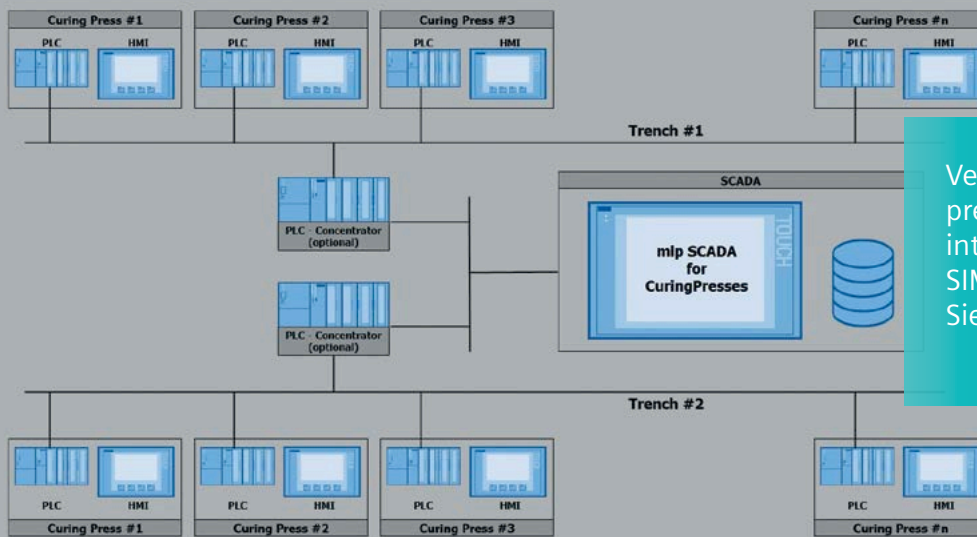


Topology



Vertical integration of curing presses with standardized interfaces – preferably with SIMATIC S7-1500 from Siemens

Functions tailored to suit the application...

The mlp SCADA system records the process data supplied by the curing press controls, like temperatures, pressures, cycle times, downtimes and setup times, unit quantity and reject counters, unique tire labeling, and status, alarm, and error messages.

Algorithms developed by mlp use this data to calculate meaningful key performance indicators (KPI) for each individual press and the line as a whole. The system uses live dashboards to display aspects like availability, throughput, quality, and the overall equipment effectiveness (OEE) of the curing presses. At the push of a button, it provides overviews of the molds and bladders used, as well as order and product data. An optional element is production and formula management especially for the vulcanization area.

The information thus gained can be used to analyze the performance of individual presses and compare them against others. This gives operators the chance to identify weak points in the entire production process quickly, eliminate them, and improve efficiency as a result. Comprehensive alarm analyses that can be individually filtered make it possible to draw conclusions about both systemic and sporadic influences.

An additional function module is used to optimize the way all the presses close, to ensure the best possible capacity utilization of the central media supply unit without overloading it.

It is also possible to monitor the service life of the bladders and notify the service team if any limit value is exceeded.

Users can also generate various reports, for example on process capability (Cp) for selected temperatures and pressures for each press, or trend and data analyses for each individual tire.

mlp shares data with the final checking unit via the local network communications system. The grading codes are transmitted to the SCADA system for analysis, which makes it possible for maintenance tasks to be carried out faster. Networking in this way also creates the preconditions for end-to-end tracking and tracing of production data.

A further module lets inventory lists and documentation like electric circuit diagrams and maintenance instructions be saved and called up when needed at the press of a button, which also helps ensure a high level of availability.

...for a much more efficient vulcanization process

All these options lead to much better process and product quality, and improved productivity and efficiency. Analysis and evaluation also result in improvements in heating times. Operators can be more flexible and make the best possible use of their production lines as a result.

The modular path to a customized SCADA solution

The mlp SCADA system for curing presses has a modular structure, which enables its functions to be adapted to the user's individual circumstances and expanded whenever needed. The following elements are currently available:

- Status overview
- Alarm and process analysis
- Synchronized closing
- Bladder life cycle monitoring
- Reports
- Tracking & tracing
- Quality
- Remote access and messaging
- Production and formula management
- Inventory management
- Documentation