Many projects in the oil and gas industry are facing challenges as they become increasingly complex and technologically demanding. In recent years, with the industry facing pressure to reduce development time and increase return on investment, standardization has become more customary.

Valve World Americas had the opportunity to speak with Senior Product Marketing Manager of Actuation Technologies for Emerson, Juliana Herman, to learn more about how the company is standardizing their projects, also making it easier for their customers to obtain the products they need.

**By Brittani Schroeder and Sarah Bradley**

Most of the projects found in the oil and gas industry are still considered “Engineered to Order” (ETO). In these cases, all valves, actuators, and controls are produced once an order has been placed. ETOs are a timely process, as the customer requires their projects to be properly quoted without the worry of delayed deliveries. The demand for customization is increasing every day, which does not help the already-lengthy quoting process, placing added scrutiny on the pressure of pricing. However, there has been a possible solution found for the issue at hand: standardization.

Emerson provides the pre-designed and preengineered actuation package solution, driving speed in the valve industry.

**Ninety Years of Work**

Emerson's portfolio of proven products now includes a modular, standardized VOS™ (Valve Operating System) strategically solving customer challenges, advancing efficiency in the valve industry. Emerson's Bettis™ VOS-PAC™ is a package with an actuator and fully integrated modular controls, allowing large-scale fixed installations to provide faster commissioning while assuring the highest quality.

The package has been in the works for decades. “The Bettis brand has been around for over 90 years, and I think a package like this has been the goal for a very long time. We saw there was a lot of interest in having this kind of standard package, so we knew we could not pass on the opportunity to provide this for our customers,” said Herman. “We have a skilled and experienced team dedicated to every product designed for a customer’s solution, and that includes the preengineered. They were tasked with finding the best actuator and control solution across all applications. It was a huge undertaking, but we had access to the information needed, so we were the ones properly suited to take on this job.”

**The Challenge**

Designing and quoting a VOS takes time and resources. Typically, it can take up to eight weeks to provide drawings after the purchase order is received. The Bettis VOS-PAC took on this challenge and eliminated the need for detailed engineering, saving weeks of waiting time. With a preengineered, simplified, and standardized control package, Emerson is able to quote a multi-unit project immediately and have it completed and available within hours. The full solution, including drawings, can be made available instantly, with the Bettis 5-year warranty to back it.

**The 5-Year Warranty**

The Bettis VOS-PAC includes a 5-year warranty. This industry-leading warranty covers everything from the actuator to the controls under one serial number. The VOS-PAC is preengineered, so Emerson knows exactly what components are being used and what replacement parts will be necessary in the future. If there are problems that the end user experiences, the team can learn from those issues, updating manuals to ensure those issues are not problematic for other end users using Emerson products.

**One Point of Contact**

“No one else has started to offer packages like this yet,” explained Herman. “Our advantage is that all the components are Emerson, and all different divisions of Emerson are working towards a similar goal.” With one Emerson solution, the company has become a one-stop shop for end users in the industry.

An integrated pneumatic actuation package includes air filter regulators, solenoid valves, quick exhaust valves, pilot valves, limit switches, and positioners, all in a modular control solution. “We really are a solutions provider,” Herman explained. “We are able to work with our customers on what they need for their business, and we have the resources for them to be able to complete their projects.” All components are designed, engineered, and guaranteed by Emerson.

Emerson’s high standard for the customer solution is due to its process that includes providing high-quality products without multiple suppliers and vendors. “We do not have to work across several companies,” said Herman. By not passing the project from engineering group to the next, Emerson is able to keep a constant relationship, avoiding production delays brought on by outside suppliers. “We find that end users prefer to work with fewer
vendors, and by creating this standard-
ized package – which includes industry
leading brands all in one package – we
minimize it down to only one vendor.”

The Quoting Stage

Standardization makes it possible to
have an accurate design when it comes
to quoting the project. It also makes
costing and creating schedules more
accurate. “Every time a new request
came in, we spent a lot of time and en-
ergy quoting, and then more time engi-
eering and reengineering the project,
which also created delays in getting the
final product to the end user,” Herman
relayed. “We asked ourselves: how can
we make this easier? How can we help
our customers save time and money
throughout this process?

So, we developed a catalogue, and it
allows us to go and quote the custom
system almost immediately.”

“When you add in a general arrange-
ment and schematic document pack-
age, you have a robust and comprehen-
sive quote package that allows EPCs
and end users to make quick decisions,
and speeding up the project execution,”
explained Herman.

Emerson also has an online store for
their sales channel, which makes for a
straightforward process to order the
VOS-PAC. Unique part numbers and all
the technical drawings can be down-
loaded from the online catalogue. The
online store has the capability to provide
instant and accurate pricing for the cus-
tomer, so the end user knows the cost
within minutes. “Letting our customers
have access to everything online at any
time is very helpful—not just for them,
but for us as well,” said Herman.

Available Documentation

“We spent a year going through all the
different drawings to find what was need-
ed in the market. We wanted to make the
product as streamlined as possible,” Her-
man explained. “When you have that
standard package in operation, you can
streamline maintenance because you
know exactly what parts are present, and
you know how to fix them.”

“In the oil and gas industry, it is really
important to understand every asset
because you need to know how much it
weighs so that it will work on top of the
platform it is going to be placed on. Be-
ing able to give the specifications to our
customers right at the beginning helps
them plan out exactly what they want,”
said Herman.

She also explained why the documen-
tation is so important and compared it
to buying a new house. “So, you have
bought a new house and there are appli-
ances that you need to learn how to use.
You need to see the manual for the dis-
hwasher, the washing machine, the dryer,
and the air conditioner. The same goes
for actuators. If you were to walk up to
an actuator in the field and you had to
fix it, you would need to know about
its parts and you would probably have
to find each individual manual to get a
comprehensive understanding of it.”

On a new Emerson VOS-PAC, a QR code
can be scanned to bring up all the neces-
sary documentation on a mobile device
or tablet. “You get the necessary infor-
mation for every component, and right
away you know what you need to do
to fix the actuator.” These scannable QR
codes not only assure compliance with
industry regulations, but also reduce fa-
cility safety concerns for the end user.

Additional Advantages

There are many advantages to hav-
ing a preengineered, cataloged,
and fully tested VOS. These advantages are
gained throughout the lifecycle of the
product, further reducing the cost of
ownership, shortening repair require-
ments and equipment downtime. Scal-
able in price, specifications, features,
and functionality, the assemblies can
be adjusted to meet any unique set of
needs. Because of the product’s stan-
dardization, it drives speed for the end
user, saving up to six weeks in engi-
eering time.

The VOS-PAC can be used in almost
every industry including oil and gas,
petrochemical, chemical, power, pulp
and paper, food and beverage, HVAC,
pharmaceutical, and water treatment.
Customized to fit many different applica-
tions, Emerson’s package can be utilized.

The views and opinions expressed
in this article are those of the
profiled company and do not
reflect the position of Valve
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