

Emerson's Valve Automation moves into

Emerson Process Management Valve Automation's new state-of-the-art manufacturing and Americas' headquarters facility in northwest Houston is running at full speed. The move from its 30-year old Bettis™ manufacturing and assembly facility in Waller, an area 40 miles outside of Houston, was completed during this past January and has been steadily gaining capacity these past few months. May 8, 2013 marked the facility's official grand opening specifically scheduled during the prestigious OTC event; very fitting since Bettis is the considered the hallmark ESD valve operator in the Global Oil & Gas Industry known for maintaining the high quality standards for which Emerson is recognized. Capability and output at the new plant now exceeds pre-move levels, satisfying increased customer demand while continuing to meet ISO 9000 standards.



Training center

Why Houston?

The new facility, in close proximity to the energy corridor, is located on the northwest side of Houston's burgeoning energy and industrial growth activity. The decision to relocate to this area made perfect sense. Houston, known as the energy capital of the world, is home to more than 3,700 energy related companies and 16 of the top 20 liquids pipeline companies. Moreover, Houston accounts for more than 40 percent of the nation's petrochemical capacity and is within reach of the world's

largest concentration of chemical plants and refineries on the Texas gulf coast—more than 400 in total.

Houston is also headquarters to a large majority of companies producing from and maintaining more than 3,000 offshore platforms and 25,000 miles of offshore pipelines. Not only is the new facility in the heart of this activity, but it is also in close proximity the Port of Houston, one of the world's largest and busiest, lending a convenient means of receiving and transporting goods to any part of the globe.

Being rooted in the new Houston location allows Emerson to continue fostering close relationships with area energy and industrial clients. "We are thrilled to be expanding our footprint in the Houston community," David Plum, Valve Automation President states. "Our history in Texas dates back to 1929 and this area remains critical to our growth plans and service level commitments." It provides Emerson the opportunity to become close partners with customers, understanding their risks as well as their service and equipment

Bringing Innovation to the Industry

Through the transition, project teams have continued to work on new product development to address the needs of the market, including the robust shale plays. As part of this effort, the PWP PressureGuard product was developed and tested for immediate release. The product combines a Bettis™ self-contained emergency shutdown system (ESD) with an API 6A reverse-acting gate valve to provide an integrated 6A package for immediate wellhead shutdowns. It is an effective product for immediate valve closure in cases of loss of line pressure and is ideal for remote area operations where there are insufficient, unreliable or prohibitively expensive power sources available. Its features make it highly suitable for application in shale plays in North America and abroad. Other products are in development at the final stages of engineering and nearing market introduction.



World area configuration center



Meeting room

needs. The Houston facility, with its many unique attributes, provides Emerson with the capabilities to help develop leading edge technology and product innovations.

Lean Manufacturing

The Houston manufacturing facility employs the latest in manufacturing technologies for improving production output with high quality. One of the new capabilities is a modern blast and paint booth area. This dedicated area eliminates the need to outsource grit blasting and painting of Bettis™ actuators, making that a fully-integrated and efficient in-house function. Additionally, the approximately 150,000 square-foot manufacturing plant is utilizing lean manufacturing techniques to provide better quality with substantial manufacturing efficiencies.

The plant has been specifically designed with a product flow layout that is conducive to the ultimate routing of parts and supplies through receiving, the efficient assembly of product, complete automation capabilities for mounting of controls and accessories, and the organized shipping area. The lean manufacturing approach dramatically reduces waste, improving product value

passed on to the customer. Further, this approach which has been used successfully in other Emerson international operations, promotes numerous other costs savings and efficiencies.

With a demand driven supply chain that lowers critical inventory, the Emerson facility will reduce production time by efficient materials handling methods and product movement throughout the plant. The lean manufacturing system will also lower waiting time between manufacturing steps. Quality will benefit through defects reduction and increased inspection scrutiny at all manufacturing stages.

Innovation Center

The Houston facility was designed to be customer-centered. The new Innovation Center within the facility provides a demonstration area with working models of all the major products in Emerson's broad valve automation offering for year-round use by customers. This perfect venue allows hands on examination for customers as well as for Emerson's application engineers and distributors, the life blood of the valve automation product sales and service.

A leading-edge training center will offer periodic seminars and sessions for exposure to new and existing products. The latest in visual technologies in the center



Learning center



new Houston facility

Reliable Emergency Shutdown Adds Safety to Shale Oil and Gas Production

There are an estimated 240 billion barrels of technically recoverable tight oil resources and 200 trillion cubic meters of shale gas worldwide. The proliferation of gas and liquids extraction from shale formations in recent years has led to rapid development of the infrastructure to include processing and transport the hydrocarbons. Often the wells, gathering and processing facilities are located in remote areas where there is a lack of dependable external power sources – clean line gas, compressed air, hydraulic power units or electricity – hampering emergency shutdown (ESD) procedures to shut in the wellhead or flow valves. At every stage of the process from the wellhead to the transmission pipeline, valves and their automated controls play key roles in providing safety for operating and civilian personnel, protecting valuable assets, and preventing or mitigating any possible environmental events.

Automatic Shutdown

The PressureGuard and PressureGuard Wellhead Protection (PWP) are self-contained ESD solutions that do not require any external power source. They are set initially by a manual hydraulic pump coupled to an ESD actuator. For example these units may be used on an API 6A valve at the wellhead (typically either side of a choke valve) or the API 6D valve on the flow and process pipelines. Applications might include: Gas/Liquid Metering stations, Liquid Pipelines, OPPS, Gathering stations, Custody Transfer skids, Metering stations, Water Treatment Skids and City Gates to a name a few.

The ESD can be “tripped” in one of three general ways: 1) A high and/or low pressure pilot signal, 2) A remote ESD signal to an integrated solenoid valve controlled by SCADA, BPCS or wireless signal 3) A heat sensitive fusible link. Once the shutdown has occurred and the cause investigated, the hydraulic hand pump can be used to reset the ESD actuator to its original operating mode once the device has also been reset.

PWP, PressureGuard Wellhead Protection System Conforms to API 6A

The PWP incorporates both an API 6A reverse-acting gate valve and bonnet coupled to the linear spring-return actuator. The API 6A valve and actuator unit is provided by OMNI, a manufacturer of field-proven products for oil and gas applications. There is no need to worry the challenge of mating a 6A valve and valve bonnet by a separate manufacturer or integrator. Emerson offers the complete API 6A wellhead ESD solution with a variety of options including rate-of-drop line break systems, switches, fast acting and lockable field covers.



Innovation center (1)



Innovation center (2)

to realizing our vision to deliver world-class products and services to support our growth throughout the Americas,” says Tom Stovall, Vice President, The Americas.

A Larger WACC

The new facility acts as a World Area Configuration Center (WACC) in support of North and South American customers and distributors. The facility complements similar full service facilities in Europe, Asia Pacific and the Middle East with manufacturing, assembly, integration of control packages, accessory and replacement parts stocking, and testing. Experienced factory trained and certified service technicians will be available to utilize their extensive product and automation knowledge to give customers life-cycle support for all Emerson Process Management Valve Automation products. The facility also complements the local manufacturing and service of Emerson’s EIM™ electric actuator brand, located in southwest Houston.

Engineering

Product and applications engineering have always been an Emerson hallmark. To emphasize that tradition, the new facility will centralize the valve automation design, product development and engineering laboratories under one roof. As a result, introduction of new products to solve customer problems will be expedited. Testing of springs, functionality, shell pressure and other non-destructive testing procedures will be carried on in-house under the watchful eyes of engineers and specialized technicians.

Emerson’s valve automation brands have been industry leaders for more than 60 years and continue to be preferred solutions for reliable automated valve operation. The opening of the new Houston facility physically represents Emerson Process Management Valve Automation’s commitment to increasing product quality, customer focus, improved production efficiencies, and engineering innovation.

will link other Emerson facilities so that the company’s worldwide experts can add to the value of training and conferences.

Headquarters for the Americas

The northwest Houston facility is the newly designated area headquarters for Valve Automation’s Americas leadership group, providing the direction for Emerson’s participation in the growth of activity in North and South America. It includes more than 60,000 square feet of office space for sales, engineering, customer service, laboratory and administrative personnel. The building is designed with sufficient room to accommodate significant expansion. “Completing construction of the Americas Headquarters is a significant milestone for Emerson Process Management. We look forward



Reception area