

Using Procedural Automation to Improve Operational Efficiency & ISA106

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ABSTRACT

Reducing the variation in how procedures are executed by using automation has been shown to improve operational efficiency in many continuous processes. A lot of the improvement was built upon applying the ISA-88 batch standard to continuous process applications. In June 2010, driven by the needs of several large Chemical and Oil & Gas companies a new committee - ISA 106 was formed and now is working towards producing a standard for automating procedural operations in continuous processes.

This presentation provides an overview of the developing standard including: 1) Key Definitions so owner/operators, automation vendors, and system integrators can use commonly understood terms to discuss requirements. 2) Models such as equipment and procedural modules where systems can be designed to be modular and flexible, reducing engineering and total lifecycle costs. 3) Potential benefits such as reducing operational errors, improving process efficiency and enabling more efficient responses to process upsets.

Procedural methodology can capture tasks of various automation styles, such as manual, semi-auto, and fully automatic. A series of prompts and confirmations can move the operator through the steps of the procedure, keep track of the progress, and handle any abnormal condition. Finally, we will also explore and discuss where automated procedural steps would benefit Water and Waste Water applications. Capturing best practices and standardizing procedures in an industry where experienced operators are rapidly retiring and is often under-staffed is especially valuable.

About the Authors:



Marcus Tennant, MS has been with Yokogawa Corporation since December 2008 as a Principal Systems Architect. Prior to Yokogawa, Marcus was employed at Rockwell Automation for 10 years as a Product Manager and Application Engineer. Prior to that, he was with Morton International for 10 years holding various positions in Process Development, Project Engineering, and Q.A. and with Jones-Blair Company for 5 years as an R&D Chemist and Process Engineer. Marcus has a B.S. in Chemical Engineering from Michigan State University and an M.S. in Operations and Technology Management from the Stuart School of Business at Illinois Institute of Technology. Contact: Marcus.Tennant@us.yokogawa.com

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