Managing Your Assets With More HART

The HART® Communication Foundation (HCF) recently presented its prestigious 2008 HART Plant of the Year Award to the PDVSA Petropiar oil refinery located in Mejorador Jose, Barcelona, Venezuela. The refinery partially, in turn, credits Emerson Process Management [1] technologies for its success. According to the company, Emerson's AMS® Suite asset management software, in conjunction with HART field instruments, enabled the widespread application of predictive diagnostics in its facility, thereby increasing production and reducing costs, all the while improving profitability. In the first four years of operation, Petropiar reduced commissioning time, improved process and device documentation, and cut loop check time by 60 percent. This marks the third award (out of the last four years) in which the AMS Suite has proven to be key to plants winning the HART Plant of the Year award. The Petropiar, formerly Petrolera Ameriven, facility is a joint venture of Chevron and PetrÃ³leos de Venezuela S.A. (PDVSA), Venezuela's national oil company. Currently, the plant upgrades about 248,000 barrels-of heavy crude-per day (BPD) from the Orinoco Belt, the largest known oil and gas deposit in the world, into 180,000 BPD of a lighter grade prior to further refining in the U.S. PDVSA Petropiar claims that the elimination of repetitive problems, along with the ability to predict unexpected instrument failures and associated downtime, resulted in a documented financial benefit of $70 million over a two-year period. The company, moreover, reports that other main benefits, achieved through the use of AMS Suite software at Petropiar, include:

- A 40 percent reduction in pre-commissioning and commissioning time.
- A 60 percent reduction in lost profit opportunities caused by instrument faults.
- Flawless plant startups.
- Elimination of 95 percent of the problem-causing components. Approximately 5,000 measurement points (90 percent of which are HART devices) transmit the HART Communication Protocol to the plant's distributed control system (DCS), while Emerson's AMS® Suite asset management software monitors all field instruments on the control network through HART multiplexers. The software was used extensively by technicians during instrument commissioning to verify each tag number and examine control loops. The technicians documented device integrity and wiring, in addition to certifying every loop's alignment with the original process design. The company believes that the process was online much sooner than expected as a direct result of the time saved on commissioning. HART diagnostics, coupled with Emerson's AMS Suite, enabled reliability personnel to regularly monitor field devices and initiate a predictive maintenance program in which priority equipment receives immediate attention. This too reduces the total number of hours spent by maintenance personnel, lowering overall maintenance costs. PDVSA Petropiar instrumentation leader Mariela LeÃ³n says, "HART technology, along with the AMS Suite, has delivered significant savings, and we believe there are

even more opportunities for increased reliability and improved performance in our facility." The HART Plant of the Year award recognizes the people, companies and plant sites that use HART communication advanced capabilities in real-time applications to improve operations, reduce costs and increase availability. This plant's commitment to implement predictive device diagnostics on all instrumentation makes detailed operating information available to key personnel. The HART communication protocol is a worldwide instrumentation standard supported by the HCF.

Source URL (retrieved on *09/03/2015 - 6:49am*):
http://www.chem.info/news/2009/01/managing-your-assets-more-hart

Links:
[1] http://www.chem.info/http