Large Soft Drink Manufacturer Avoids Production Downtime When PLC Code is Lost

Application Story: Food & Beverage

Challenge:

A large soft drink manufacturing plant, producing up to 4,000 cans per minute and 3,280 bottles of soft drinks per minute, was following a manual, human-driven change management process. The procedure included using two separate back-up systems: a 'master' and a 'working' system based on floppy disks. Technicians would change PLC code locally and then follow a set of procedures to ensure the change was recorded and backed-up. This made the plant very vulnerable to human error.

Solution:

Once the plant determined a reliable, easy-to-use version control solution was critical to maintain production uptime, it selected the MDT AutoSave Change Management System with its ability to maintain an ancestor history of all PLC programs files on site. With its universal capability, the software was also used to store non-PLC files. Particularly useful to the plant is AutoSave's Schedule Compare feature that automatically compares the program in the device with a program stored in AutoSave. This feature detects and identify changes between the programs so that designated users are immediately notified of changes that may have been unknown or unauthorized.

If a change was unauthorized or the engineer simply forgot to save the change to the main back-up file, version control issues would arise. If just one production line goes down because a PLC has fallen over due to poor software version control, the plant is faced with downtime costs of around $1,800 per minute

Results:

After installing AutoSave, the plant had a problem with a PLC controlling the water treatment plant resulting in all the PLC's code to be lost, stopping all water supplies to the production process. Production was up and running within five minutes by downloading the correct code from AutoSave. On another occasion, the main preparation PLC fell over. The code was reloaded immediately over the network from AutoSave and the plant incurred no downtime. In both cases, the reloaded code was up-to-date due to AutoSave's Schedule Compare capability which updates the ancestor files if discrepancies are found during the compare routines. Few discrepancies are now detected, as the on-site technicians now use AutoSave for checking out programs and verifying them again when making a new revision.

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Automation Change Management