

Abstract - Best Practices for an Automation Change Management System

The increase of plant floor automation has created a dependency on PLCs, PC control systems and programmable automation. These devices and their logic programs are costly in their development, vital to the running of the plant, and are viewed by most companies as corporate assets. It is incumbent on plant and corporate management to insure that proper safeguards are in place to protect and manage change in these assets.

This document explores best practices for the planning, implementation and ongoing lifecycle maintenance of a Change Management Software (CMS) system in a manufacturing facility. Other industries that use a CMS system will find similar benefits from the practices outlined in this document.

Introduction

Automation Change Management Software has matured over the past 20 years along with the increases in sophistication and capability of the automation devices and control software developed by automation vendors. As automation devices have grown more complex and have incorporated more plant data in their operation, there is an increase in the need to make adjustments to variables and logic to continue smooth operation. These adjustments may be minor individually, but are directly linked to machine throughput and uptime.

If these changes are lost, and an old version of the device program must be used, or even worse the device program must be rewritten, the result is decreased machine performance, decreased quality and/or downtime. Each of these is very costly. Appropriate procedures to assure adequate security and control, as well as the installation of a CMS system can greatly reduce the risk of extended downtime.

Reliable automation control logic can be compromised by the following events:

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Human Error

Equipment failure

- . Sabotage

- . Power surges / interruptions

- . Fire

Without proper system safeguards

these events can lead to increased downtime, and an increase in "mean time to repair" (MTTR). Recovering from these

events quickly requires adequate planning regarding hardware and maintenance strategy, and a reliable and recent backup of the automation control program logic. Current and complete backup

copies of the program logic require the features of a CMS system. While a manual backup approach may appear adequate at first glance, experience has shown that plant downtime can quickly pay for the cost of a CMS system, in addition to the reporting and process improvements brought about by effective use of a CMS system.

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