down with Mr Luca Marianetti, President and CEO of ABV Energy, to hammer out the details of the deal and come up with a strategic plan for the new company, christened Velan ABV.

By Christian Borrmann

The result of this meeting of the minds was the largest acquisition in Velan's history. Velan ABV is 70% owned by Velan Inc. while the Marianetti family retains 30% ownership. The new company has annual revenues of \$20-30 million. Over the years, some of ABV's biggest customers have included Aramco, BP, Conoco, Total, Peru LNG, PDVSA, ENI, and ExxonMobil. "This is a great opportunity for both companies since ABV's excellent range of products totally complements Velan's existing range while broadening our offering in the energy market," says Mr Tom Velan. "And on the other hand, we at Velan can help to realize the global market potential for ABV's

specialized valves and actuators." "We were also interested in ABV because it is a very dynamic company with a substantial number of young, highly trained engineers and other experts in the field who have proved that they can consistently create innovative, new designs for demanding applications. ABV's founders and staff are very forward thinking when it comes to valve design." Mr Rob Velan was also heavily involved in helping negotiate the acquisition. He adds: "We chose ABV because they also share many attributes with Velan: They are a solid, family-run company with a combination of fairly conservative business practices and innovative, proven products. Velan was determined to have ABV's management team continue to run the company after the acquisition. By retaining the 30% ownership in the company, the Marianetti family has shown that it is committed to the business."

The ABV philosophy

At the heart of ABV's identity and a key element of its success is the business philosophy of Mr Marianetti, who says: "Tomorrow's success depends on the innovation of today." That philosophy is deeply ingrained in all that the company does, from its R&D affiliation with local universities to its extensive product line based on giving customers an all-in-one package of valves complete with in-house designed and manufactured actuators and control systems. The company provides these tailor-made packages to customers who face some of the toughest applications in the energy field today. "On our side, I wanted our company to have an even larger presence because I'm passionate about this business," Mr Marianetti says. "By working with Velan, we are expanding our scope and making our brand even stronger. Velan is a well-known name around the world and a well-established company with a long history," he explains. Also, "it was a logical partnership because we are both family-run companies and we work for the same goal—providing top-quality solutions for our customers worldwide." And he continues: "The reason I love this business and what makes it interesting is the daily challenge of providing something that clearly differentiates us from our competitors. I am always looking ahead and seeking creative new ways to meet our customers' needs."

How it all began

Though its formal relationship with Velan is a new one, ABV itself has been around for well over a decade and benefits

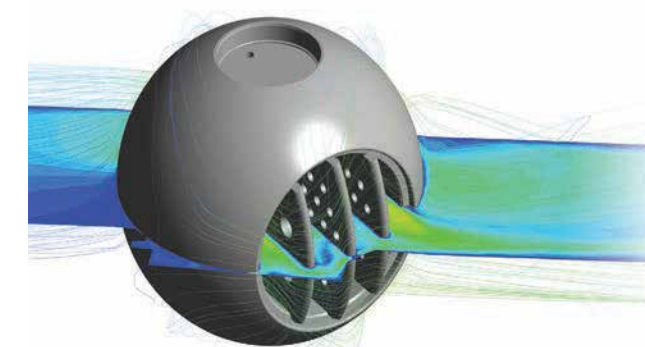


A Velan ABV engineer testing a control panel.

from a well-established reputation. The Marianetti family had already gotten their entrepreneurial feet wet by operating two companies—one manufacturing valves and one actuators—for a number of years before acquiring ABV in 2000, then located in Milan. With the Marianetti's purchase of ABV, a new era of innovation for the company began. First, they moved the headquarters further south near the historic walled city of Lucca, Italy. Then they launched a program of organic expansion that included diversifying the product line, pursuing important industry certifications, and developing a broader global reach. The company now employs more than 130 people.

As it has from day one, the company mainly targets the oil and gas industries for offshore and subsea applications. It has also expanded into power generation, geothermal processes, and liquefied natural gas (LNG). Over the years, the

company has grown its product range to include pipeline ball valves, emergency shut-down valves, high-integrity pressure protection systems, subsea ball valves, control ball valves, diverter valves, modular double block and bleed valves, slab gate valves, choke valves, and nozzle check valves. The



CFX simulation of the flow inside a KEY-C valve.

company also designs and manufactures pneumatic, hydraulic, and gas-hydraulic actuators.

But what ABV prides itself on most is the capability to offer its customers a complete valve and actuation package, a one-stop-shopping approach to fluid control. "We are not interested in manufacturing commodity valves," Mr Marianetti says. "Our goal is to provide the complete package, and we work very closely with a number of very large EPC contractors to bring in new orders. Basically, that's our sales strategy in a nutshell."

Top-of-the-line talent

However, family tradition is not the only reason why the two companies seem to be an ideal match. There is another way in which the companies are alike: both understand the importance of top-notch R&D and testing as well as finding and cultivating top-level talent. For ABV that translates into developing a close relationship with the University of Pisa, one of the oldest schools in Europe and an organization that is renowned for its excellent research facilities and ability to produce highly skilled mechanical engineers. ABV works with the research staff on special projects such as a range of applications demanding very compact designs that are exceptionally reliable as well as valves built to handle very



Left to right: Alessio Gori, Financial Controller; Luca Marianetti, President and CEO; Claudio Pii, Project Manager (standing); Michele Costa, Actuators and Control Systems; and Nicola di Iorio, Operations Manager.

severe control services. "We have also designed valves for deep water service that are completely different from the standard valves because of the particular environment in which they must operate. I'm proud of the fact that we have not only designed the valves, we have also designed and manufactured in-house the subsea actuators and the ROV override, thereby creating a complete package," Mr Marianetti says. "Working with the university makes sense for many reasons, not the least of which is that we strengthen our own internal expertise through the process," he explains. "It also gives our customers the reassurance that we're on top of advances in the field for

such things as materials, coatings, and R&D and testing processes. Our reputation for quality and design is already very good, and this puts muscle behind our efforts so we can develop even more products that are tailor made for very specific applications."

A strong R&D team

ABV uses both computer simulations and other testing facilities including its own hyperbaric chamber, which effectively simulates deep water conditions. Mr Marianetti explains, "I believe the strength of our testing and R&D team is one of our key selling features. We're always at work on the development of new products, continuously improving our designs. We work on sizing and optimization issues to satisfy a wide range of operating environments, and perform CFD (computational fluid dynamics) simulations to test out the worst possible working conditions. We even take into account such details as the potential noise levels that workers might face in severe service applications. We are very thorough." That expertise is vital for a company that faces the challenges presented by working with difficult applications and corrosive materials.

Velan ABV's plan

Asked what can be expected for the future of the new Velan ABV, Mr Rob Velan says, "We want to strategically grow



the sales within the company's existing product lines. Velan ABV has a number of product lines—all of which have really great designs. We want to strengthen the marketing and sales structure behind them to support their winning an ever-larger footprint in the global market. We want to help get the momentum going to ensure these well-designed products get the market share they deserve." In preparation for the anticipated growth, Velan ABV has invested in a second manufacturing plant in Lucca with state-of-the-art equipment. This 8,000 square metre (almost 80,000 square foot) facility

boasts massive testing machines and heavy-duty material-handling systems. Mr Marianetti adds: "We're going to focus on rapidly scaling up on our production. We've invested a lot in our recent expansion, including installing the largest crane in the entire Velan global manufacturing network—it's a huge 60-ton beast. So with production going full speed and by joining our existing sales network with the larger Velan one, we have all the pieces in place to grow our valves and actuators sales worldwide. The sky's the limit."



Velan and ABV joined forces to announce the acquisition at the Offshore Technology Conference in Houston, May 2011. They had signed the contract in Italy three days before.

The challenges of going subsea

"About a quarter of our business is in subsea applications," Mr Marianetti says. "In broad terms, there are two types of subsea applications: shallow water, which is relatively easy to deal with because you can refer to the national API standards as clear guidelines for designing the equipment, and deep water. For deep water, customizing the valve package is much more important because you face unique temperatures and pressures. We've designed systems that need to operate reliably kilometres underwater." "With subsea conditions you need to find materials that can handle corrosive service in the sea—mainly the challenges presented by the effects of hydrogen sulphide (H₂S), carbon dioxide (CO₂), and chlorides," explains Mr Nicola Lucchesi, Manager of Velan ABV's R&D engineering team. "Newer subsea operations also often use chemicals that minimize paraffin, asphaltene, hydrates, and scale formation; they must also be able to inhibit corrosion. It's a balancing act since these chemicals can negatively affect both metallic and non-metallic materials, and the problem is compounded when materials have to handle produced and annular fluids as well as the injected chemicals." And Mr Marianetti adds: "Also, with subsea systems, the effects of hydrogen embrittlement from the cathodic protection system—a well-known technique for controlling the corrosion of a metal surface by making it the cathode of an electrochemical cell—have to be taken into account. That's why it's especially challenging to pick the right materials for the job."



Velan ABV's President and CEO, Luca Marianetti, with Tom Velan, President and CEO of Velan.