Visualization, Operation and Control with the EAE Riga System

EAE
www.eae.com

The EAE Riga system is a modular automation concept for web offset printing presses with a low degree of automation. The system provides you with central visualization and operation of all major elements which impact on the print layout and you will be able to decide in each case which elements (ink zones, ink ductors, dampening, side lay and circumferential register) are controlled via the EAE Riga system. In addition, machine control functions can also be integrated into the system.

The Machine

The EAE Riga system can be used as a retrofit system for existing web offset printing presses with a low degree of automation and as new equipment for small to medium-sized web offset presses.

The System

At the core of the system are:

- one or, optionally, several control consoles for visualization and operation,
- a Quality PLC for the control of the elements that impact on quality and,
- optionally, a Press PLC for machine control.

Depending on individual requirements, the system is complemented by local I/O components with regard to hardware.

Your benefits:

- Increased efficiency in the printing process
- Reduction of costs by increasing quality in press start-up and during printing
- Reduction in waste cost by ink pre-settings
- Optimal workforce by central machine operation
- Increased machine availability by proven systems
- Reduction of costs by use of standard industrial components
- Investment and planning reliability due to long-time hardware and software support

The Control Modules

All available Control Modules include the required visualizations and operating options via the control console(s) and the required I/O components. Generally, a distinction is made between Quality Modules and Press Modules.

Quality Modules

The Quality Modules control the press aggregates which impact on quality.
They are:

- Ink zones
- Ink duct
- Dampening
- Side lay and circumferential register

Press Module

The Press Modules implement elementary control tasks at machine level. Depending on the press model, they can, for instance, control motors and/or clutches.

Integrated fault display

Faults in the aggregate control are reported immediately. This means that the user can respond more quickly to malfunctions within the printing press.

Ink pre-setting

In addition to pure ink zone control, ink pre-setting can also be realized with the EAE Riga system, based on the data from the prepress.

Operation

The operation of the EAE Riga system is based on a machine-oriented operating concept.

The visualization of the individual aggregates is well structured on various operating masks on the control console.
For each printing couple, ink and water as well as side lay and circumferential register can be adjusted via the ink/water keyboard on the control console.

Via a separate operating mask, the data from the prepress can be assigned to the individual printing couples for ink pre-setting.

Ink and dampening curves can be defined and assigned via additional operating masks.

Machine commands can be issued centrally via the command keyboard which is integrated into the control console.

The Control Background

The EAE Riga system control console is operated by an industrial PC with Windows 7 operating system and touch screen. Communication between the control consoles and the PLCs is via Ethernet.

Multitasking systems are used as PLCs, these are programmed in accordance with the IEC61131-3 standard. The equipment includes a Can-Bus interface, all common serial interfaces and network connections. There are virtually no limits to the control options.

Local I/O components are connected via Can-Bus. The interfaces and network connections enable, for example, the control of the machine drives.

With regard to I/O components, standard Can-Bus assemblies and modules are used.

Remote-controlled ink zones

If your press is currently not equipped with remote-controlled ink zones, we can offer the integration of remote-controlled ink zone drives via our partners.

System benefits

By using the EAE Riga system, you will increase efficiency and quality at the start of printing and during the print run. You will benefit from reductions in waste which can be optimized even further by the use of a ink pre-setting system. You will also relieve machine operators of extra duties. High-quality print products will increase your customers' satisfaction. Due to its open system structure, the EAE Riga control system can be extended at any time.