Is It Time to Consider Upgrading Your Press Clutch/Brake and Automation Controls?

Press safety is paramount. Operators, helpers, and passersby need to be protected from point of operation and any other press related hazards.

Press safety controls and associated automation controls have undergone significant technological advancement in recent years. Some older controls may not comply with current OSHA and ANSI standards and it's unlikely they provide automation features that could provide you significant competitive advantage.

Are Your Clutch Brake Controls Safe and Do They Comply with OSHA 1910.217 and ANSI B11.1-2009 Standards?

Older relay based systems have often had lots of undocumented wiring changes that may or may not compromise safety but certainly complicate maintenance and troubleshooting. A sure sign of this problem is a control cabinet full of wire nut connections. Check to see that you have current up-to-date schematics.

Brake Monitoring: Older press control systems may use top stop overrun brake monitors. While these are technically compliant with current OSHA standards, they do not comply with the latest ANSI standards. Further top stop overrun designs do not provide a means to measure down stroke stop time and establish safe distance for two hand controls and/or presence sensing devices. Mechanical cam overrun switches designed to monitor stop time are often easily defeated by expanding the cam timing window.

Resolver Based Controls: Replacing a rotary cam switch with a resolver base control provides users easy access to control timing for press and automation functions resulting in efficient setups and optimal job running efficiency. Safety related timing functions are protected.

Self-Diagnostics: Newer control designs feature self-diagnostics not present on older systems. This provision allows quick control problem identification. Often operators can correct identified problems and avoid waiting for maintenance to take care of a problem. The result – more press uptime and profit.

Stroke Position & Speed Indication: Newer resolver based controls also provide stroke position and press speed display so the operator, setup people, and maintenance can determine exactly where the press is. Variable speed machines can be programmed to run at a preset spm with the tool number.

Press automation: Features are often integrated with newer clutch/brake control designs but are readily available as an add-on to existing controls. Common productivity features include:

Programmable limit switches – Easily set timing functions such as feed advance, pilot release, part blow off, spray lubrication, and cam or cylinder advance. Store settings by individual tool number for instant recall. Global cam functions are also available for timing functions that are used on all tools

Die Protection – Prevent die damage associated with misfeed, slugging, part ejection failure, stock buckling, material run out, and transfer problems. It's common to monitor up to 8 die related events but possible to monitor up to 64!

Servo Feed Interface – You can speed up your setup process and reduce setup errors by using the servo feed interface to set feed length, feed angle, and other adjustable feed parameters with SmartPAC. This information stores to tool number for instant accurate tool setup.

In-Die Quality Control – In-die measurement using analog sensors make on the fly measurements of critical part parameters in the tool possible. Measure and monitor variables such as hole diameter, form angle, and burr height. Reject bad parts and/or stop the press when the process moves out of control.

Advanced Tonnage Monitoring – Measure, display, and control peak load, off bottom loading, and snap through. Compare new setups to what previously ran well. Make sure you're not abusing your press by overloading, off center loading, or misadjusting shut height to correct for part quality problems.

Counting - The SmartPAC 2 Press Automation system has a very potent counter system that can be used to help eliminate the need to stop the press under normal batch runs. The SmartPAC counter program is made up of a stroke counter, good parts counter, 3 batch counters and a total hits counter.

Shut Height and Counterbalance Control - This optional module provides a combination of functions – it measures and adjusts ram shut height (adjustment feature dependent on the press having motorized shut height adjustment) using a linear transducer. The ram adjustment information is stored to tool number for immediate recall. This module is intended to save time during setup by allowing an operator to do other things while RamPAC operates the slide adjust motor to get you very close to your final shut height. The operator makes the final adjustment using the RamPAC digital display as a reference.

Data Collection and Communication - When connected to your network, the press operator can use the SmartPAC 2 to send text messages to email, text-enabled beepers/cell-phones, etc. When your press needs the attention of maintenance, tooling, or other personnel, the operator simply selects the name of the person that he wants to contact and sends a message. The SmartPAC 2 can also send status and diagnostic information to the Wintriss Tech Support Group – giving our already industry-best support staff even more tools to help you with your application and troubleshooting questions. SMARTVIEW allows users to with networked SmartPAC2's, to view press status from anywhere with an internet connection, send text, and e-mail messaging.

LETS factory reporting software uses the latest technology to collect production data, including Overall Equipment Effectiveness (OEE), from presses equipped with Wintriss SmartPAC press automation controls as well as virtually every other machine in your factory.

Preventive Maintenance – An option is available to allow users to identify maintenance items and post an alert based on time, number of strokes, or clutch engagements.

Payback $$$ – Wintriss safety and automation controls fully pay for themselves in a few months. Prevent 1 major die smashup and the system is paid for immediately.