Real-time Alarm Management in Today’s Process Plants

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ABSTRACT

Poor performing alarm systems overwhelm the operator with alarm floods and hinder their ability to effectively manage plant upsets. Industry incident investigations have shown that the time when the alarm system is most critical it is actually a hindrance in a console operator’s ability to deal with abnormal situations. They must be able to identify the problem, and discern and take the appropriate action within seconds in order to safely mitigate the impact of an upset. Implementing alarm management best practices requires an effective and comprehensive methodology supported by mission-specific software and experienced professionals. From extensive experience, PAS has developed a rigorous seven-step alarm management methodology. Step six of this methodology is the implementation of real-time alarm management. Every industrial plant has multiple operating modes or states, such as startup mode, normal operation, shutdown, low rates, etc. Modern alarm systems are often designed to operate in a single mode of operation. Even after implementing alarm management steps one through four, excessive alarms can be generated during alternate plant operating conditions. This presentation will briefly discuss this seven-step methodology with a special emphasis on real-time alarm management. It will discuss the consequences associated with not applying real-time alarm management, as well as the benefits. Steps for implementing real-time alarm management will be discussed.