LEHNBERGER, ANDREAS[1], SILKE STIEGERT[1] and NILS BITTNER[2]*, [1]BMA Braunschweigische Maschinenbauanstalt AG, Am Alten Bahnhof 5, 38122 Braunschweig, Germany and [2]BMA Automation GmbH, Am Alten Bahnhof 5, 38122 Braunschweig, Germany.

Updated automation on batch and continuous centrifugals.

Automation systems for batch and continuous centrifugals have to adapt to the current state of the art control philosophy in factories. (1) The operation of a battery of batch centrifugals is commonly realized by hardwired interlock. This prevents batch centrifugals from simultaneous operation but has limited flexibility: operator interaction is required if one centrifugal is stopped and restarted after regular cleaning or maintenance. (2) The introduction of Managed Sequencing allows an automatic and flexible operation of the batch centrifugal sequence. Intelligent pause management includes filling interlock, discharge interlock and acceleration and deceleration ramp control for optimized centrifugal sequencing. The optimization can be focused on maximum throughput or on reduced power peak loads. (3) Continuous centrifugals in high raw and low raw service have commonly poor automation installations because of the continuous process with low variation. Each adjustment to the process requires operator action at the machine. (4) PLC control solutions are now inexpensive enough to replace the discrete controllers and indicators. A touch panel provides up-to-date human-machine communication. This update in the control system of the continuous centrifugal allows additional functions for optimized massecuite processing: a non-linear control function is now realized for the magmatizing of the separated sugar and speed adjustment by a VFD is easily possible. Communication with a DCS system is implemented for extended supervision.