Issue 9

DistributionNOW has a new face

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2015

Also:

Doing business in Sweden A new greener technology Today's workers

Velan View





Cover photography: Inside DistributionNOW's Edmonton warehouse (see story on page 6). From left to right: Bill Patrick, Velan Regional Manager, Western Canada; Lori Olinyk, DNOW

Account Specialist; Kent Langstaff, DNOW Director of Supply Chain; and Rod Hill, DNOW Category Lead – Valves & Automation

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A new leader grabs the steering wheel with both hands

The first non-family member to head up operations took over in January 2015. He talks to *Velan View* about his background and what he hopes to accomplish.

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Velan Worldwide Headquarters, 7007 Côte de Liesse, Montreal, QC H4T 1G2 Tel: +1 514 748 7743 Fax: +1 514 748 8635 www.velan.com ©2015 Velan Inc. All rights reserved.

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CEO's message

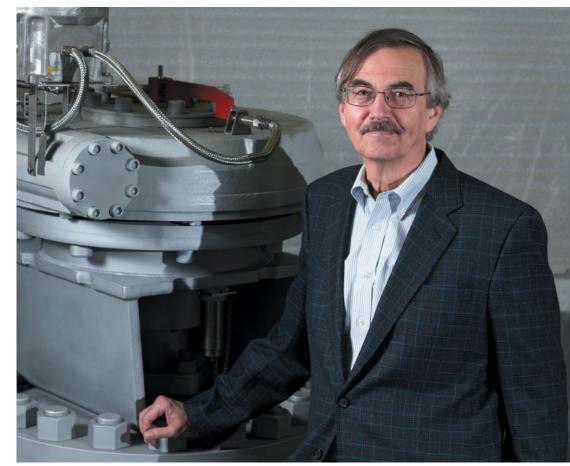
T hese are challenging times in the valve industry as everyone in the energy markets contends with the impact of the low price of oil and strong U.S. dollar.

This has likewise been a time of change at Velan. My father retired from his position as Executive Chairman of the Board after 65 years of enthusiastic and devoted service to the company he founded. At the "ripe old age" of 97, he was appointed to the honorary position of Founder and Chairman Emeritus. I was appointed Chairman in addition to my CEO responsibilities.

We also successfully hired Yves Leduc this past January as the first non-Velan family member to hold the position of President since the company was founded in 1950. Yves has shown himself to be a strong and passionate leader, and he is determined to bring positive change to the company.

I am very happy that we have found such a talented leader to join our company, and I believe that he will have a very positive impact on the future of the company. At first, Yves is taking responsibility for Velan North America as well as for some specific tasks with a global scope. He will take on increasing global and corporate responsibilities as he gains knowledge and experience about our company. To read an interview in which Yves shares some of his insights into Velan and the industry in general, go to page 4.

Even though we hired a non-family President, Velan is still very much a family business, and I am glad that my son Dan returned to the business as Vice President, Marketing after getting a Masters in Business Administration (M.B.A.). Also, Ivan's son Shane, who has a Ph.D. in Computer Science and Operations Research from the University of Montreal, recently joined the company as Director, Strategic Planning and Special Projects.



Together with Rob Velan, who also holds an M.B.A. and is now Vice President, Sales Administration (North America), these men represent the third generation of Velans in the business. They are smart, well educated, and ready to help Yves take the company to the next level.

As is our tradition in the Velan View, we have profiled a number of our distributors in this latest issue. We spotlight DistributionNOW, one of our partners operating out of western Canada. We also talk with part of the management team at Swedish distributor Alnab Armatur AB, as well as a new distributor that will help us in the specialty valve market: 700 Valve Supply.

In keeping with our dedication to staying on the forefront of technological design and R&D, we explore our relationship with Hardide, which enables us to offer nanostructured coatings. And we zero in on the challenges we face alongside other companies like us in building a better workforce by understanding what attracts new, young talent into our industry.

We hope you find this magazine to be a useful compilation of interesting topics and people in our industry. If you have ideas about topics we should cover or people or companies we should profile, please let us know.

I wish you all good health, happiness, and success in all your endeavors.



Tom Velan, CEO, Velan

Yves Leduc A new leader grabs the steering wheel with both hands

Yves Leduc took over the position of President of Velan on January 26, 2015. His entry into the fold is historically significant because he's the first non-family member to head up operations.

** The Velan family is the backbone of this company, but we felt the tremendous growth of the last few years required bringing in someone with a fresh perspective. We are very pleased to have found someone with the talent and background that Yves brings to the table," says Tom Velan, former President and current CEO.

Yves comes to the company from BRP Inc., where he was a corporate officer as well as Vice President and General Manager of the North American Division since 2006.

Velan View asked Yves to fill readers in on why he's joined Velan and what he hopes to accomplish.

Why were you interested in working for Velan?

Velan has a tremendous reputation for quality in what it does and how it operates both in North America and around the world. I wanted to be part of that.

My exposure to Velan began almost eight months before I accepted this position. I developed a relationship with the Velan family, got to know the valve industry better, and talked to experts about both the company and the industry. My level of excitement at the possibility of joining the company grew steadily over that period. By the time of my appointment, I felt greatly honored to be selected for this new role by a company that's been around well over 60 years and has achieved so much success.

I wanted to be part of the valve industry itself because it's part of the energy picture,

which is an exciting field that basically affects most of the world today.

I wanted to join Velan in particular because of its history and foundation. I have had the opportunity to work for other companies with the kind of long proven track record that Velan has. Bombardier Recreational Products (BRP), for example, is a family-run business that has been around since 1942. Companies such as BRP and Velan carry a rich heritage, and they tend to have values that are tangible and authentic—a sturdy base upon which to build a platform for success.

What skills and background have you brought to the Velan organization?

I am a lawyer by background, which gives me a solid understanding of the rules and regulations that govern any industry. When I decided to expand beyond the legal field, I went to work for a global consulting company where I gained business and management perspective. Much of my background with that company and others has been in the industrial worlds such as pulp and paper, chemical, and most recently, making recreational products.

At BRP, I had the privilege of running several business units and being exposed to almost every key function within the company. In particular, I spent six years at Rotax in Austria, BRP's engine division where, before becoming its General Manager, I headed production planning, materials management, supply chain logistics, and project management.



Like Velan, Rotax relies heavily on machining operations, as well as assembly. And so, as the person responsible for the development of lean enterprise, I think my Austrian experience helped me quickly understand Velan's manufacturing model.

Later, coming to North America, I headed BRP's largest division, overseeing manufacturing, sales, marketing, logistics, and network development.

What are you hoping to accomplish here at Velan?

One of my main areas of effort will be to find ways to increase our focus on our customers—not just our global network of distributors, but also the end users. I viscerally believe the customer should influence most of what we do in product development, manufacturing, application development, and marketing, as well as service. In addition, Velan could maximize its market efforts by borrowing some of the best practices from the consumer products industry, including consistently delivering its brand message and its association with innovation

How will you achieve those goals?

First, I need to spend a good deal of time understanding the company itself because I believe that culture and people are what truly powers any business today. If you don't understand the people, you don't understand where the company is coming from or why certain decisions were made, and you will miss the boat.

I'm immersing myself in this business, walking the plants, talking with employees, discussing strategies, talking to customers and business partners. The next step, which I'm working on now, will be to diagnose what's strong and what needs improvement. I'll work with the team on defining the focus areas where we can both leverage our strengths—those areas that make us unique in this world—and identify areas where we need to improve.

One of our goals will be to identify ways in which we can improve delivery to our customers. This mandate comes from the fact that industry and manufacturing have evolved in the last decade and a half. Increasingly, companies such as Velan are asked to design and make valves and related equipment created specifically for a particular end user as opposed to delivering stock. Although we still have a solid amount of straight manufacturing for distributorbased stock, new requirements for valves that can address higher temperatures, more corrosive processes, and other challenges place specific demands on the company. Velan is already quite good at delivering these types of more specialized valves for power plants, refineries, energy companies, and other end users. But the company has grown so fast in the last few years, it's time to step back and assess our situation. We'll be looking at how we can improve delivery and reduce lead times.

Another area we're studying is pure growth opportunity. Velan has built its reputation on multi-turn gate, globe, and check pressure seal valves in industries such as the U.S. Navy and applications such as nuclear. But it's surprising to me how relatively unknown some of our other products are, such as quarter-turn valves, triple-offset valves, and dual-plate check valves. So we need to look for new areas where these products can be used, such as additional markets in upstream oil and gas. I think there is tremendous opportunity for growth just by marketing effectively (again here, learning from the retail industry) and making it known what superior valves we make and how they can be used in increasingly challenging environments.

How will Velan keep up with what's happening in the valve world?

What I'm finding is that this industry is one where innovation needs to be sharply defined in terms of how it will truly create value for existing or new customers. We have these long-established standards to which valves for specific applications such as oil and gas must conform. But it's our ability to understand new customer needs and demands and quickly adapt existing designs to new areas that will translate into success going forward. Fortunately, Velan is terrific at this because research and development is in our DNA. Founder A.K. Velan is an engineer himself so it's always been a central focus of the company.

The questions we'll address moving forward include how to do more research and development and how to target fastgrowing segments and areas that might be new for us. This should not be a problem because innovation is the air we breathe.

What opportunities and challenges do you see in being a worldwide company?

One of the strengths that Velan has is that when you look at this company and compare it with the general landscape, we are already established and have a strong global footprint. We have a wealth and depth of knowledge that few other companies have, as well as a terrific brand reputation for quality that we've built up over decades. This provides us an additional opportunity to optimize our operations as markets evolve.

We also have the advantage of closer contact with customers. We are sometimes three or four tiers away from the end use of our valves in a plant or facility. But with the technologies we have today for communicating and with the partnerships "One of my main areas of effort will be to find ways to increase our focus on our customers—not just our global network of distributors, but also the end users."

-Yves Leduc, President, Velan

we've already established within countries, we can deliver sharper customer solutions and get closer to the operator. Companies that don't have the global footprint we have will be faced with time and knowledge issues that we don't face because our global connections are already strong.

It's also important for us, however, to leverage our vertical knowledge. Each of our plants and locations has capabilities and specialties, and we want to encourage those capabilities, continuously learning to use them more efficiently. We want both concentration and flexibility.

Will Velan address the brain-drain issue of retiring employees and the need to bring in new blood and transfer knowledge between the two?

I have faced this issue before because of my exposure to long-standing companies, and I recognize the importance of these issues in today's workforce. We'll need to focus on making sure mentoring and training are part of regular daily business. We'll need to find ways to attract the new talent we need.

Velan has a great number of incredibly experienced and loyal employees and some are close to retirement. Those employees and their knowledge are one of the great resources of this company. Because of this, we'll be looking for ways to consistently pass the torch from one generation to the next. $|\mathbf{V}\mathbf{V}|$

The new second s

Expertise times expansion equals more opportunity

Employees gather for a group photo inside DistributionNOW's warehouse in Edmonton, Alberta.

The last two years have seen significant developments for one of Velan's supplier partners, DistributionNOW (DNOW), which was formerly the distribution services division of National Oilwell Varco (NOV). In 2013, NOV purchased two major companies—the Wilson distribution business segment of Schlumberger Limited and major energy industry supplier CE Franklin. Then, in the middle of the clouds of dust raised by such major acquisitions, DNOW made a strategic decision: In June 2014, it spun off from NOV and became its own distribution company.

The result is a major powerhouse: a company that has more than 330 locations in more than 20 countries and is an industry leader in providing pipe, valves, fittings, flanges, valve automation, and a host of other equipment and supplies to the upstream, midstream, and downstream oil and gas world, as well as the industrial markets. For Velan, that offers a huge opportunity to expand the relationship and promote business in the oil and gas fields.

Though the spinoff was not an easy task for the many DNOW staff responsible for

creating the new entity, the company has come through with flying colors.

"We essentially were a 30-year-old child living at home whose parent says, 'it's time to move out of the house, and oh, by the way, we paid for the new house, for you," jokes Scott Hauck, President of DistributionNOW Canada. "It was an exceptionally structured spinoff process as we became our own publically traded company (NYSE: DNOW) and had absolutely no debt. This positioned us very well to go out and take the world on and grow our business." If anyone could make the transition smooth for employees, customers, and suppliers, it was the leadership at DNOW, who are highly experienced, seasoned professionals who have been in the business for many years (see "The history behind the relationship with DNOW" on page 10).

"Such a major spinoff takes a massive effort on every single employee's part," Hauck explains. "You have to start from scratch in every area from setting up human resources to finding the software needed to operate the most responsive distribution system," he says. "Having said that, the spinoff also offers great benefits both for the new company and the employees involved," he adds.

For the company, becoming a new entity allowed it to put new systems into place that are focused specifically on becoming a top-notch equipment supplier and inventory manager. For the employees, it gives them experience and background that might otherwise take much longer to gain.

"I tell my employees that if they've been part of what we've done in the last two years, they've been exposed to more change than most people get in a 30-year career. Our employees took on the challenge, dug deep, and came through with flying colors. While nothing is perfect, today we are working on fine tuning our entire business through continuous improvement processes. It's a journey, not a destination," Scott says.

At the same time, however, one of the reasons it worked so well for DNOW is because of the background of the people running things: the leaders have a huge amount of hands-on experience in the oil and gas industries—they understand the nuances of how their business works and how to get things done. "Believe it or not, of the 10 people on my Canadian management team, nine of us started out on the job with a broom in our hands," Scott says. "We've lived and breathed through every step up every rung of this ladder."

The CEO and the Corporate President both held the same position Scott did when they all started out in the company. That speaks very well for the company's recruiting process and provides employees with the opportunity for personal and professional growth.

That background also includes Scott himself, who began in the business 33 years ago right out of college, working for one of NOV's predecessors: National Supply.

Pushing the broom

Scott's own hands-on experience started in Billings, Montana, where he grew up. He went to Montana State University in Bozeman, where he pursued a business management and marketing degree. He was recruited by National Supply in 1981, one of the last of a generation to start a career in such a manner before the oil industry crashed later in the decade. "I tell my employees that if they've been part of what we've done in the last two years, they've been exposed to more change than most people get in a 30-year career. Our employees took on the challenge, dug deep, and came through with flying colors."

—Scott Hauck, President, DistributionNOW Canada

At the time, "I didn't know a valve from a Volkswagen," he says. Nonetheless, he quickly learned on the job, "starting with crawling all over drilling rigs, refineries, and power plants," he says. "In those days my customers knew I was green, and they were very helpful in making sure I learned their businesses. They taught me how to deliver exceptional customer service to help them. They told me my job was to make their life easier and I have lived to that customer service mantra my entire career," he adds.



DNOW's headquarters in Calgary, Alberta (left to right): Bob Salmon, DNOW Technical Sales-Valves; Ernie Greig, DNOW Facilities and Construction Product Line Specialist–Valves; Bill Patrick, Velan Regional Manager, Western Canada; Hubert Murphy, DNOW Director of Sales–Total Valve Solutions; Paul Dion, Velan Vice President, Sales, Canada; Scott Hauck, DNOW President Distribution Services, Canada; Natalya Stone, DNOW Business Development Manager; Art Marjadsingh, DNOW Inside Sales; Gerry Drebit, DNOW Corporate Sales Manager; Mark Parekh, DNOW Manager–Major Project Sales; Chad Tuck, DNOW Vice President–Canadian Sales; Leo Shewchuk, Velan Regional Sales Manager, Western Canada.

"Our first priority with Velan is to get people to understand that upfront price needs to be weighed against the real value: Customers who buy Velan will not be replacing that valve anytime soon."

—Scott Hauck, President, DistributionNOW, Canada

By the end of his first year he was managing a facility, which gave him a general operations background he built upon for the next 16 years.

"Eventually I was exposed to every aspect of energy production from power plants and refineries to coal mines and steam plants across a wide variety of products from pipes, valves, and fittings to fluid pumping, artificial lift, industrial maintenance repair, and operating supplies. I cut my teeth learning about a wide variety of industries with some very helpful customers," he says.

After 17 years, opportunity struck in the form of a promotion to a job in project integration and process design in Houston. He packed up his family and moved, which he says was hard, but beneficial.

"This business is all about change, and I often tell people that if you don't like change, you should probably be in another industry. I've become adept at designing processes around that change," he says. "I enjoy working with others to create ways to take cost, time, and effort out of a process. Doing this can bring concrete value to the company and job satisfaction to the employees."

In fact, change was also part of his next career step. He became Vice President of International Operations when the company was just starting to go global. He was put in charge of setting up NOV's operating system in nine countries.

"I had to spend a lot of time away from my family on the road, but I would never give



DNOW Edmonton employees: Rod Hill, DNOW Category Lead–Valves and Automation; Kent Langstaff, DNOW Director of Supply Chain; and Lori Olinyk, DNOW Account Specialist.

up that time because it was incredible," Scott says. Again, he was learning by starting at the ground level—this time during a very scary era. Scott's first trip abroad was to the Middle East right after September 11, 2001: There were only nine people on the huge jet that took him overseas.

But although the first trip was sobering, he quickly learned how fascinating international business was.

"By traveling to the different countries and seeing what operations and cultures were like there, I found out how much more there was to learn about this business," he says.

The most recent opportunity meant another major change when he and his family moved to Canada, which was much closer to his roots in Montana. With the creation of the new DNOW legal entity, it also provided yet another way to use his wide knowledge of the industry and the processes that help it run, working alongside other leaders who have adapted to change and who know their stuff.

"DNOW and NOV before it have a long history. One thing that has remained constant throughout is that we see expertise as a key resource," Scott says.

"When you have a leadership group that has 'been there, done that,' you have a team that does not need an advisor to tell them how to do their jobs. We know hogwash when we see it, and we hold our people accountable to do their jobs—to fix what's wrong or do whatever it takes, and to do it all with a sense of urgency," he says. "Our people are our most important asset and the right people thrive in this professional, fast-paced environment."

The relationship with Velan

Because Velan has such a long-standing relationship with DNOW staff as well as NOV's staff and its predecessors, Scott says the spinoff, as well as the growth brought on by acquisitions, can only mean more business.

"I sum up our relationship with Velan with two words: strategic and collaborative," Scott says.

Why coming to Canada is "returning home"

Scott Hauck was delighted when he found out his new job with DNOW would mean living in Calgary, Canada, a city that is a mere eight hours from where he grew up in Billings, Montana.

In the nine years he worked in Houston, Scott made 19 car trips home—a 24-to-30-hour drive one way.

"My wife and I bundled up three kids, two dogs, and a hedgehog and drove 1,600 miles each way," he explains, a trip made necessary because flying the whole crew was not only expensive but impractical: they needed a car while they were there and where do you put a hedgehog on a plane?

However, that's not all he means by "returning home."

"My greatest passion is the outdoors, and I always say Canada is like Montana on steroids," he explains. Canada is beautiful, it's big, and its citizens respect the land, he points out, with some of the strictest environmental laws in the world. As in Montana, there are wilderness areas protected by law forever where access can only be made on foot or on horseback.

He and his wife own about a thousand acres near Billings: "On my own land, I don't even have a cow. The land is there not to serve commerce in any way but to remain a pristine piece of land where the resources will remain untapped," he says. Scott is an active conservationist (as he believes we all should be), and fought to have drilling that was scheduled to be completed on his property done in a manner that would allow the least amount of impact on the environment. Knowing the advanced capabilities of drilling technology today, his proposal will gladly be considered as an option when the time comes. As much as some people would like you to believe otherwise, "no one in our industry wants to hurt the environment and we all live here on the same earth and want the best for our kids and future generations," he says.

Scott says there is not a more passionate group of people than those in manufacturing, who voluntarily regulate their practices and spend millions on research and development, which they share, to find safer practices and process for people and the environment. "We all live in the same environment, and we all benefit from systems put into place to protect our world. It may cost us more to do business the right way, but you cannot really put a price on this," he says.

He adds, "I sit on the board of PSAC (Petroleum Services Association of Canada), and we often marvel at the misinformation that is out there about the industry. Frankly, that is partially why we exist: to advocate for the industry and get both sides of the story in front of everyone. "The group doesn't exist just to make decisions that side with oil and gas, but also so people in general



Enjoying the great outdoors: Scott surrounded by 1,000 acres of his property in Montana.

can make intelligent and informed decisions and have all the facts before they make a choice."

He says that, "We do this to inform people in our industry, government, the public, and those that might tend to advocate based on partial information or sound bites. We are all in this together and it is our obligation to make sure we have all the right information," he concludes.

Part of the strategy going forward will be continuing to spread the word about the true value of Velan's product base.

"Velan has a distinct product niche, especially in Western Canada where a lot of our oil and gas business derives," Scott explains. "However," he says, "many of the customers already know that you don't choose a Velan valve as much for price as for quality and exceptional fit for purpose and application."

"When we explain to our customers that you buy a Velan valve for its ability to be a solution to a problem, they get it. That's the way we've always sold it," he says.

Collaboration is part of the DNOW strategy, he adds. The staff at DNOW regularly joins forces with Velan staff to develop better ways to plan and inventory the products, Scott says.

"We are working hand in hand with Paul Dion (Vice President of Sales, Canada), Bill Patrick (Regional Manager, Western Canada), and Leo Shewchuck (Regional Manager, Sales, Western Canada) to develop systems for servicing customers so lead times are minimized, customers' projects are not delayed, and we are the go-to team with technical expertise and product," he says.

"Bill Patrick, in particular, is a constant presence within our company," he adds. He knows the oil and gas business and the technology that goes into it, "so he is continually working with us as we develop better ways to predict and measure what our clients will need," Scott says.

The result for DNOW of the collaboration on inventorying product is stronger relationships with existing and new customers.

"These strong ties are based on the fact that customers see that we look not just at immediate needs, but future requirements and how we can offer a unique solution to their application issues and their delivery requirements as well," he says.

As with his own staff, Scott credits not only Bill, but also the rest of the Velan personnel with having the expertise today's customers demand, which he says is an important part of the distribution world today.

"Bill and the others we deal with at Velan have a strong technical background, they educate both our people and, in some cases, our customers. Our first priority with Velan is to get people to understand that upfront price needs to be weighed against the real value: Customers who buy Velan will not be replacing that valve anytime soon," Scott says. **[VV]**

The history behind the relationship

DistributionNOW's relationship with Velan stretches back to the earlier days of distribution in Canada—when Velan did business with some of DNOW's predecessors.

Back to the 80s: Pre-NOV

During the 1980s, Lytle Specialties was the exclusive distributor of Velan valves from coast to coast in Canada. During that decade, Velan entered the oil and gas field in a major way when y-pattern and pressure seal valves were approved by Imperial Oil, which was the beginning of a long and successful steam valve program in western Canada. Velan became the sole holder of almost every maintenance, repair, and operation contract for cast and forged steel valves in Canada.

"Many projects, including Shell Peace River and Caroline, were built with wall-towall Velan products, and we participated in almost every major new project unless they were looking strictly for absolute lowest price," Paul Dion explains.

Towards the end of the 1980s, United Westburne purchased Lytle Specialties along with distributors Donaldson, Pyrch & Hume and Dominion Oilfield.

Westburne then merged the three new divisions and added a fourth (RAFF Industrial Supply) to form Dosco supply.

NOV enters the picture

In 1999, National Oilwell's first direct link with Velan occurred when the oil and gas equipment producer acquired Dosco as well as TS&M, a competitor distributor in Manitoba, Saskatchewan, and northern Ontario.

Crude oil prices hit \$30 per barrel in the early 2000s, which made oil sands projects very attractive. By 2005, prices started rising at unnatural rates to over \$100 per barrel. The Canadian dollar hit parity with the U.S. dollar and shelved projects started looking potentially profitable, creating such a demand for products that even more competition came into the country from off shore.

Business in Quebec and Atlantic Canada was diminishing while business in Western Canada, especially in the oil and gas areas, was booming.

Velan's relationship with National Oilwell was strengthened in 2006 when National Oilwell acquired Varco, a prolific supplier of oil field equipment, and became National Oilwell Varco (NOV).

In mid-2008, the boom in Western Canada came to a halt as the financial crisis hit in the U.S. and heavily leveraged projects were shelved or cancelled.

By 2010, the picture improved as the recession ended and almost every Canadian heavy oil project (except most upgrader projects) that had been cancelled went back on the books; new projects sprang up, and the Alberta market exploded once again.

By 2012, National Oilwell Varco acquired U.S. company Wilson and then CE Franklin in Canada to become NOV Wilson. The company spun off from NOV and changed its name to DistributionNOW in 2014.

Timeline

DistributionNOW has been in business for more than 150 years. Serving the upstream, midstream, and downstream/industrial markets, it now stocks more than 150,000 diverse products. Here's a glimpse of its history:

- 1862 Oilwell oilfield equipment business established
- **1878** Oilwell Supply formed
- 1894 National Supply formed
- 1921 Wilson Supply formed
- 1930 Oilwell Supply acquired by U.S. Steel
- 1958 National Supply acquired by Armco Steel
- 1987 National Supply and Oilwell Supply merged to form National Oilwell
- 1991 Wilson acquired Tyler Dawson
- 1993 Wilson acquired Wallace Company
- **1995** Continental Emsco and Franklin Supply merged to form CE Franklin
- 1996 National Oilwell, Inc. initial public offering (NOI)
- **1999** Wilson acquired Continental Emsco Co.
- 2000 Wilson acquired Texas Mill Supply
- 2001 Wilson acquired Van Leeuwen Pipe and Tube Corporation and Mid-Valley Supply
- 2005 National Oilwell and Varco International merged to form National Oilwell Varco (NOV)
- 2012 National Oilwell Varco acquired Wilson Supply and CE Franklin
- 2014 Distribution segment spins off from NOV to form DistributionNOW



Scott Hauck, DNOW President, Distribution Services, Canada, with Paul Dion, Velan Vice President Sales, Canada.

Success in Sweden

requires a good partner... and expertise



Rolf Arvidsson, Product Manager for ASME Products, with Jan-Erik Larsson, Managing Director, Alnab.

There is a principle guiding businesses in the Nordic area of the world that Alnab, Velan's distributing partner in Sweden, says is responsible for its success: The company recognizes that "the products we represent are the bonus of the deal. Yes, we need to offer the best quality in our products, which is why we deal with Velan. But what we're really selling to our customers is knowledge," says Jan-Erik Larsson, Managing Director of the company.



ars Eriksson, Operations Manager, explains further what that means.

"In our area of the world, it's not enough just to hold a large stock of inventory and offer low prices," he says. "You have to be a complete partner that offers technical support, understands the customer's complete process, and offers very smart solutions to their problems," he says.

Sweden has only nine million people. It doesn't manufacture very much of the equipment used in industry; however, it has thriving petroleum, pulp and paper, chemical, mining, and other industries. The suppliers that do well in Sweden are the ones that can build bridges between manufacturers and the country's end users. The main building block of those bridges is expertise.

"We are traders here in Sweden and have been for many centuries. As such, technical knowledge of our customers' processes is key to our success," says Rolf Arvidsson, Product Manager for ASME Products and Velan's main daily contact person. "Alnab built up our technical know-how over time, and we market that knowledge as one of the main values we offer to our customers."

-Rolf Arvidsson, Product Manager for ASME Products, Alnab

Forty years of trade

Alnab was founded in 1975 by Arvid Lennart Nilsson, who started selling butterfly valves and steam and condensate equipment (such as steamtraps, control valves, boiler equipment, and heat recovery systems). By 1987, when Nilsson stepped down and Peter Eriksson took over heading up the company, Alnab had become a market leader. Peter Eriksson doubled business for the company, and then decided to sell, the lucky buyer being Indutrade, a Swedish company with a strategic plan to grow by acquisition.

Jan-Erik, who started with Alnab in 1987 at the age of 20, explains why Indutrade was the right company to take over.

"Indutrade is a company set up to encourage entrepreneurism," Jan-Erik explains. "Indutrade grows by acquisition; they acquire companies with technical niche expertise. The companies are characterized by high-tech knowhow and an ability to build enduring, close relationships with customers and suppliers. The business philosophy is based on entrepreneurship, self-determination, and decentralized leadership."

That's a good mix for Alnab's main markets, which are refineries and petrochemical, power/energy, pulp and paper, chemical, steel, and mining. The staff of 30 employees has a heavy background in engineering, and most of them have many years with the company, learning about Alnab's end-user industries by coming up with solutions to problems and answers



From left: Lars Eriksson, Operations Manager, Alnab; with Karl Laas, Velan Area Sales Manager, Germany and U.K.; and Rolf Arvidsson, Product Manager for ASME Products at the 2014 Velan Distributor Conference in Mt-Tremblant, Quebec.

to challenges in a particular industry for so many years. That's vital to the industry given today's marketplace challenges.

"The last decade has seen the loss of a lot of personnel in end-user industries," Rolf explains. "As a result, we suppliers have a real marketplace advantage if we can keep up the technical knowhow the industry needs because it's lost those people," Rolf says.

In other words, "Alnab built up our technical know-how over time, and we market that knowledge as one of the main values we offer to our customers," Rolf says.

Velan in the picture

In the 1980s and 1990s Alnab sold only a small share of ASME valves, buying mostly from Italian producers. (The greater share of equipment business in Europe is done through the European standard—DIN.) Alnab learned about Velan and its abilities to produce quality ASME products through Wolfgang Maar, who is now Velan's Executive Vice President, International Sales and Overseas Operations, but worked many years previously for Velan Germany. By the mid 2000s, Velan's reputation also had reached Nordic shores, and shortly

A "tall" order from a new kind of company

Through the efforts of Alnab, Velan valves are installed in the new extension of Preem's bio-refinery, a new and revolutionary way of producing diesel that is greener and uses waste products from the pulp and paper industry.

A mix of valves are being supplied to Swedish company SunPine, which opened a plant in 2010 that is the first to take what is called "tall oil" and turn it into a product that will be upgraded into a high-quality green diesel at the Preem Bio Refinery.

Tall oil is the waste product of the pulp industry—the black liquor that is a byproduct of wood as it's ground and processed, then dissolved into a liquid. The resulting substance has chemical properties with favorable qualities being studied for many purposes.

For the greener fuel, the tall oil is blended with regular diesel to make a better biodiesel that burns about 16% cleaner than traditional diesel. The new fuel can then be used in the same machines as traditional diesel.

thereafter, Rob Velan introduced Alnab as Velan's new strategic partner in Sweden.

Today, Stefan Wingerath and Karl Laas (President and Managing Director, Velan Germany and U.K., and Area Sales Manager, respectively) "take very good care of us," says Jan-Erik. Meanwhile, with the help of Velan's European team, Alnab has gone from a small market share to "about 85% of the market share in Sweden on ASME gate, globe, and check valves," he adds.

Jan-Erik describes why Velan and Alnab have meshed so well. "The reason it works so well between Alnab and Velan is that both companies have been created by great entrepreneurs; the culture of the companies is very similar," he says.

The other reason is that both companies recognize the importance of having a oneon-one partnership in Sweden.



Rolf Arvidsson and Lars Eriksson at the 2014 Velan Distributor Conference in Mt-Tremblant, Quebec.

On their "off" hours

When Jan-Erik, Lars, and Rolf are not wearing their technical expert hats, they are busy pursuing their personal passions. Some of those passions have to do with where they live: For example, despite the fact that Sweden is a country where most of the population is concentrated in cities, it has a rich abundance of nature, including many lakes, rivers, and mountains in the north western area.

Although Lars and his wife love to travel to other countries, you can find them at their cottage 300 kilometers (186 miles) north of Gothenburg most weekends.

"With some luck we can see wolves, bear, and elk. I take my ATV (all-terrain vehicle) and go out into the woods. We do a lot of fishing," he says.

Rolf also does a lot of fishing, but for a different reason: Rolf lives on Björkö, an island located in the



Lars near his country cottage.



Jan-Erik: Another day at the races.

northern archipelago of Gothenburg that has about 1,500 residents and is about 2 square miles (5.5 square km) in size. Rolf moved there as a young man when he fell in love with one of its residents.

Jan-Erik on the other hand, takes a little different approach to enjoying the terrain and climate. When he was in his late teens, he was a motorcycle road racer, a career he had to give up when he joined the Alnab team and came into work a few times with an arm or a leg encased in plaster. Today, however, he's returned to the race circuit with a different vehicle: a Porsche 911.

"It's a substitute for my motorcycle days but at least it's on four wheels instead of two: It's much safer," he jokes.

Then there are the sports of that country. Rolf developed a reputation in his youth as a tough soccer player, and Jan-Erik plays a sport that started there in Sweden:

floorball. It's played like hockey with five players and a goalie for each team, but with a big difference: running shoes and a plastic ball on a wooden floor instead of skates and hockey pucks on the ice.

One thing the team has in common with all of the people in Sweden is that they are deeply loyal to their country.

"Swedish citizens complain about high taxes. But we love our country. We can go up north and be in a remote area or we can hop on a plane and shortly be in Paris or Naples—somewhere completely different. When we come back from those trips abroad, we realize we are quite happy to be here," Lars says.



Rolf fishing for the catch of the day.

Lars explains why. "In Sweden, companies such as Velan definitely need to have one strategic partner who has a very strong local presence. If you have more than one partner, end users are confused by loyalties, a price war begins, and profit disappears," Lars explains.

On the other hand, because technical expertise is such a significant part of the value proposition, "your partner supplier has to know your product's capabilities and how those capabilities can be applied to Swedish industries," Jan-Erik explains. Because most European industries are dealing in DIN equipment and only a few industries need ASME equipment, "this is especially critical in Sweden," says Lars.

Some of the current projects that Velan and Alnab are working on together are:

- The Preem refineries. Velan has supplied about 8,000 valves for a refinery in Lysekil and one in Gothenburg, both for new projects and for shutdowns.
- Alnab won the contract to supply all the cryogenic butterfly valves for the Skangas LNG project. Velan France supplied the valves.
- In Gothenburg, Velan valves are part of a burgeoning new effort to produce "green diesel" out of wood (tall oil), a revolutionary new method of producing cleaner diesel that is making scientific headlines (see sidebar on page 12).

Rolf explains that, "You do not win projects like this without strong local presence and good customer relationships with the technical engineers and applications specialists involved." [VV]

Sweden: Did you know?

- Sweden is the English translation of "Sverige," a word formed from "Svea" (an old name for one of the nations that formed Sweden), and the word "rike" or "rige" (which means kingdom). Therefore, Sverige = kingdom of Svea.
- The Swedish Empire controlled much of the Baltic region during the 17th and early 18th centuries, when Sweden was one of the great European powers. It conquered about half of the member states of the Holy Roman Empire. Sweden founded overseas colonies, principally in the New World. New Sweden was founded in the valley of the Delaware River in 1638, and Sweden later laid claim to a number of Caribbean islands. A string of Swedish forts and trading posts was constructed along the coast of West Africa as well.
- Sweden has the highest number of nuclear plants per capita, with 10 reactors for nine million inhabitants.
- Total taxation in Sweden amounts to 54.2 % of GDP, the highest level worldwide.
- The Oresund Bridge connecting Sweden and Denmark is the longest combined road and rail bridge in Europe.
- Sweden didn't have an official language until 2009.
- Sweden granted Norway independence in 1905.
- The Swedish capital, Stockholm, is known as the Venice of the North: the central parts of the city consist of fourteen islands in the bay Riddarfjärden.
- Sweden has the highest number of McDonald's and personal computers per capita in Europe.
- The Turning Torso skyscraper is the tallest building in Sweden and the second tallest apartment building in Europe.
- One of the richest people in the world, Ingvar Kamprad, the founder of IKEA (in 1943), is Swedish.



Turning Torso skyscraper

- Sweden has the highest number of patents granted per capita of any European country. Swedish inventors designed the three-point seatbelt, ultrasound/ECG, adjustable wrench, pacemaker, computer mouse, flat screen monitor, refrigerator, astronomical lens, and even the modern-day zipper, which featured an enhanced "separable fastener" with interlocking teeth pulled together and apart by a slider.
- If you think ABBA is Sweden's most significant export, you're wrong! The engineering sector accounts for 50% of output and exports. Telecommunications, the automotive industry, and the pharmaceutical industries are also of great importance. Main export partners are Germany, United States, and Norway. [Source: www. tradingeconomics.com/sweden/exports, as of February 12, 2015]
- Sweden's primary imports include machinery, petroleum and petroleum products, chemicals, motor vehicles, iron and steel, foodstuffs, and clothing.



The Oresund Bridge connecting Sweden and Denmark, the largest combined road and rail bridge in Europe. Photo credit: "Öresundsbron" by Henry von Platen

In keeping with the move to green

Velan adopts Hardide nanostructured coating



Known informally as "fish bowls," these Velan balls and seats feature prominently in the top-entry ball valve design.

Since its inception in 1950, Velan has taken pride in its innovative and entrepreneurial spirit, pushing to find new designs and technologies to produce high-performance valve solutions. In more recent years, the company also has been called upon to find solutions to technological challenges that are friendly to the environment but still cost effective.

"Most recently, Hardide" announced investment in a new \$7 million manufacturing plant in Virginia that will help the company further roll out its range of specialist nanostructured coatings across North America."

— Dan Wilson, North American Business Development Manager, Hardide[®] Coatings Inc.

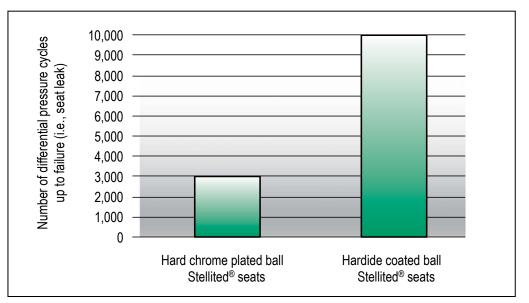
O ne of those solutions will be an alternative to a tried and trusted valve industry tool—hard chrome plating (HCP) which is now under strict environmental regulation. Velan's solution, after very tough scrutiny and consideration, is nanostructured coatings.

Velan's innovative drive

The company has gone through a period of growth over the past decade; revenues have increased substantially. What hasn't changed is Velan's approach to product development and innovative technology.

As Luc Vernhes, Corporate Manager, Product Innovation and Technology, explains, "Our products are optimized to provide customers with quality, safety, ease of operation, long service life, and low total cost of ownership. 'Quality that lasts' is not just our tagline, it's what we put into each valve."

But innovation is only one key motivator. Increasingly, the company is looking for ways to provide clean technologies and eco-friendly products. Production plants are being driven not just by the need to lower industrial waste and its effects, but by economic challenges to operate more efficiently. For example, today's valve industry is focused heavily on issues surrounding fugitive emissions (FE), which present a particularly important technical challenge.



The above graph shows the results of a steam endurance test (600 psig at 600°F, 1 cycle per min.) performed on a 3" Class 300 Type M metal-seated ball valve.

This is because leakages don't just produce emissions; they hamper operating efficiency and increase costs of labor and materials needed for repair. And that does not even consider the added cost of damage to a company's reputation.

One of the most recent environmental issues is how to deal with regulations coming out of the European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. The new regulations will be here in 2017, and they are similar to the U.S. Occupational Safety and Health Administration (OSHA) controls on HCP. HCP was a proven valve industry solution used for many years. However, many industries are now looking for a suitable replacement because of highly toxic hexavalent chromium salts used in the process.

It will be hard to replace. HCP has excellent hardness and good resistance to corrosive environments. It is also easy to apply and low cost. However, environmentalists have found that even short-term exposure to chromium can cause skin irritation.

Economic realities

In keeping with the principle of "the Porter Hypothesis," the Velan engineering team has been investigating alternative coatings. That hypothesis, which was formulated in 1995 by economist Michael Porter, states that strict environmental regulations can induce efficiency and encourage innovations that improve commercial competitiveness. That's important in this case because not only does the replacement for hard chrome have to perform to the same standards as HCP, it also needs to meet environmental regulations and be cost-effective enough to improve overall commercial competitiveness.

Having reviewed and tested several alternatives, Velan has identified nanostructured chemical vapour deposition (CVD) coatings as the best replacement for HCP. In tests, the nanostructured coatings performed better than HCP for sliding wear, scratch, adhesion, toughness, and corrosion testing in saltwater environments. Comparing relative costs showed that the nanostructured coatings kept pace with HCP when economy of scale is taken into account and when large volume and preand post-coating operations are in effect.

In 2007, Luc contacted Hardide Coatings, the leading global innovator of low-temperature CVD tungsten carbide-based coatings, and expressed interest in testing the coating as a hard chrome replacement. Hardide was chosen because it offers an extensive line of



A micrograph of Hardide coating on austenitic stainless steel.

nanostructured CVD coatings that significantly increase the life of critical metal parts operating in abrasive, erosive, corrosive, and chemically aggressive environments around the world.

Dan Wilson, North American Business Development Manager, and Robin Gillham, Flow Control Business Development Manager from Hardide[®] Coatings Inc., worked with Luc for many years, and a relationship grew from basic coupon and material testing to production qualification at companies in the petrochemical and power sectors.

Meanwhile, Hardide is also actively investing in the future of the industry.

"Most recently, Hardide announced investment in a new \$7 million manufacturing plant in Virginia that will help the company further roll out its range of specialist nanostructured coatings across North America," says Dan.

What these coatings do

Hardide coatings extend the life of critical components across a wide range of highwear/high-value industries and applications. These industries include oil and gas, aerospace, defense, petrochemicals, and motorsports; the applications include downhole tools, control valves, cylinders, rotors, pistons, pins, landing gear, turbine blades, and many flow control components.

Over the years, Velan has provided valves with CVD tungsten carbide-based coating for many demanding applications for

which the standard HCP coating was not appropriate. For example, this was the case in a corrosive and erosive application found in the petrochemical sector, where metalseated ball valves protected by HCP were wearing prematurely. Velan collaborated with the end user to clearly assess what was causing the premature failure, then selected the CVD tungsten carbide-based coating as the most suitable alternative material. Since then, metal-seated ball valves provided with CVD tungsten carbide-based coating have been installed in these particular severeservice applications and have performed to satisfactory results while radically increasing meantime between failures.

Another prime example of Velan usage of CVD tungsten carbide-based coating is for industries that preclude plating processes, such as certain nuclear power plants. In those applications, Velan traditionally offered alternative wear-resistant materials to protect severe-service metal-seated ball



Velan's Torqseal triple-offset butterfly valve with CVD tungsten carbide-based coating on all wetted trim parts for severe service applications.

"Velan has also successfully used the CVD tungsten carbidebased coating on all wetted trim parts of the Torqseal triple-offset butterfly valve for severe service applications. Without Hardide, this would not have been possible."

— Craig Bekins, Director, Autoclave Projects and Product Manager, Torqseal, Velan

valves providing either lower cycle life or higher cost than conventional HCP. Velan now has experience with CVD tungsten carbide-based coating for those services and can offer more economical solutions that also provide higher performance than traditional products.

According to Craig Bekins, Velan's Director, Autoclave Projects and Product Manager, Torqseal, "Velan has also successfully used the CVD tungsten carbidebased coating on all wetted trim parts of the Torqseal triple-offset butterfly valve for severe service applications. Without Hardide, this would not have been possible."

The most notable case was an application that included a combination of dry hot media and extremely fast and frequent operation that required an ultimate solution. Following a review of all available materials, Hardide was selected as the only proven technology that could be applied to all internal components without disrupting the precise geometry that the triple-offset valve requires to maintain tight shut-off. The subject valves have been in service now for over two years and have seen thousands of cycles. Once again, without Hardide, this would not have been possible.

Spreading the word

The results of what Velan has found with nanostructured coatings has been published.



A Velan ball on Hardide's coordinate measuring machine.

Velan, together with Polytechnique Montreal University, wrote a paper in the Materials Chemistry and Physics journal entitled "Alternatives for hard chrome plating: nanostructured coatings for severeservice valves." It evaluates a variety of chromium-free protective coatings as alternatives for HCP for valve applications. A series of lab tests, including hardness, micro scratch, pin-on-disk, and electrochemical polarization measurements, were performed to compare the performance of different coatings.

In addition, mechanical resistance and fatigue resistance were evaluated using prototype valves with coated balls under severe tribo-corrosion conditions. The paper showed that the Hardide tungsten/ tungsten carbide coating exhibits superior resistance to wear and corrosion due to high hardness, good toughness, and high resistance to pitting. It concluded that the coating offers a rate of wear that is eight times lower and a friction coefficient that is four times lower than hard chrome when using alumina counter bodies and similar wear mechanisms and when sliding against Stellite[®]. It also suggests the Hardide alternative should provide good performance in slurry and corrosive services with various counter bodies.

Most recently, Velan is partnering again with the Polytechnique Montreal to develop novel combinations of overlay layers with Hardide coating. Luc is in charge of this area of research and development, which is designed to demonstrate the synergy between hardfacing materials and nanostructured films.

"In this study, we want to characterize graded coating systems composed of two things: a thin top layer that provides superior sliding wear properties, and a hardfacing interlayer that reduces stresses between the top layer and the soft base material," he explains.

The hardfacing interlayer minimizes stresses and eliminates the risk of indent-

ing or breaking the thin hard top layer (which is the so-called "eggshell-effect"). This increases the load-carrying capacity of the overall coating system.

"While we're in the early days of research for this project, some multi-layer, hybridgraded coating systems have already demonstrated sliding wear and mechanical performances that greatly exceed those of the standalone surface treatments," Luc says.

By working with Hardide Coatings and conducting independent research, Velan "has been able to identify a cost-effective, off-the-shelf coating with the potential to fully replace hard chrome on our severe service applications," Luc says.

"The nanostructured CVD Hardide coatings provide an excellent alternative to hard chrome and ensure that we continue to deliver innovative and highquality products to our customers," he concludes. **[V V]**

HARDIDE is a registered trademark of Hardide PLC, and is licensed to other members of the Hardide group.

Velan adds a line

After extensive testing, Velan now considers the Hardide coating process to be qualified and ready for production orders of top-entry and split-body metal-seated ball valves up to pressure Class 600, with no further research and development efforts required.

A new "V" coating code has been created, and a price list developed to expedite quoting and the order entry process. Future work will include testing on Power Ball valves to determine where Hardide can offer performance and price advantages over other coatings.



Building a better workforce



Understanding generational differences

Photo credit: iStockphoto

Today's companies are more challenged than ever to find and keep the skilled labor they need to run tomorrow's successful companies. One place to begin meeting that challenge is to realize the differences between the different generations of workers and how bridges can be constructed so that they can work together smoothly. A universal issue that comes up at almost any event in the valve industry today is the need to attract new people with the right skills into the specialized, technical fields where valves and control devices are made and used. But to solve that problem requires something that many of those doing the hiring and training don't have: an understanding of the differences between the generations of yesterday and those of tomorrow.

Marilyn Moats Kennedy, a workforce issues specialist and speaker at VMA (Valve

Manufacturers Association) events, uses this story to illustrate the problem:

"One of the worst things I ever saw happened at an insurance company's new employee orientation. This guy got up before a group of young people and announced: '17 years ago, I sat where you are sitting now," Kennedy explains. That might have flown many years ago when the speaker was a young man, she says, but: "What he didn't know was that his audience members were saying to themselves: 'Oh my. Couldn't he get a decent job?"" "Boomers are focused on upward mobility and buying more things because that is the model of post-World War II America." Younger generations, "just want to be able to cover their costs. They do not want more things. One of their major goals is to see that their children graduate college debtfree and that they save for retirement."

- Marilyn Moats Kennedy

The problem was that the speaker came from the baby boomer generation, but his audience was part of the millennial and younger generations, which have an entirely different set of values.

"He had no understanding that you don't talk longevity to people who live in the moment," Kennedy says. "If the worst thing you've experienced to date is a bad hangover from a long night or if you're still living in your parents' house, longevity in a job is not your goal," she says.

The generations

For purposes of illustrating her point and explaining how different generations came to be, Kennedy uses these four groups as reference points for most of the workforce:

- **Baby Boomers** born in 1946 to 1959 (ages 55-68—about 38% of the population)
- Cuspers born 1960-1968 (ages 46-54—11%)
- Busters born 1969-1978 (ages 36-45-20%)
- Millennials born 1979-1990 (ages 24-36—15%)

One of the major differences between the oldest and youngest of these groups is that when baby boomers were entering the workforce, they were driven by the need to make money or, like with the speaker at the insurance company, have a career. Millennials are driven by principles and the need for self-satisfaction.

"Boomers are focused on upward mobility and buying more things because that is the model of post-World War II America," Kennedy explains. Younger generations, "just want to be able to cover their costs. They do not want more things. One of their

Motivation across age cohorts				
Boomer 1946–1959	Cusper 1960–1968	Buster 1969–1978	Millennials 1979–1990	
More Money	Do well by doing good	Time off	Time off	
Promotion	Meeting organizational goals	Mentoring	Mentoring	
Public recognition	Boss's recognition	Meeting own goals	Portable skills training	
Peer recognition	Bonuses	Boss's recognition	Meeting own goals	
Desire for subordinates	Mentoring others	Skills training	Bonuses	
Control		Bonuses	Prep for self-employment	
Loyalty to self		Latest technology	Sales training	

major goals is to see that their children graduate college debt-free and that they save for retirement," she says.

When it comes to the workplace, the two are very different in how they view getting things done. Boomers, for example, have been taught to take a team approach.

This is because their upbringing was influenced by parents who went through World War II—parents who looked to the U.S. military as an example of how to get things done.

"What we forget, however, is the amount of training military forces have for making teamwork operate—much more than anyone in private industry could afford," Kennedy comments.

Even baby boomers today have learned there are flaws in the idea that everything is best done through teamwork.

They've learned over time "that each of the members of a team will not do the same amount of work," she says, and they have learned to put systems into place for accountability.

Meanwhile, when today's young people were children, teachers and coaches presented them with the idea that "everyone gets the same ribbon," for participating in a sport or academic challenge, Kennedy explains. Such thinking "diminishes what you do as an individual," she explains. As a result, they now have the attitude that "I'm going to be responsible for my own work. I want to do the job on my own and be evaluated on my own."

Another great difference is how important personal values and the freedom to express those values are in the workplace.

Older workers tend to participate in community service for its social and professional benefits so they join organizations such as the local Rotary or professional organizations, she says. Younger workers believe it's important for the company itself to be cause-oriented.

When they are deciding where they want to work, "They want to know what the owner truly values. Does he or she support the Salvation Army, participate in Big Brothers

Age Cohorts: Workplace characteristics				
Boomer 1946–1959	Cusper 1960–1968	Buster 1969–1978	Millennials 1979–1990	
Money/work ethic	Money/principle	Principle/satisfaction	Principle/satisfaction	
Work first	Some of both	Lifestyle first	Lifestyle first	
Expected to lead	Lead and follow	No need to lead	Lead if necessary	
Loyal to employer	Some of both	Loyal to skills	Loyal to skills	
Care deeply what others think	Some of both	Don't care what others think	Care selectively what others think	
Want others to work with them	Want others to work with them	Prefer to work alone	Like small groups	
Technically challenged	Technically challenged	Technically savvy	State of the art	
Lip service to mission	Care about mission	Must have mission	Must have mission	
Chain of command	Mixed	Individual first	Individual first	
l win, you lose	Want to win	l win, you win	l win, you win	

"When you're dealing with someone who is 18 or younger, you have to realize that the one thing he or she is not eager to do is to get a white collar job and die at a desk."

- Marilyn Moats Kennedy

"Here's a big conflict that comes with talking to today's youth," she explains. "When you're dealing with someone who is 18 or younger, you have to realize that the one thing he or she is not eager to do is to get a white collar job and die at a desk."

Kennedy also says that too often, she sees industry technical professionals who are talking to young people who almost apologize because the work is hard or repetitive.

"They are putting ideas in young people's minds that are negative when they should be talking about outcomes—not about making widgets. It would be so much better to start with a tour of a facility and show them exactly what the job looks like and what the product does," she says.

To appeal to the millennial generation, for example, they need to show how those widgets meet specific needs because that generation loves to solve problems.

Not many people know how vital valves are in the infrastructure of the nation—how they are in everything from pipelines to building operations.

"Your websites and your presentations should be telling people what valves are, who uses valves, and what that means to the world," she says. "Don't assume they know because they don't."

What is not needed in dealing with today's younger generations is to tell them: "Someday you'll be owner of a company." That is not what they want to hear. They want to know what they might be doing in

and Sisters, or stand up for environmental causes? The younger generation may not pick a job based on those causes, but they want to know the boss occasionally thinks about something other than the bottom line," Kennedy says.

How it translates

The larger question today is not so much what each generation represents but how the different generations interact. This is because the boomers are the ones retiring or about to retire and the older generations are also the ones doing the hiring and promoting. The younger people are choosing a field or deciding whether to stay with a job and seek upward mobility or go to another employer.

To get the needed fresh blood for industry will require the older people to understand what appeals to today's youth, Kennedy explains.

She suggests the valve industry start by appealing at the junior high level. "Early

and repeated exposure to your industry is important, and I'm amazed that more valve and industrial company professionals don't go into the schools, bring a pizza, sit down and tell these young people the advantages of what they do," she says.

They need to start early because young people need to see how a professional can get from point A to point B with a career in industry or manufacturing.

"Think about how many people go into medical school because they have high scores on the MCAT (Medical College Admission Test). It's not that they want to treat people initially—they just get on a track that begins with doing well on a test," she points out.

The valve industry also should be reaching out to the nation's technical schools to find candidates who may have a real interest in technical fields.

She suggests that for technical school students, companies sponsor regular "day on the job" tours of plants.

"Companies have to learn to invest in the best today because if you want to appeal to the world's youth, you can't even have a whiff of obsolescence. It spooks people."

— Marilyn Moats Kennedy

three weeks, then three months, then three years," she says.

They also want assurance that what they will be doing will be useful and effective.

Kennedy pointed to the paint industry as a place where certain companies have been effective in doing just that by linking painting to sustainability.

"Some of the companies have been able to show how vital painting can be to the environment and how working for the right paint company can make a difference because of it," she says.

Industries trying to appeal to the young today have to relate what they do to the good of the nation, to the economy, to the environment, she explains.

The boomers are a good source for teaching these lessons because they have seen the industry as it's evolved and they've personally been on the tracks of movement that can occur within manufacturing companies, she adds.

"Young people want a story from someone believable, so don't send young people out to recruit other young people. The younger generations want people to tell them personal tales of what the industry did for them. Send those garrulous boomers proud of what they've done. Every alumnae group in the country has learned to use this technique and you should, too," she says.

The middle generations

Beyond the challenges of bringing in new people are the challenges of retaining and

encouraging different generations so that they will move up through the ranks of management. Here, too, the interaction between the generations is key, Kennedy says.

For example, while the upper ranks of boomers and even some cuspers are "technically challenged," the younger generations have not only embraced technology, but made it a daily requirement.

"Companies have to learn to invest in the best today because if you want to appeal to the world's youth, you can't even have a whiff of obsolescence. It spooks people," Kennedy says.

Boomers also need to realize that to appeal to generations not motivated by money requires facing the fact that "forever after no longer exists. If someone is doing a wonderful job after a couple of years, you need to start asking what else he or she would like to learn," she says.

Those generations moving up the ranks want to know what else they can accomplish in the job. For some, that may mean that the international travel increasingly necessary in the business world may appeal.

It's also vital to face the reality that the issue of "having it all" that feminism first struggled with is still around; however, it's expanded to include both genders.

"With younger generations focused heavily on lifestyle as vital to their lives as career mobility, both men and women are looking for ways to make their personal lives work," she says.

"The balance issue is a major one at all levels of employment today and companies that can find a way to provide flexibility will retain their workforce best," she says.

"The assumption used to be that if you recruited the best and the brightest, they would stay forever. Today, I often tell companies that the competition for good employees is not so much between different companies that steal each other's talent. The competition is self-employment," she says.

"There is such a backlash against working in offices today that everyone under the age of 40 wants to work at home," she adds. While that can't possibly happen, "maybe we can look at what that really means. We can concentrate on things they don't like about the office such as office politics and constant meetings and find ways to give them what they want, such as the chance to participate in social causes and flexibility with family situations," she says.

She also points out that the youngest generation (those born after 1990) are a different breed, but says that may offer an advantage in the technical fields. Young people have an extreme interest in science and in mechanical things.

"They care about using their hands and making things," she adds.

Meanwhile, "save your biggest paychecks for the baby boomers" because they'll need it both for retirement and because that generation was not taught to be frugal. Many were encouraged to use their homes as ATMs, have revamped retirement plans and plan to work until 75 or so. Many did not or could not save what they'll need to be comfortable in old age or lost significant amounts during the latest recession.

Overall, Kennedy says the companies that give people the means to make their lifestyles work, convince them the company stands for something beyond making money and show them the job and what the company makes is useful to the world, "stand a much better chance of finding and keeping the talent they need." **[V V]**

This article was written by Genilee Parente, managing editor of *VALVE Magazine* and a writer for *Velan View*. Reprinted with permission from *VALVE Magazine*.

Shutting down safely

By Nicola Lucchesi, R&D Manager, Velan ABV

Exploring good practices for emergency shutdown valves in offshore safety systems

Emergency shutdown valves are used in offshore production platforms as key components of the more complex emergency support systems (ESS).

The ESS themselves provide a level of protection by initiating shut-in functions and minimizing the consequences of emergency situations, typically those related to uncontrolled flooding, escape of hydrocarbons, or outbreak of fire in hydrocarboncarrying areas. The API RP 14C standards written for designing, installing, and testing ESS address different aspects of it, which include emergency shutdown systems (ESD), gas detection, containment systems, fire detection, and subsurface safety valve systems.

The aim of ESD is to protect personnel, facilities, and equipment and minimize

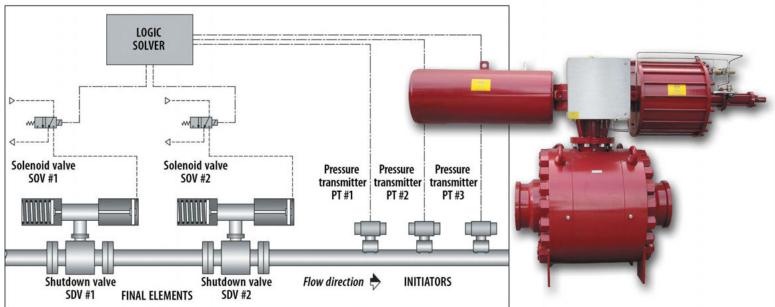
damage to the environment that can result from catastrophic events, such as what happened in 1988 when the Piper Alpha platform was destroyed and in 2003 with the accident at the Brent Bravo facility. Both those disasters were caused by the lack of ESD valves.

Because of their criticality, continuous improvement in ESD design is a top priority for safety management and increases the reliability of an entire system.

This article describes Velan ABV's experience in designing ESD valves and actuators. It also illustrates how requirements can range greatly from facility to facility.

Background

While the number of ESD systems needed in an offshore platform depends on its complexity and production capacity, common levels of activation for different hazard situations exist. For example, a unit shutdown, where only a restricted area or individual process is involved in the shutdown process, is less critical. A more serious situation would be a surface process shutdown, where all the production activity halts and all the pipeline processes and injection shut-down valves (SDVs) fail, leaving some utilities, such as main power generation, available. The third and most



A typical schematic drawing of a safety instrumented system (SIS).

Velan ABV's high-integrity, pressureprotection system (HIPPS).

catastrophic level is total platform shutdown, in which all the processes including power generation halt, the wellheads and sub-surface safety valves close, and the blowdown valves open to depressurize the platform. In this case, the only system still active is the emergency generator for firefighting systems.

IEC 61508 and ISA 84.00.01 propose the more general definition of a safety instrumented system (SIS). SIS is described as a distinct and reliable system with the purpose of taking a process to a safe state when predetermined conditions are violated.

An SIS is composed of several sensors, a programmable logic controller (PLC), and a final control element. Sensors collect information necessary to determine if a dangerous situation could occur. When such a situation is identified, the PLC disconnects the power of the ESD solenoids and moves the valve into its safe position.

The implemented control loop function is defined as a safety instrumented function (SIF). Here, performance can be measured in terms of reliability and availability. Reliability is the probability of performing the correct logic safety function under specifically determined operating conditions for a defined time period. Availability is the fraction of the total time a protective system is able to function on demand.

SIF is designed to minimize process risks to a tolerable level, assigning to each risk a safety integrity level (SIL). IEC 61508 and ISA 84.00.01 specify four possible discrete levels of reliability and further demand that platforms furnish quantifiable proof of compliance. Generally, offshore processes lie within levels SIL1 or SIL2, with SIL3 applied for critical applications only. SIL4 is rarely used, though it is common in the avionics, aerospace, and nuclear sectors.

The final control element is commonly acknowledged to be the weakest link in the SIS loop (causing 40–50% of the problems). Because the shutdown valve remains in one fixed position for what can be years, it can become stuck in that position with no guarantee it will perform its desired safety function when required. This means the valve's design is essential in ensuring its reliability and availability.

Final control element design

The final control element is composed of three main components: the valve, the actuator, and the local control panel. Each has its own subtask in the control loop. The first is to ensure the closure member has only two stable, discrete positions with the ability to stroke from one to the other under any operative or emergency conditions. For valves, a second important subtask is to guarantee a tight shutoff, with the obturator (sealing member) in a closed position, with minor or no leakage. The actuator safety function moves the obturator using an intrinsically safe mechanical device, usually a powerful compressed set of springs, when the supply line is stopped by a PLC emergency signal. The local control panel receives input signals, cuts off the supply line, and ensures the stroking time.

Valves

API 6D and API 6A are the main standards for offshore valves, even when EPCs or operators integrate those standards with their own specifications. Valves also could be required to meet the NORSOK standards developed by the Norwegian petroleum industry to meet the needs of equipment suitable for the extreme North Sea weather conditions. Commonly, a design agreement with the valve manufacturer must be reached even when EPCs' and operators' specifications are influenced by experience and procurement policies.

The most common ESD valve is the trunnion ball valve. These valves can be either reduced or full bore, although all the valves installed to protect risers and exported oil and gas systems have to be full bore so they are piggable. This is because this pipe cleaning method has to be done carefully, demanding a perfect valve bore alignment to ensure the pig does not damage the seats and ball surface. This is especially true during the first commissioning



An 18" (450mm) full bore class 2500 ESD valve complete with a hydraulic SY actuator and manual PST device for offshore severe service.

when the line could contain dirty debris remaining from the piping assembly.

Two major risks of dangerous failures are seized seats and jammed stems, and these negatively affect a target by closing a line with a quarter-turn rotation of the ball. In addition, the process fluid and the external environment also play a significant role in determining the probability of a valve failing. The operating fluid can be a single clean phase of crude oil, gas, condensates, or a mixture. But no matter the mix, at the beginning of the process, the fluid is dirty and strongly abrasive.

A ball valve fixed in the same position for a long period also faces the risk that sand and debris could be pushed by the flow in the upstream ring cavity, creating a consolidated mass that can act as a wedge at the bottom of the seat ring. This increases the valves' torque or, in the worst case scenario, causes the upstream seat to seize. To deal with this, the valve design should include emergency sealing injection on its seats, whereby the injection of a lubricant or a flushing fluid can act as a hydraulic push, lifting the seat ring off the ball face. Debris can often be trapped between a valve's seats and the ball, where it can scratch the contact surfaces during strokes and thus compromise the tight shutoff function. Soft-seated valves are considered more vulnerable to this situation than hard seats. Even though some Engineering, Procurement, Construction (EPC) professionals prefer the soft-seated design because of its zero leakage capacity, metal-seated valves with tungsten carbide hardfacing are more reliable.

Wellhead fluids also may have considerable amounts of hydrogen sulfide (H₂S), which corrodes the internal wetted surface. To counter this, the valve material must meet NACE MR-01-75 standards and corrosion-resistant alloys are recommended for protecting seat and sealing areas. Confined spaces are mainly exposed to aggressive pitting and crevice corrosion. Because of nickel alloy's excellent weld deposition characteristics and superior crevice-corrosion resistance, these alloys are commonly used.

An important precaution for avoiding stem jam is using external seals to isolate the bushing areas from the outside environment. When valves are in a horizontal position or located in splash zones, seawater and rain can seep into the stem packing, leading to premature stem failures from corrosion. Furthermore, for fast operations of high-pressure valves, design precautions are taken to achieve the right coupling between the stem and actuator. Narrow tolerances, longer bushings, and reference pins help to guarantee a perfect alignment between axes.

Actuation

The most common actuator for ESD systems is a pneumatic scotch yoke spring return, though the hydraulic version is also a valid alternative. In contrast, a double-acting configuration is rare. This is because, even though it is more compact and cheaper, a backup supply tank and a more complex control are needed when used for ESD applications.

Velan ABV has its own brand of actuators, MOSS actuators, which are designed, manufactured, and tested in-house to cover the full range of quarter-turn valves.

Actuator sizing is often a discussion point between EPCs and manufacturers. Because of the severe nature of the service, EPCs tend to be too conservative in their specifications, forcing manufacturers to select oversized actuators. The debate with EPCs then generally focuses on two main points: the condition at which the valve torques are calculated and the applicable safety margin (SM).

Valve torque is influenced by pressure drop and temperature. There are three main situations where torque can be determined: operating pressure and temperature,



A Velan ABV HIPPS system showing the open logic control panel.

The number and potential complexity of the variables involved in designing ESD valves for offshore processes can be overwhelming. Only through close collaboration between EPCs, end users, and valve manufacturers from the start to the finish of a project can the right decisions be consistently made.

design pressure and temperature, and class-rating pressure at maximum piping temperature. Since no standard rules apply, EPCs generally make their choice during the piping design. The first of the three is less conservative and not recommended for emergency purposes, whereas the last of the three ensures the interchangeability of valves with the same piping class. From one criterion to the next, the increase of torque can be remarkable, at times more than 50–70%.

The actuator sizing has to include a safety margin to compensate for deterioration of a valve's performance during its lifetime. EPCs and end users define three different applications to establish this safety margin: general (150% SM), emergency (200% SM), and special (250% SM).

Actuator-torqued values are always calculated at the lowest set pressure of the supply air in the facility to ensure values are operable in the event of pressure fluctuation. At the same time, the actuator's ability to withstand the maximum supply pressure must be verified, since some EPCs do not allow the installation of protection devices such as air-filter regulators and relief values.

An improper combination of these can lead to valves equipped with oversized actuators that provide little benefit in terms of size, weight, and maximum output torque. This can negatively affect the valve design itself, requiring a higher maximum allowable stem torque (MAST), which can be achieved by changing the stem material or, less favorably, by requiring the redesign of the valve to give it a greater stem diameter.

The most dangerous failure is a spring rupture, which is mainly caused by long exposure to a corrosive environment. As a result, springs are always provided with a protective coating and hermetically sealed in a welded cartridge. Also, a good practice is to ensure a minimum water protection level, IP 67, by adding seals to prevent seawater from going inside the scotch yoke housing. For the pneumatic model, avoiding entry of salty air inside the backside chamber of the cylinder is recommended. A closed loop is generally implemented to lead part of the clean air supply released from the supply chamber.

Control panels

Being able to choose the right components, accessories, and tubing is strongly influenced by the maximum stroking time. Fast closures are usually desired in ESD systems, and a closure velocity of one second per inch of valve size is standard. Higher velocity is a critical requirement and must be taken into account during the valve/actuator design. For big valves, in which the inertia of the movable components is elevated, special devices such as hydraulic dampers have to be installed to mitigate the impact at the end of the stroke.

During a failure situation, the closing velocity depends on how fast the air is released from the cylinder. Quick exhaust valves are commonly assembled on the actuators, sized by the necessary flow rate. Generally, EPCs do not require certain opening times, and a three-times higher solution is accepted. The opening time depends on how fast the air is supplied to the actuator against the spring force. The components involved include airfilter regulators, pilot valves, and solenoid operating valves. One note about the inlet piping diameters: If the EPCs do not properly design the pipe bore, the opening time will not be satisfactory even if the control panel is correctly sized.

Testing

The only way to completely verify the status of an in-line ESD valve is by a proof test that strokes the valve from a fully open to a fully closed position. This operation often requires total shutdown of the process, which can only be done during a scheduled plant shutdown. Installing a smart partialstroking test (PST) device in the control panel is a common practice. This is done to perform on-line diagnostic testing to find at least a percentage of total failures.

The PST moves the ESD valve 10–20% of the stroke, receiving feedback about valve travel position and actuator pneumatic pressure. This data supports the diagnostic analysis of the valve performance. When difficulties are found, the test will be automatically aborted and the operator is alerted with a signal. Even though PST does not eliminate the need for full-stroke testing (since tight shutoff capacity cannot be detected, for example), its frequent use increases the reliability and availability of the whole system.

Conclusion

The number and potential complexity of the variables involved in designing ESD valves

About the author

Nicola Lucchesi received his degree in Mechanical Engineering in 2004 from the University of Pisa and has collaborated for five years with the Laboratory of Perceptual Robotics (PERCRO), part of the Scuola Superiore Sant'Anna, Pisa, Italy, as a Ph.D. student in Robotic Automation.

He joined Velan ABV in 2009 as R&D Manager, focused on optimizing the design of actuated valves equipped with pneumatic and hydraulic accessories and intended for critical and control services.

He is the inventor of two patents for Velan and the author of several articles. Since 2012, Nicola has spearheaded the high-efficiency valves project in partnership with the University of Florence. for offshore processes can be overwhelming. Only through close collaboration between EPCs, end users, and valve manufacturers from the start to the finish of a project can the right decisions be consistently made.

Velan ABV has developed a new research project for an actuator concept that can exceed most of the current limitations. The main features of this project are innovative quarter-turn devices with higher efficiency, low friction, and better torque linearity, all of which help address the issue of actuation oversizing.

The project, which was begun in 2013 in partnership with the University of Florence, should bear positive fruit by the end of this year. $|\mathbf{VV}|$

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Nicola Lucchesi

Ron Harrington

Learning teamwork with a different twist

When people ask Ron Harrington, Regional Sales Manager NE, to list something about his background that many people don't know, he names his original job: He studied education in college and was a history teacher and a coach at the high school level for 12 years.



Ron Harrington, Regional Sales Manager NE, Velan (middle), speaking to attendees at the 2014 Velan Distributor Conference in Mt-Tremblant.

Know that's not the typical road to a career in industrial sales, but it's been an interesting ride and I actually think being a teacher prepared me well for my second career. And who knows, maybe somewhere in my distant future there will be a New Jersey high school in need of a history teacher and a JV basketball coach—beats hanging around on the beach all day," Ron says.

As is true of teaching, the ability to communicate is critical in a sales profession. As is likewise true with coaching, having the right team in place is vital to winning.

"I learned early in my 20-year career with Velan that when you work for this company, you work with a team of professionals—both internal teams and our distributor partners," Ron says. "I also learned quickly how critical it is to keep a smooth flow of information back and forth among team members," he adds.

Bridging two worlds

The question most people ask after they find out Ron used to be a teacher is: why did he make that leap?

His answer is multi-faceted.



Ron teaching history at Foran High School in 1975 in Milford, Connecticut.

"For one thing, I was just itchy for a change. I loved teaching and it was always a challenging job. But in my 30s, I realized that when you're in education, all you've ever known is school: grammar school then high school then college and finally your first job. I was at a place in my life where I felt like if I didn't try something different then, I might never do it," he said. He had a friend in industrial sales that looked at Ron's skills and said he thought the change from teacher to sales was a good fit. Ron agreed and found his first sales job selling instrumentation valves and fittings.

"As a teacher, you're always presenting topics to your classes," Ron explains. "You have to have a thorough understanding of your specialization (history in my case) and you have to have the communications skills to impart what you know to others," he says.

As a sales professional, "you are often giving presentations to a group of people that typically have a lot of experience in the field and a high level of technical knowhow. If you're going to convince them what you are offering is a fit to their needs, you need to understand exactly what your products can do, as well as the capabilities of the company you work for," he says.

When he came to Velan, he also got his own coach: Paul Lee, who Ron says has been his mentor.

"I started out as a District Manager under Paul. At that time Paul was handling the Bechtel MPA, and the territory demanded additional coverage. Working closely with



The Harrington family vacationing on the Outer Banks, North Carolina. From left: Bradley, Danielle, Lindsey, Carolyn, Olivia, and Ron.

At home with Ron

Teaching provided a few other benefits to Ron's life besides contributing to his success in sales. For one thing, being a coach gave him a life-long passion for sports. Ron continued his coaching after he left the high school environment by serving as a youth basketball coach for the community and his church, beginning with his oldest daughter's co-ed team when she was in the fourth grade, and continuing long past his youngest daughter's college graduation. He is a huge tennis enthusiast both in the summer for regular tennis, and in the winter through platform tennis—an outdoor winter sport.

Teaching and coaching also introduced him to his wife of 29 years, Olivia, who hails from Bolivia and was studying abroad in the U.S. when she first met Ron. After her studies were completed, she returned to her home in Bolivia and lived there for about eight years. They reconnected when she returned to the U.S. to visit while working as an airline attendant for Argentina Airlines.

Paul, I learned early on what it takes to be successful at Velan," Ron says.

One of the requirements is knowledge, both of clients and of sales techniques.

"Paul has a tremendous amount of knowledge about our end-user markets. He also knows how to address issues in a reasonable and professional manner," he says.

The two have similar work habits as well as similar approaches to selling, Ron says.

For example, "I am always very careful to remember that I represent Velan and I must make decisions that are in the best interests of the company."

Attention to the details

Ron, who has a diverse territory that stretches from New England to Washington, D.C., and includes eastern New York State, eastern Pennsylvania, and metropolitan areas such as New York City, Boston, and Philadelphia, also says he could not do what he does without the expertise of the Velan internal teams.

As Northeast Regional Manager, Ron has clients that range from A&E firms to power plants, from pulp and paper to the chemical and refining industries. As a result, "the learning curve has been quite intense, and you have a very high volume of work," he says. However, working with Velan "we have the needed support to get the job done, beginning with our solid leadership structure as established by A.K. Velan and carried on by our current executive team. The Velan commitment to innovation and quality is mirrored in their leadership style. The Velans have created an atmosphere that fosters creativity while adhering to best practices."

The sector of Velan staff that contributes to Ron's efforts has many facets, starting with the team that puts quotation packages together.

"There are many stars that shine in our quotations group, and Velan is known for its excellent project bid packages. It takes a special, talented person with a wide skillset to put together a competitively priced and technically sound quotation. The job requires great attention to detail, a trait this team has in abundance," Ron says.

Next comes the sales administration team, which consists of people who are incredibly detail-oriented, as these complex orders

Shortly thereafter, they started a family of three girls and one boy. The family bought a 150-year-old home in New Jersey fit for the large clan. The house sits on the historical site of a church in Bergen County, and Ron has spent many years updating the homestead. It now includes a two-story barn in the backyard that features an office and workshop and is affectionately referred to within the family as the "Velan Northeast Regional Sales Office."

Ron also has two older sons, who have followed in his footsteps with sales careers and have started their own families.

The big family and a love of barbecuing are among Ron's other passions in life.

"We have a big yard and a big house, and we love nothing better than all getting together on a Sunday afternoon to spend some family time with our dog Brooklyn running around outside," Ron says.



"Coach Harrington" on the basketball court.

"I started out as a District Manager under Paul. At that time Paul was handling the Bechtel MPA, and the territory demanded additional coverage. Working closely with Paul, I learned early on what it takes to be successful at Velan."

—Ron Harrington, Regional Sales Manager NE, Velan

must be efficiently entered and expedited. "We get many compliments from clients and distributors on the professional way our projects are administered, not just on day-to-day operations but also special circumstances that require expedited deliveries," he says.

Finally, there is the engineering team and manufacturing staff and quality assurance, who all work to ensure that Velan's valves are of the highest quality, Ron says. "Their expertise is immeasurable—some of what we do is art, not science!" There is also the Field Service Engineering Department, which Ron says has one of the toughest and most critical jobs in the company. And equally important are the networks of external agents and distributors Ron relies on to initiate sales in the northeast. "Simply put, if we don't get the opportunities and work together to get the order we can't be successful as a company," he adds.

His advice to others

Ron says one of the developments in the industry that he sees as a problem is the lack of "young blood" coming into the industry.

"There used to be many more young people in the valve business," he says. "Many would start in the distribution business and learn from the inside out. That doesn't seem to be the case anymore," he says. "What we do at Velan is not easy since so many details go into the design of a valve. We make a very precise product that is critical to infrastructure as well as a multitude of markets. We need to show aspiring job seekers what a challenging and exciting business designing and manufacturing valves can be."

—Ron Harrington, Regional Sales Manager NE, Velan

As a result, companies in the business of selling industrial goods need to find ways to promote the career opportunities available to young professionals.

In industrial sales, for example, "it's a challenging position, but it offers a wealth of benefits," he says. "There is room for advancement for those who work hard; you get to travel and you have the chance to meet a wide variety of people."

There are interesting things happening every day, he adds, and for those who enjoy a challenge—it's there for sure.

"Whenever I get the opportunity to go to Montreal with a client and we tour the plants, I come home invigorated," he says.

You're also dealing with products that have global markets to serve.

"What we do at Velan is not easy," Ron explains, "since so many details go into the design of a valve. We make a very precise product that is critical to infrastructure as well as a multitude of markets. We need to show aspiring job seekers what a challenging and exciting business designing and manufacturing valves can be," he adds. **|VV|**



Ron discussing sales strategies during the 2014 Distributor Conference at Mt-Tremblant with Bill Dunne, Vice President of Sales, Deacon Industrial.

From the boss' perspective

Paul Lee, Velan's Vice President of U.S. Sales (Eastern Division), says he's been impressed with Ron Harrington since the day he first met him.

"I found out in that first interview that he had two traits going for him that I consider positives: He was an ex-athlete and he was a family man," Paul says.

"Athletes understand competition and they know how to perform on a team," he explains. "Having strong family ties shows stability."

Paul adds that it's been deeply satisfying to see that his initial reactions were correct and that there's a lot more about Ron that makes him effective in the job. One of them is the ability to react calmly amid a storm.

"I joke with Ron about his start here because for some reason the first week he started, he got his office all set up then nothing much happened. The second week, however, all hell broke loose and it hasn't stopped since then," he jokes.

In fact, just a few weeks after Ron started, Paul had open heart surgery.

"I couldn't drive for a month, couldn't even talk for that first week. Ron stepped in and kept everything going for me," Paul says. Ron also has the level head that Paul says helps him deal with one of the most challenging of Velan's sales territories: the northeast.

"He's a master at maintaining relationships and at keeping things from spiraling out of control," he says.

He gives the example of "the ugliest meeting I've ever been in," which involved a paper mill customer and a distributor.

"One of the individuals in that meeting was out of control and even though he was not a Velan employee, our reputation could have been harmed by the way he was acting. Ron and I walked out of that meeting in shock. But we regrouped, tightened our belts, and got back in there to lessen the impact of the situation and, at the same time, we let the individual know his behavior was unacceptable," he says.

That kind of cool thinking is something Paul depends upon.

In the world of keeping customers happy and products moving, "It's important to have someone who can analyze the situation, share his viewpoints and then work with me on a common solution," he concludes.

Introducing 700 Valve Supply

Expanding our reach in high nickel

One of the ways for a company to grow its overall market share is to identify a potential niche market and expand it, finding ways to build on the company's strengths. Fitting right into that slot is Velan's newest master distributor: 700 Valve Supply, Houston.

7⁰⁰ Valve Supply does what few companies do: It keeps a stock of high nickel alloy gate, globe, check, and ball valves on hand. Velan will be supplying those valves.

"We've produced these valves for many years, but this is the first agreement to provide a massive order of inventory," says Mark Tilley, Velan's Regional Sales Manager, Houston.

For 700 Valve Supply, the choice of going with Velan represented a great opportunity.

"Our mission is different from that of some other wholesalers: We were not looking to offer a wide range of brand names. We are a value-added company, and we wanted one solid brand that is known for quality," says Matt Spiller, General Manager of 700 Valve Supply.

"We are starting with an extensive inventory of alloy 20, Hastelloy, Inconel, and Monel products. Over the next few years, we intend to massively increase that inventory by gaining more market share, then we'll expand into other materials," he adds.

To do so, the company must attract the attention of Velan's network of distributors who serve the industries where high nickel alloys are used (e.g., petrochemical, chemical, pulp and paper, and refineries).

"These users are the ones that must deal with acid in the process; stainless steel and more traditional materials tend to get eaten up in such processes," Matt explains.

Hitting the ground running

While 700 Valve Supply is less than two years old, the company did not go through the traditional start-up process. It has the backing of a major powerhouse in Texas owners Bette and Jerod White, who run more than a dozen businesses in that neck of the world.

The Whites own 26,000 acres of land in Texas, including the 13,000-acre 700 Springs Ranch, which is known worldwide for its areas of conservation as well as hunting and recreation.

"The name of the ranch comes from the land's 700 naturally fed springs. Jerod and Bette, a hard-working and down-to-earth couple, wanted the new company to reflect its connection to the ranch," Matt explains.

Matt brought expertise to the White's latest venture because he was highly experienced in the high nickel alloy field. "By the time the new company got started, we had laid the ground work. The first day we opened, we had almost \$8 million in stock orders placed," he says.

Matt has been involved in the valve world since he was 14, working in the warehouse of a major valve company where his mother was employed. He worked his way through college in the company, then took over quality control after he graduated. Two jobs later he was almost 100% focused on the high nickel market and his path crossed



Left to right, front row: 700 Valve Supply's CEO, Jerod White with his wife Bette, CFO; and General Manager Matt Spiller. Back row: Velan's CEO, Tom Velan; Vice President, Ivan Velan; and Vice President, Sales Administration (North America), Rob Velan.

with Mark's as they briefly worked for the same company.

When Matt took on the challenge of starting the new venture for the Whites, he looked to Mark and Velan as a natural fit.

"We both recognized the lack of a competitive product in the high nickel field," says Matt. "I knew Velan's reputation, and I knew that the Whites needed a quality product for the stock."

Mark adds that, "Velan has always produced high nickel, but the competition is very stiff and our business had clear room to expand. Also, when a plant or distributor needs these valves, they need them quickly, which is why keeping stock makes sense. While the market is not as broad as some, it's a profitable field and offers great possibilities. With our partnership with 700 Valve Supply, we meet a specific, high-demand niche market," he says. **[VV]**

For François Martel, one of Velan's Field Engineering Service Technicians, the term "pressures of the job" has a whole new meaning. Over the years, he has been escorted to the job site by machine-gun-armed guards, worked with radiation levels so high he could only be on site for brief periods, learned how to avoid poisonous snakes and spiders, and arranged to be met at his incoming plane with a fresh suitcase of clothes so he could travel to another project half way around the world.

What you might not know about François is that he likes challenges off the job too. That's why he's just signed up for scuba diving lessons so he can explore a whole new underwater world when he's not literally up in the air.

Velan: We're more than just valves.

Velan. Quality that lasts.

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