

Asset Management Enables Chemical Company in China to Effectively Maintain Hundreds of Field Devices with Limited Staff



RESULTS

- Reduced costs through predictive maintenance
- Unexpected downtime cut by concentrating maintenance on highest priority equipment
- Equipment reliability improved through proactive asset management



APPLICATION

Production units for acetic acid, vinyl acetate, and engineering polymers in China have a combined total of approximately 3500 HART® and FOUNDATION™ fieldbus instruments for measurement and process control.

CUSTOMER

Chinese chemical subsidiary of multinational corporation serves customers throughout the world. Sales offices and research and technology centers are strategically located to provide rapid response to customer requests.

CHALLENGE

Just two workers were assigned to maintain thousands of intelligent instruments in three production units, so they could do little more than react to device issues as they appeared. This costly maintenance method inevitably led to unexpected downtime when a critical instrument failed. Plant management recognized the need to change from reactive to predictive maintenance for all assets, including instruments and control valves, but help was needed in implementing such a technology-based initiative.

Predictive maintenance of some 3500 field devices relies on AMS™ Suite: Intelligent Device Manager software.



For more information:
www.assetweb.com



SOLUTION

Emerson's AMS™ Suite: Intelligent Device Manager predictive maintenance software is designed to alert plant personnel if performance of intelligent field devices begins to deteriorate. With this software, a few well-trained workers can effectively manage many instruments. By providing direct access to the predictive diagnostics generated by smart field devices, AMS Device Manager enables users to respond quickly with corrective action to resolve instrument and valve issues in time to prevent unexpected downtime.

A PlantWeb Services team from Emerson's Asia-Pacific region was employed to install and implement AMS Device Manager in the production units, enabling the company to benefit greatly from predictive maintenance – even with the limited staff.

The process began with the creation of a device database. Specifications and operating parameters of every instrument connected to the process control system were entered into the database. Each one was given a unique tag number so that any specific device can be easily located to access its diagnostics. Simultaneously, these assets were prioritized according to their criticality to production. Assets that cannot be allowed to fail were given the highest priority and earmarked for maximum maintenance attention. The PlantWeb Services experts then built alert monitoring limits into the software, causing a Status Alert to be raised on any priority device that begins to show signs of lagging performance.

To develop a predictive maintenance culture, the team created a blueprint with rules to guide plant personnel in determining the correct timing for maintenance, when to make immediate repairs, and when to wait for the next convenient planned shutdown before repairing or replacing a failing asset.

A solid asset management program based on predictive intelligence means reduced maintenance costs with less risk of production loss due to the failure of a critical instrument. The Chinese chemical production units now enjoy that competitive edge.

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