Steam Foil Control Unit

Applications

The HMI Profiling Control System is optional with every new Steam Foil appliance and can be retrofitted to your existing Steam Foil installation.

Features

- Touch screen interface panel and control box for adjusting and coordinating steam output with production
- Standardized components
- Capable of communicating to mill systems for data collection

Benefits

- Uses existing cables from the panel to motors
- Auto system recovery on power failure
- Room for multiple zones in single control panel
- Control multiple foils through a single control panel

Reliable profile control

To develop the HMI Profiling Control System Kadant worked with a well-known control design group to develop a system that would have the same functionality and work with the proven existing components.

This system consists of an electronics package with a Windows CE industrial computer embedded in the electronics panel which actuate the stepper motors located on top of the valves in the Steam Foil appliance. All of the interface functions are performed through a touch screen available in sizes from 12” to 19”. The operator screen looks and acts the same as the original Profiling Control System with enhancements.

The components used for the HMI Profiling Control System are considered “off-the-shelf” or standard items in communicating with machinery. There are no custom designed or fabricated parts as with the old systems. Ethernet IP or OPC programming is available for communication to mill computer systems for data collection. USB extender modules available to allow use of multiple HMI touch screens.

The trunk cables that lead from the electronics panel to the steam foil, the stepper motors, and the valves remain the same. For a retrofit installation, the previous version’s electronics would be removed from the electronics enclosure and the operator’s PC station would be removed. A back panel with the new control system, fully mounted and wired, would be bolted into the existing enclosure. The HMI touch screen interface can be mounted within an existing panel, in a pedestal, or on an enclosure suspended from a swing arm mount.

The interface from the HMI to the electronics cabinet is handled via a Cat5 ethernet connection versus the previous RS-232 link that is susceptible to power surges. If there is a power interruption, the HMI Profiling Control System will automatically re-boot, drive all actuator valves to a zero reference and then to the last known set point. The new modules and associated power supplies of this system are of a lower voltage and produce hardly any heat compared to the old system.