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Application Success Story



Machine Tool Manufacturer Everite is a specialist in making Electrolytic grinding machines and had long used a leading PLC manufacturer as their control platform based on customer requirements. In fact the PLC supplier had a 20 year relationship with Everite and it was very difficult for one of Trio's most successful distributors G&G Technical, based in Philadelphia, to try and break through with Trio's *Motion Coordinators*, for several reasons:

- 1) The machine control was fully mature and there was no perceived benefit in changing regardless of cost savings.
- 2) Everite's management were concerned that any engineering effort to change the control would have a ballooning cost.
- 3) Everite staff were hardened ladder logic programmers and had not fully experienced the advantages of structured text programming.

4) Perceived wisdom about the PLC manufacturer was that no one ever lost their job by recommending them; it was the control of choice of programmers and end customers.

5) The Bottom line was that sales were good and savings were not a front running concern.

However, after a few years of G&G Technical selling everything but the controls to Everite an opportunity presented itself for their machines to have an adaptive control of the cutting axis. They needed feedback from the cutting spindle to control the speed of the cut. Unfortunately the PLC based system was not capable of addressing this need and the time for a complete redesign of the current machine was out of the question. The solution came in the form of Trio's MC206X *Motion Coordinator*. Trio's modular architecture, communication options and easy programming made integration simple and quick, allowing Everite to make custom machines and capture business. Initially the PLC control remained on the front end allowing the use of the original HMI and I/O control scheme. The Trio MC206X was placed between the PLC and the servo systems which allowed for continuously changing the motion profile. The spindle cutting force was read by the MC206X and the PLC communicated to the Trio controller via Modbus allowing user inputted data to be processed for closed loop adaptive cutting control. The resultant cutting control on these special machines was so good that Trio *Motion Coordinators* were also installed on the standard machines along with the PLC.

The current down turn in the economy then presented a problem that Everite needed to reduce cost without impacting performance. In fact they needed to improve performance to avoid the perception that they were offering a scaled down version of a standard machine. The Trio MC206X was then in a great position to take over the entire machine control improving performance by controlling the servos across a digital network which allows monitoring and control of all drive parameters. Everite also took the time to rewrite the HMI and I/O control to be handled by the Trio MC206X and implement control over the internet for remote programming. Removing the PLC rack along with its I/O and communication modules reduced the complexity of the machine architecture and made a significant cost saving.

With the help of G&G Technical and Trio's MC206X, Everite's machines are now more streamlined, more reliable and offer faster better performance. All whilst improving the bottom line!

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