FISHER IN CONTROL
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A World of Opportunities

Opportunities In The Challenging Environment

Held on 21 - 24 November, 2002, the FY 03 Asia-Pacific Valve & Regulator Sales Meeting was more than just another annual gathering. This meeting was crucial; to chart out the direction Emerson Process Management was to take in the face of an increasingly challenging environment.

Held at the Putra Jaya Marriot Hotel, Malaysia, the four-day conference saw a congregation of 250 participants from the Emerson Process Management Valve and Regulator Division and its Sales Representatives from Australia, Bangladesh, China, India, Japan, Korea, New Zealand, Pakistan, Southeast Asia and Taiwan.

The key message that resounded throughout the conference was about positioning for growth in the challenging environment. Mr Mike Train, President of Emerson Process Management Asia-Pacific, laid down the strategies for FY03. Participants were urged to view the challenging business environments as hidden opportunities.

This was followed by a reinforcement of Fisher's capabilities in the arena of excellent valve performance. Mr Danny Nelson, Director of Engineering, and Mr Alfred Lee, Senior Marketing Manager, presented a live digital valve demonstration remotely through broadband dial-up to the Dynamic Performance Loop in Singapore. Through this, the participants were informed and convinced of the true performance superiority of Emerson Process Management's valves and instrumentation.

A tradeshow featuring the newest and most exciting products from Emerson Process Management's Valve & Regulator divisions soon followed. Workshops were also conducted for all participants. This enabled them to identify market opportunities and equipped them with the skills and knowledge required to serve the customers better.

The Sales Meeting would hardly be considered complete without some bonding. Some of the team activities include golf and bowling sessions. Nature lovers were treated with a visit to the Indah Wetlands. Visits to the company's plant in Nilai, Malaysia, also formed an important part of the itinerary. The Nilai plant is Emerson Process Management's largest valve manufacturing facility in Asia-Pacific.

The four-day event saw the changing of many mindsets. New bonds sealed while old ones were deepened. A continued belief in the Fisher brand name was reinforced. The Fisher spirit is indeed well and alive.

Emerson Proves Most Popular Amongst Readers of 'Control Magazine'

For the 10th year in a row; automation users surveyed by Control Magazine ranked Emerson's products and services tops in more categories than any other supplier with 28 First Place awards. Emerson bettered its own record, set last year, of 20 First Place wins.

- Analyzer, Chromatograph
- Analyzer, Density/Concentration
- Analyzer, pH/ORP/Conductivity
- Analyzer, Stack Gas
- Control System, Process
- Control Systems, Hybrid
- Control Valve
- Flowmeter, Coriolis
- Flowmeter, Magnetic
- Flowmeter, Positive Displacement
- Flowmeter, Turbine
- Flowmeter, Variable area
- Flowmeter, Vortex
- Level, Float Displacer
- Level, Inventory
- Level, Radar
- Pressure Transmitter
- RTD
- Software, Asset Mgt
- Software, Batch Control/Mgt
- Software, Calibration Mgt
- Software, Expert System
- Software, Loop Tuning
- Software, Neural Networks
- Software, Process Control
- Software, Simulation
- Temperature Transmitter
- Thermocouple

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Fisher AP Capabilities

SINGAPORE VALVE INSTRUMENTS MANUFACTURING: Fast and High-Quality Manufacturing in Asia-Pacific

Smart positioners are revolutionizing the way plants are being managed today. With an annual projected growth of over 20% in a US$200 million market, smart positioners presents an opportunity for plants to increase accuracy, predictive maintenance capability and therefore profitability.

Recognizing the importance of enabling customers to manage their process better, Fisher led the industry in developing advanced technologies in smart instrumentation. A leader in every aspect, Fisher dominates the market with over 300,000 FIELDVUE® Digital Valve Controllers installed.

In order to serve this market more effectively, the company set up the Singapore Valve Instruments Manufacturing (SVIM) plant in 1996.

Constructed at a cost of US$2.5million, the facility spreads over 16,000 sq feet and is led by able leaders as well as a team of R&D and engineering talents. Operating in 2 shifts, the SVIM's production volume has now reached 80,000 units of instruments across four product lines every year.

SVIM's commitment to customer service, on-time delivery (OTD) and quick response time to customers resonates throughout the organization. The adoption of LEAN manufacturing practices in year 2000 pushed the plant's performance level to competitive lead-time and 100% OTD. LEAN means minimizing all forms of waste such as inventory, cycle time and rework, while creating customer value.

To ensure the quality of every finished product that rolls off the assembly line, SVIM employs stringent standard operating procedures and checks. Other production values include:

- Commitment to doing it right the first time, every time

- Operator certification to ensure that production personnel are qualified for technology production work
- Quality control teamwork and LEAN manufacturing
- A customer-first culture and staff empowerment to give priority to customer needs above everything else.

The SVIM facility produces the entire range of Fisher FIELDVUE® smart instrumentation for worldwide consumption. Dedicated to continuous improvements, SVIM is proud to have achieved the new ISO 9001:2000 certification this year.

Valve Innovation

Fisher V150S - Superior Slurry Valve Technology

In collaboration with an alumina refinery in Australia, Fisher has developed a new Slurry Vee-Ball® Control Valve, V150S, for handling aggressive slurries.

Successful field-testing has been ongoing for more than a year. The new Slurry Vee-Ball® provides inherent advantages over traditionally used butterfly valves and combines the innovative use of materials with low impingement flow paths.

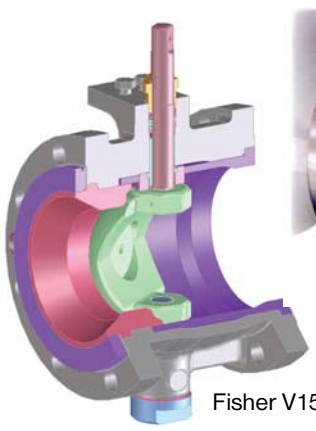
The customer is happy with the longer life and increased reliability of the new Slurry Vee-Ball® valve that provides a lower cost of ownership. A reduction in unscheduled outages due to valve body or pipeline failure provides increased safety and efficiency, a direct commercial benefit that is easily quantifiable.

The customer has ordered the V150S for installation in all three Australian plants plus their operations in the Caribbean. Product introduction to other alumina plants within Asia-Pacific is on-going. The commercial launch of 4", 6" and 8" sizes will occur in March 2003.

Design features include:

- Hardened flange protection with body inlet and outlet bores machined to match the pipeline diameter.
- Full body protection with the use of a highly wear-resistant sleeve and flow ring to increase service life in aggressive slurry flows.
- Pressure drop is taken across the flow ring and V-notch Ball interface. This region has a large cross section to enable long lifetimes.
- Easily replaceable trim without the use of screw threads or press fits.
- Failure prone 'O' rings have been engineered out of the design.
- Hexagon shaped drive and follower shaft connections to reduce backlash.

The Fisher V150S is certainly not limited to applications within the Alumina industry. Applications that deal with highly abrasive slurries in any industry can be handled by the V150S.



Fisher V150S

HD Metal Seal

Heavy Duty Metal Seal Technology for Exceptional Performance and Lower Operating Cost

The Heavy Duty Metal Seal used in the Fisher V150 / V200 / V300 Rotary Vee-Ball® valves is a rugged, one-piece solid metal construction. With increased wear resistance and pressure drop capability over the traditional flat metal seals offered by most segmented-ball valve manufacturers, the Heavy Duty Metal Seal is suited for a wide range of applications in steam, gas, slurries, and various liquids.

This seal design is pressure-balanced with lower operating torques, resulting in smaller actuators for high shut-off pressures.

A wave spring is used to load the seal against the ball, completely eliminating the shims and other cumbersome adjustment procedures. It also provides a uniform loading pressure on the Heavy Duty Metal Seal, keeping it in continuous contact with the ball segment. Its wiping action across the ball prevents scales and sludge buildup. This uniform seal loading pressure also assures bi-directional tight shut-off capabilities and maintains a constant low friction between the seal and ball, which is vital in ensuring best control valve performance.

The seal can be accessed simply by removing two machine screws on the valve body inlet. No need to disassemble the valve body or remove the actuator for seal replacement. This leads to ease of maintenance.

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Control Valve Diagnostics

What's New in AMS ValveLink® 6.1

With the release of AMS ValveLink® 6.1, control valve monitoring and diagnostics will never be the same again!

New features include 'PlantWeb Alert' colour codes to help the plant operator identify potential problems. Performance diagnostic features in AMS ValveLink® will also recommend actions for the maintenance personnel to check and rectify the problems. Most of the diagnostics can be run simply at a click of the "One Button Sweep".

Some diagnostic features are:

Supply Pressure Diagnostic: Detects low and high supply pressure to ensure there is sufficient air to operate the valve, hence avoiding process upset.

I/P and Relay Integrity Diagnostic: Detects potential problems like build-up of foreign particles in the I/P and relay, air leakage or calibration shifts before failure occurs and shuts the plant down.

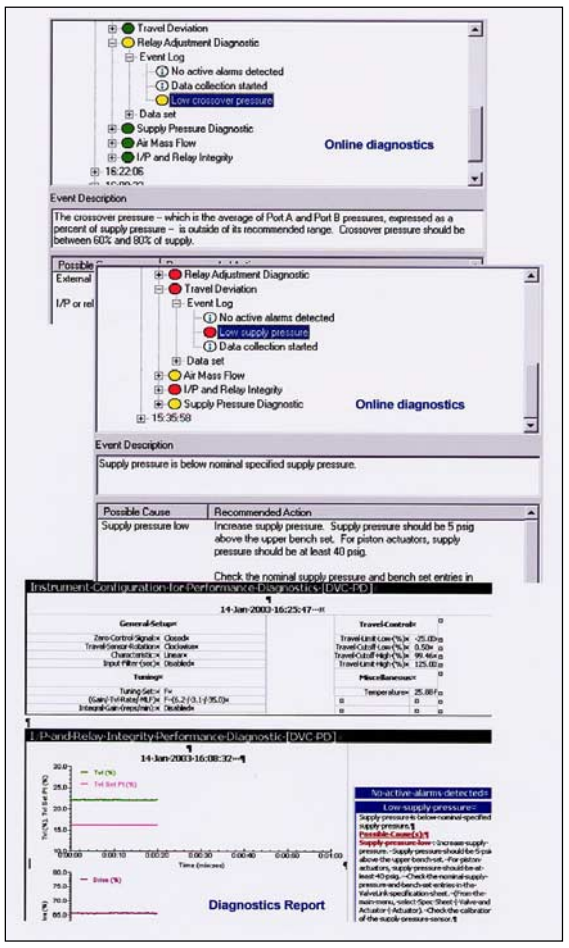
Relay Adjustment Diagnostic: Ensures a proper airflow (with no leakage or blockage of air) to ports A and B of a piston actuator.

Travel Deviation Diagnostic: Detects travel deviation caused by sticking valves, travel calibration shifts or insufficient supply pressure.

Air Mass Flow Diagnostics: Detects actuator or air tubing leakage.

Valve Friction Diagnostics: Estimates valve friction and dead band while the valve is in service.

Report: A list containing all the potential problems and recommended actions. It can be used as a report to the management or for maintenance personnel to carry out servicing.

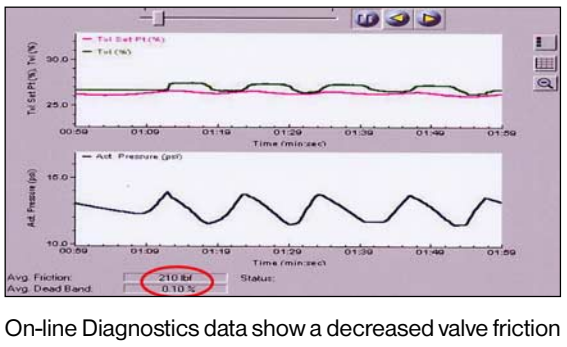


Quantified Business Results

Valve Signature and On-line Rectification Saves Plant US$135,000

A Paraxylene plant in Thailand observed that one of its critical control valves was fluctuating even though the system signal was stable. The valve was installed with a Fisher Digital Valve Controller (DVC) on-line diagnostics tier called Performance Diagnostics (PD).

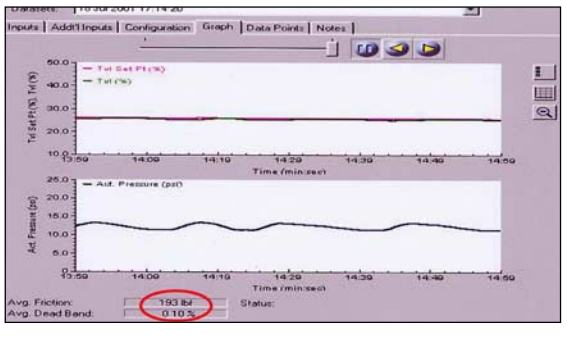
Using the AMS ValveLink® software, the Fisher Diagnostics Engineer discovered that the valve fluctuation was around 1%. It was also observed that the valve friction was different from an earlier valve signature two years ago. The valve was experiencing only 210 lbs force, compared to the earlier value of 293 lbs.



On-line Diagnostics data show a decreased valve friction from 293 lbs to 210 lbs

It was determined that the friction of the valve had reduced, as compared to two years ago, due to wear and tear on the packing. Hence the original tuning of the valve became too aggressive, causing the valve to oscillate. Adjustments were made to the booster and tuning was done to the DVC to bring the valve back to good control.

Thanks to the DVC Performance Diagnostics (PD) capability, the valve was tuned on-line. A plant shutdown was avoided, which resulted in savings of US$135,000.



On-line diagnostics data shows good control after re-tuning the valve

Signature Series Performance Testing

Do you know that Fisher maintains a birth certificate for every Digital Valve (Fisher Control Valve with a FIELDVUE® Digital Valve Controller) ordered at the factory?

This factory signature is a record of the checks performed on the valve to ensure it meets Fisher's stringent quality standards. The tests carried out include Valve Signature, Dynamic Error Band, Step Response and Drive Signal.

This signature is the first step in a control valve maintenance program. It can be ordered from Fisher prior to or after delivery of the valve. A variety of optional tests are available for orders placed prior to delivery.

The certificate benchmarks the valve's operating health. It is commonly used in valve diagnostics to determine if any performance degradation has occurred by comparing it with the current operating condition signature.

Keep your plant operating at peak performance! Start your control valve management program today by contacting your Fisher Sales Representatives.