

Easier automation, the Emerson way

The philosophy behind Emerson, and the Emerson Process Management division in particular, is simple: bring like minded companies together and make use of the overlap in technology, experience and customer coverage, as well as employing synergy effects to cut costs. Twelve months ago, this was brought into practice when the Emerson Valve Automation group was created within Emerson Process Management, by combining the market resources of Bettis, Dantorque, El-O-Matic, Hytork and Shafer. To find out more about the products and services now available from Emerson Valve Automation we went along to one of their customer information days in Hengelo, the Netherlands.

English, French, German, Norwegian... the multitude of languages spoken during the coffee-break indicated that this was no ordinary customer information day. Emerson Valve Automation group makes and sells products around the globe, and this was reflected in its open day held in Hengelo, the Netherlands. The objective was to inform Emerson's clients about the latest developments in bus systems and highlight

Actuators from Emerson Valve Automation group have a proven track record in the world's harshest locations.

some exciting new products and services. Far from being abstract lectures, these presentations gave a hands on approach to plant automation as well as some persuasive case histories of actual applications. During one of the first presentations for example, Martin Breen, Vice President Marketing Europe, Middle-East & Africa, talked about the implementation of an AS-i bus system at Croda Universal in Kingston

upon Hull in the United Kingdom. Placing a strong emphasis on natural chemistry Croda manufactures a wide range of products, which are used to optimise polymer processing, which ultimately enhance the properties of plastics and rubbers. When Croda Universal decided to upgrade from traditional plant control, based on a DCS system, to digital bus communications, Emerson Process Management was able to provide a cost-effective valve automation solution complete with AS-i. The Valve Automation group of Emerson Process Management successfully met Croda Universal's demand for enhanced plant wide control, by supplying a package of Hytork XL actuators, fitted with AS-i switch boxes, along with Hytork CATS (Clean Air to Spring) Solenoids. This and other presentations clearly signal Emerson's transition from a product supplier to a solutions provider. Commenting, Mr Breen said: "We are still a proven manufacturer and remain true to the ethos of delivering quality products. However, we realise that our job doesn't stop at making boxes and passing them on to the customer, whether it be a distributor, a valve manufacturer or an end user. We can get involved with the order at a much earlier level, such as the concept stage, and ask the customer what it is he wants to achieve. With that knowledge we can help him make an optimum choice from the 264 (!) bus systems that are available and offer him the suite of products that best meets his needs. That, we believe, is the key issue for today's market place."

Functionality

Elaborating on the multitude of automation systems currently available, Mr Breen said it was important to determine the required functionality of an automation project at an early stage. Once that knowledge has been gained Emerson can offer the most cost-effective solution. Mr Breen: "AS-i for example is the simplest way to give a client on/off facilitation using a bus system and is relatively inexpensive. So inexpensive in fact that large plants can be divided up into sections by putting several systems in and looping them back to the control room. This neatly overcomes some of the technical limitations associated with AS-i. If a customer wants more functionality for modulation and/or control we can look at Profibus or Foundation Fieldbus. Admittedly more expensive, they do enable more information to be sent over longer distances." Given the ever-growing number of automation architectures it is easy to understand how end users can become confused about the best direction to take, let alone feel confident enough to define the technical details. Mr Breen believes that there is a clear role for Emerson here in providing impartial, practical advice. "Emerson already has the capability to advise clients on a local level about which bus system to choose and which products are needed to implement that system. That service can only grow in the coming years, and will help us consolidate our position as market leaders for bus systems. Customers will then definitely perceive Emerson as solution providers instead seeing us as the

Emerson Valve Automation

The Emerson name has been around for over 100 years, but the Valve Automation group within Emerson Process Management was only created quite recently.

The goal was to combine the market resources of several leading suppliers of valve automation products and services for the chemical, oil and gas, pharmaceuticals, power, paper, food and beverage, and water and waste industries.

Member companies include Bettis, Dantorque, El-O-Matic, Hytork and Shafer, all of which are established and well-known players in their market segments. The Valve Automation group employs more than 780 people, concentrated in the United States, Canada, Great Britain, France, Denmark and the Netherlands.

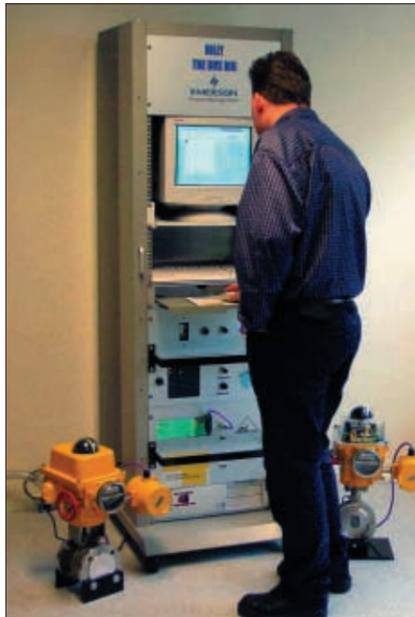
Research and product development are top priorities and the Valve Automation group is using the latest technologies to bring an array of new products, including buses, diagnostics and more, to the marketplace.

people who 'just' sell outstanding quality actuators."

Underpinning Emerson's technical know-how about buses are its various R&D departments. Their role is not just to develop new products, but also to disseminate practical knowledge throughout the entire organisation. "The R&D departments provide regular training programmes for our sales force," explained Mr Floris Groeneveld (Vice President of Research and Development). "That way, we can provide excellent front-line advice to all our clients. And if a client needs additional information, the sales contact knows exactly who to turn to within our organisation. Again, this all enhances our capabilities as a solutions provider," he concludes.

Developments

In combining the resources of five companies, Emerson has indeed created a valve automation group with enviable research and development capabilities. Considerable funding is constantly being channelled into



Not 'just' a source of reliable actuators, Emerson Valve Automation group can assist clients in choosing from the 264 (!) bus systems currently available and offer an appropriate suite of products.



To meet Croda Universal's requirement of enhanced plant wide control, an integral package was put together comprising Hytork XL actuators, AS-i switch boxes and Hytork CATS (Clean Air to Spring) Solenoids.

R&D; so much, in fact, that 36% of all Emerson's annual sales is generated from new products. What then can customers expect from Emerson in the field of actuators and bus systems? Mr Breen: "We currently offer electric, pneumatic and hydraulic actuators for quarter-turn applications, as well as ancillary components such as switchgear, solenoids, etc. So the range is already quite complete, and will be further enhanced thanks to Emerson's plans to launch multi-turn electric actuators as well."

One initiative which is currently coming to fruition concerns Emerson's latest new product, the EQ/ XLQ-series actuator.

This model, which received considerable interest during the Emerson open day, encompasses a radical new approach to the standard concept of an actuator. Mr Breen: "Listening to end users it became clear that many don't like buying what they see as an actuator with bolt-on's, such as the solenoids, etc. So we went back to the



Lean manufacturing is reducing lead times at Emerson.

drawing board to integrate these functions in the actuator itself. This means that clients don't buy products, they buy functionality."

Emerson showed its new actuator at the recent Interkama trade fair in Germany where it was warmly received. Now in the final development phase, the EQ/XLQ should soon be undergoing field trials. The EQ-series will be branded under the El-O-Matic name, the XLQ-series under the Hytork name (for more information see box).

Other products originating from Emerson's R&D facilities include fieldbus cards for Profibus, Foundation Fieldbus and AS-i systems. An immedi-

ate thrust is now underway into developing solutions for DeviceNet and Hart. Said Mr Breen: "End users still like Hart. It's a proven technology and well established. We will support them by developing a Hart protocol for our products. It's no secret that Emerson plans on growing its bus capabilities through various channels. At the moment, for example, there is a definite trend towards open systems. These enable users to profit from the additional information available from the system. That will be a continuous improvement for the future. Right now the focus is on the El-O-Matic and Hytork brands but other areas will be addressed in the near future as well."

All torque

In-house product development, which enables Emerson to be flexible towards customer requirements and deliver custom-made products, is just one of the ways in which clients can benefit from doing business with Emerson, believes Mr Breen. Another benefit accrues from Emerson's widespread network of outlets. "On the one hand," he explains, "our production units deliver products in volume to facilitate the smaller MRO needs of clients through our distribution network. Such distributors carry stocks that are laid out to the local demand. On the other hand, the valve automation centers interface with larger clients or those with more demanding needs."

Product Marketing Director for El-O-Matic and Hytork Mr Jean Paul De Graaf underlined just how local a presence Emerson has. "To get our products to the customer we have nine fully owned Valve Automation Centers, located in the United States, the United Kingdom, Holland, Germany, South Africa and Singapore. Additionally we have 290 distribution units at our disposal, divided amongst El-O-Matic, Hytork, Shafer, Bettis, and Dantorque."



Emerson's R&D departments fulfil a key role, translating customer needs into new developments and disseminating practical knowledge throughout the entire organisation. In fact, 36% of all Emerson's annual sales is generated from new products.

Mr De Graaf hinted that Emerson intends enlarging this already wide network of distributors and Valve Automation Centers. A new center is already being implemented in France and future ones are planned in Latin-America, the Middle-East and Asia to bring Emerson's proven formula to clients in these

areas. "This 'think global, act local' philosophy enables Emerson to offer a consistent, high quality service world-wide. For example, we can provide actuation systems with repeatable technology whether the orders concerns a single piece sold in Chicago or multiple units ordered via distributors in Shanghai," stressed Mr De Graaf.

Indeed, Emerson takes pride in servicing clients large and small, says Mr Breen. "As we approach the market on a local level we can accommodate individual needs whilst offering the benefits that come with our size. Our product array for example puts us on a completely different playing field. Very few suppliers can offer the same wide spread of products from one source. We have also used our size to realise important cost containment. For example, we recently opened a production plant offering the best quality product for the best price available, and we built it in Western Europe! So we know just how to leverage economies of scale and technology to provide benefits for us and our customer. The Emerson Valve Automation group knows all about the actuation business, from manufacturing the smallest component right up to providing complete new automation systems. So when people say 'Emerson is all torque' it's really a great compliment to the skills and resources we have to offer." ■

El-O-Matic EQ-series

The EQ-series (together with the XLQ-series) is a new approach to pneumatic rack and pinion actuators as it integrates actuator and control accessories. This eliminates the need for the end user to engineer and procure the actuator, solenoid valve, switch boxes, positioners and/or other accessories separately. Cost savings can therefore be realised on installation costs including engineering and procurement, whilst product selection is simplified as it is no longer necessary to place multiple orders for all the separate components. The use of standardised modules further reduces the need for stocking complete products and spare parts.

Technical information

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| Torque range: | From 40 Nm to 1,600 Nm. |
| Visual position indication: | Yes |
| Permanent position tracking: | Yes |
| For pneumatic control module: | Breather functionality, pneumatic booster block, speed control functionality, pneumatic manual override. |
| For On/Off module: | Push-button auto-configuration, quick connect plug for electrical interface, pneumatic manual override and position indication LED. |
| For the future: | Modules for modulating, AS-i, Hart, Profibus and Foundation Fieldbus. |

