Yizheng Chemical Plant Reaps Additional $255,000 in 1st Year Using AMS™ Suite: Intelligent Device Manager

PlantWeb

RESULTS

- 1,026 hours saved during startup and commissioning

- More than $200,000 generated by production made possible through faster startup

- $44,000 in increased availability by preventing just one unplanned shutdown

- 597 hours saved annually during ongoing maintenance

APPLICATION

More than 1,000 HART® field devices installed in a new polyester (PTA) plant generate vast amounts of data regarding their condition and that of equipment to which they are attached. If accessed and handled properly, this information can be the basis for fast instrument commissioning and startup, increased throughput and availability, and reduced maintenance costs.

CUSTOMER

Yizheng Chemical Fiber Co., Ltd., located in China's Jiangsu Province, is the fifth largest producer of polyester in the world. A second PTA plant constructed at the site in 2001 has a rated capacity of 450,000 tons per year, making the company China's largest producer. Yizheng Chemical is a subsidiary of Sinopec Corporation, one of China's largest chemical companies.
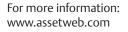
CHALLENGE

Process design engineers of Yizheng Chemical did not feel the conventional TDC3000 distributed control system selected for the second plant could adequately use the information produced by the HART field devices. At the same time, all field instruments and signals transmitted from them had to be intrinsically safe and explosion resistant under the plant's normal processing environment.

> *"During on-going maintenance, the AMS Device Manager becomes our information center. It provides intelligent diagnostics that reduces our work greatly."*
>
> **Mr. Zhang Cheng**
> Instrument Supervisor, Yizheng Chemical

AMS Suite

For more information:
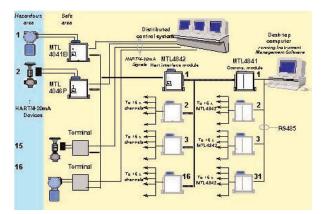www.assetweb.com

EMERSON Process Management

SOLUTION

After investigating available alternatives, Yizheng Chemical selected Emerson's AMS™ Suite: Intelligent Device Manager to access data directly from the HART instruments and valves in the new plant. The AMS Device Manager includes a HART© multiplexer interface, the 1500 tag database, Audit Trail, and Valve Link® SNAP-ON™ application. This PlantWeb® architecture delivers never-before-available predictive diagnostic data to the instrument engineers and technicians responsible for start up and on-going maintenance.

Faster calibration checks, wiring checks and loop testing, zero adjustments, and troubleshooting enabled the technicians to shave 1,026 hours off the time expected for instrument commissioning and startup. As a result, the plant was able to begin operation an estimated 40 hours earlier than planned, producing some 1,680 tons of additional polyester valued at more than $200,000.

In just one instance, an alarm raised by the AMS Device Manager enabled a senior engineer to identify a specific valve with a severe problem, which was quickly resolved. If unchecked, this problem would have caused an unplanned shutdown of at least 6 hours, costing $44,000 in lost production.

Since the plant went into operation, the Emerson solution is saving technicians about 600 hours per year in device configuration, calibration, testing, device replacement, and valve diagnostics.

The installation meets intrinsic safety requirements due to the potentially explosive process environment in the production of PTA.

POWERS
PlantWeb

AMS Suite: Intelligent Device Manager powers PlantWeb through predictive and proactive maintenance of intelligent field devices to improve availability and performance.

EMERSON™
Process Management