

Emerson's valve auto offering is thrust



The Emerson Process Management manufacturing facility in Nilai, Malaysia. Home of Fisher Valves, Malaysia and Valve Automation, Malaysia.

As the saying goes, there is always light at the end of the tunnel. If any one company has actively sought that light for a sidelined business, then it has to be Emerson Process Management's actions to right its valve automation business. Just two years ago, a catastrophic fire destroyed the company's production facilities in Hengelo, the Netherlands. Following this tragedy, Emerson redefined its valve automation business strategy, creating new production facilities for its rack and pinion product offering and successfully transforming Hengelo, the former factory for producing El-O-Matic® actuators, into a Configuration Centre for the European market. Valve World recently visited Mr Dan Button, Mr Dave Plum and Mr Dan Wisenbaker at Emerson's headquarters in St. Louis, MO, USA, to find out how the company has managed to create opportunities through adversity.

By David Sear and Sarah Thompson

By mid 2002, with numerous manufacturing and operating units worldwide, eight company owned valve automation centres and more than two hundred and fifty global distributors, Emerson was a valve automation force to be reckoned with. With an extensive product line including rack and pinion actuators, pneumatic and hydraulic scotch yoke actuators, linear actuators, gas hydraulic actuators for pipelines, quarter turn electric actuators, and control accessories, Emerson had established a strong and reliable name for itself with five globally recognized brands in the valve and flow control market. In short, Emerson's valve automation business was clearly on a path for growth through technology, solutions, and service.

That position was seriously challenged in May of 2002 when Emerson's Netherlands based production facility for El-O-Matic actuators was destroyed overnight

mation back on track!



After the tragic fire at its Hengelo, the Netherlands, facility in May 2002, Emerson successfully put the recently inaugurated location in Nilai, Malaysia, at the heart of its recovery strategy

by fire. Mr Button explains: "At that time, nearly two-thirds of our rack and pinion actuators were being manufactured in our El-O-Matic actuator facilities in Hengelo. Considerable sums had been invested in lean manufacturing technology and we were in the process of rolling-out a customer centric strategy that would leverage best cost and best service in conjunction with a product strategy that afford our customers the features and benefits of an actuator that their individual applications require. This strategy included both organization and product. We were in the process of defining strategies to consolidate capabilities into Centres of Excellence to provide product focus via engineering, development and marketing of our rack and pinion actuators. We were also discussing opportunities to leverage production to compete more effectively in the local market in the Netherlands as well as throughout Europe based on price

and volume. We had just started to implement this plan when the fire completely disrupted our entire business."

Mr Plum continues: "Our strategic plans for the process valve industry were built around the El-O-Matic actuator as the foundation. With the El-O-Matic actuator plant literally in the ashes, you can imagine that we had some initial difficulties in deciding how to move forward while continuing to serve customer needs. We needed to act fast because of course we still had customers depending on our El-O-Matic products, but we were also sensitive to the expressed needs of other customers wanting new products and better service. Fortunately, we are a broad based supplier with other major market brands in Bettis® and Hytork®. Those products remained unaffected by the disruption in the Netherlands. This gave the management team some flexibility to focus fully on re-building the El-O-Matic actuator

production facility and moving forward with redefining our rack and pinion business."

World-Wide distribution creates a safety net

Quickly moving into recovery mode, Emerson looked to its distributors to provide customers with the valve automation products and services that they needed. The comprehensive worldwide network of distributors acted as a safety net, catching Emerson in its time of need. Mr Button expresses his true gratitude: "I can very proudly say that our distributors around the world really stepped up to take care of our customers and provide them with the products they needed the most. This alleviated a lot of the pressure on us, giving us the time to organise ourselves and make a start on the re-building of the facilities in Hengelo."

Mr Wisenbaker notes that a key differentiator for Emerson is the amount of finished inventory available in the local markets. "Fortunately, there was already a buffer of El-O-Matic actuators in the market place. Most of our distributors carry a significant amount of stock, regardless of market fluctuations. In addition, we saw – and still see – distributors working together in order to balance their inventories. That has been a great help and speaks volumes about the true customer focus of stockists. On top of all of this, in many cases, our customers worked very closely with us to identify suitable alternatives and were willing to substitute products from our Bettis or Hytork actuator ranges. This is all proof that there are significant advantages to having such a broad product offering: flexibility and choice to name but a few."

A new strategy

Having resolved clients' immediate concerns about product availability, Emerson's management team had some breathing space to develop a recovery strategy for its El-O-Matic actuators. Although Hengelo had been a flagship production facility, it was quickly realised that the predicted five years to rebuild the location would prove unworkable. Instead,



▲ One of the three Nilai LEAN assembly lines. This line produces the smaller El-O-Matic and Hytork products thru size E350 and XL221 actuators. All lines employ LEAN assembly techniques including three-bin KanBan and a seven stage progressive assembly approach.



▲ The large LEAN assembly line spring press operation is used for El-O-Matic sizes E600 thru P4000 and Hytork size XL281 thru XL4586 actuators.



◀ All Nilai-manufactured actuators are subjected to a 100% final integrity test including functionality and pressure / leakage testing.

thoughts turned to the recently inaugurated production facilities in Malaysia. Mr Button : "A viable option was to transfer the entire production process of the El-O-Matic rack and pinion actuators to our Malaysian facilities. The planned completion date of this new plant was much earlier than the expected completion of the new Hengelo facilities, and would allow the earlier reintroduction of this product line." Mr Button further notes that the new Malaysian facilities boast three assembly lines capable of building 170,000 units per year in a range of sizes. Current monthly output is around the 10,000 unit mark, which is set to gradually increase. Lean production is assured thanks to close ties with the local supply base.

Emerson has also used the enforced period of reflection to further improve and develop the El-O-Matic product line. Asked for examples, Mr Wisenbaker notes that substantial improvements have been completed in the appearance and performance of cast components. "Instead of using a combination of sand casting and gravity feed casting for the smaller body sizes, we can now offer customers high-pressure die castings. Further, we have replaced spray-on enamel with powder coatings. This is not just a cosmetic change, but

actually makes the actuator much more suitable for chemical and hygienic applications. Furthermore, the performance, the fit and the function of the product have also been improved upon," he comments

Flexible manufacturing via World Area Configuration Centres

Once manufactured, the new actuators are shipped to one of Emerson's three World Area Configuration Centres, which includes the newly refurbished Hengelo. The other two are found in Tampa, USA, and Singapore. Mr Button: "Our new strategy is to produce high volume very lean quantities in the facilities in Malaysia and then to send them to a World Area Configuration Centre in each of the three major world areas (Europe, the Americas and Asia). The facilities in Hengelo have been 'reborn' as a new World Area Configuration Centre, where products can be configured to the specific needs of the individual customer. At the same time, the Hengelo facilities will continue to produce small quantities of 'special' products as well as the high-tech Field-Q™ range. Needless to say, we are all pleasantly surprised that it has not taken as long as we first imagined to get the plant in Hengelo back on its feet."

Asked which clients could benefit from the World Area Configuration Centres, Mr Button makes it clear that distributors, OEMs and end users alike can all be served with complete product packages to suit strict and varied specifications. "The two established World Area Configuration Centres in Tampa and Singapore have set a trend within the Emerson group for high-quality products, very short lead times and competitive costing. I am convinced that the new centre in Hengelo will continue that fine tradition."

Customer care

In addition to its World Area Configuration Centres, Emerson continues to highlight its local valve automation presence via what Mr Plum calls its "Local Customer Care Centres". With existing facilities located in Germany, England, France, South Africa and Singapore, new centres will be opening soon in Brazil, China, Dubai and Argentina. Mr Plum explains how once the customer has received their custom-made package of actuators, valves and accessories, there is always someone at hand at a Local Customer Care Centre to offer after sales help, technical advice and automation. "Our Local Customer Care Centres are situated in numerous



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countries around the world. Here, our customers receive a 24-hour, seven days a week service. Our plan is to provide product and applications expertise, locally, to help customers solve problems. Our representatives are available either face-to-face, or to answer the phone and discuss and offer advice on the problems at hand, in the local language. Our representatives are well-trained and qualified to protect our customers' investments." Furthermore,

Care Centres are often combined with local distributors, meaning that new equipment, spares and parts or engineering expertise are always at hand. "Emerson prides itself in knowing our customers place high value on prompt service, so same day/next day service and delivery is an important goal for us. It has been a key differentiator for us in the past and will continue to be so in the future" emphasizes Mr Plum.

FACTS & FIGURES

Name:	Emerson
Founded:	1890
Sales:	USD 14 billion world-wide
Manufacturing base:	400-pls locations world-wide
Employees:	over 106,000
Businesses:	Emerson Appliance Solutions Emerson Climate Technologies Emerson Industrial Automation Emerson Motor Technologies Emerson Network Power Emerson Process Management DeltaV Control Systems Rosemount Measurement Devices Fisher Control Valves and Regulators Valve Automation (see box) PlantWeb Solutions and Services Emerson Professional Tools Emerson Storage Solutions

FACTS & FIGURES

Name:	Emerson Process Management Valve Automation Division
Brand names:	Bettis Dantorque El-O-Matic Field-Q Hytork Shafer
Major products:	Pneumatic rack and pinion actuators Pneumatic scotch yoke actuators Hydraulic actuators (gas/hydraulic, subsea, linear) 1/4-Turn electric Control accessories
Torque range:	10 in-lbs to 6,000,000 in-lbs
Key applications:	On/off valves (ball, plug, butterfly, gate, 1/2" - >40")
Key markets:	Oil & gas production, gas transmission, process, power, water & waste
Key sales:	North America, Europe, Latin America, Middle East, Africa and Asia

Going forward

Emerson is very much in touch with the customers' wishes and takes its role as supplier very seriously, continues Mr Button. "High-quality products, short lead times and the availability of expert technical support are what Emerson's customers have come to rely on and trust. In that light, our employees can be very proud of what has been achieved in the past two years. We have faced some major challenges yet have managed to revitalise our rack and pinion business and rebuild the facilities in Hengelo. We have rebuilt our business and reorganised along a three-tier approach comprising manufacturing, World Area Configuration Centres and Local Customer Care Centres. This is already proving to be a successful formula. As a result, the company's relationships with its distributors and customers have strengthened and the quality of our products has significantly improved. Our focus has now shifted even closer to the customer and his needs, which means that Emerson's customers can expect no less than reliable, flexible, fast and efficient service, as well as Emerson's high-quality actuation technology. All in all, Emerson is most definitely back and on track." ■