Upgrade Kit 01 - Modification of the existing process control and visualisation system from B&R to SIEMENS S7

Application:
• For all BRUCKNER lines with B&R control system

Benefits for the customers:
• Easy control via touch panel
• Recipe administration for individual articles
• Direct integration of the measuring and control sensor system
• Possibility to increase the quality and quantity via reproducible parameter sets
• Interface for process data collection
• Temperature control and width adjustment integrated in the control system
• Network connection
• Remote maintenance, error diagnosis and trouble-shooting
• Particularly safe internet connection possible (so-called tunnel link)
• Very good availability of spare parts

Technical Data:
• Use of SIEMENS CPU including touch-screen control
• Recipe data programmable
• Error diagnosis via teleservice
• Option for the measuring of dwell time control, residual moisture, exhaust air moisture
• Electrical width adjustment with Fraba (older transmitter systems can be upgraded)
• Interfaces for process data collection

When do we recommend the modification:
• B&R CPU spare parts supply no longer possible!
• Automatic mode possible
• Control shall be simplified
• Setup times shall be reduced
• Subsystems shall be integrated and automated
• Teleservice is required
Upgrade Kit 02 - Drive upgrade to LENZE drives (DSS)

Application:
• For all BRÜCKNER lines with
  • PIV- adjustment/gears (high maintenance efforts, long delivery periods for spare parts)
  • Baumüller converters – ATB motors (new products no longer available or long delivery periods)

Benefits for the customers:
• Easy control via touch panel or specification via recipe and reproducibility of the drive settings
• Fast fault correction due to detailed error display
• Very good availability of spare parts
• Possible increase of the fabric quality due to precise speed and torque stable technology (control system for overfeed and fabric traction)
• Control station with visualisation, thus anytime general overview over the drives possible
• Lower susceptibility to trouble and less maintenance efforts
• Teleservice possible
• Higher speed and overfeed with stronger motors is possibly feasible

Technical Data:
• Use of state-of-the-art gearmotors with digital feedback
• Motor control via digital converter
• Central control via touch panel
• Maintenance support via central fault indication, fault memory in the converter and teleservice possible

When do we recommend the modification:
• The quality of the product shall be improved via a precise control system
• The maintenance costs shall be reduced
• The line availability shall be ensured
• The control shall be simplified
• Problems in the availability of spare parts for existing drives
Upgrade Kit 03 - Frequency-controlled circulating air fan motors

Application:
• For all BRÜCKNER lines

Benefits for the customers:
• Optimum air circulation via continuous speed adjustment of the circulating air fans (30 % - 100 %)
• Control via touch panel
• Due to the continuous control range of the fans the air circulation and the fabric position and movement in the dryer is optimized
• Teleservice possible
• Easy spare parts availability
• Energy savings are possible

Technical Data:
• Digital converters including the elements for the control cabinet or supply of a new control cabinet
• Control of the existing motors
• Teleservice possible
• Control range of the fans of 30 % - 100 %
• PLC connection possible

When do we recommend the modification:
• The air circulation of the fabric shall be improved
• The operability shall be improved and shall be easily reproducible
• Spare parts supply shall be easier (possibly problems with the supply of spare parts for the existing system)
• The maintenance periods shall be reduced
Upgrade Kit 04 - Upgrade to individual width adjustment with Fraba transmitters and PLC control system

Application:
• For all BRÜCKNER lines (all existing lines for the width adjustment are upgradable)

Benefits for the customers:
• Central control and setting via touch-screen
• Increased ease of use and overview of all adjustable spindles
• Increase of the quality possible via an optimum adjustment of the stentering pattern
• Minimum susceptibility to trouble
• Accurate monitoring of the entry swing angle
• Upgrade of a width tension measuring system possible
• Teleservice connection possible
• Easily reproducible stentering patterns

Technical Data:
• Touchscreen panel for all spindles
• New width adjusting spindles with longer shaft for motor connection

When do we recommend the modification:
• Problems with the spare parts availability for the existing system
• Setup times shall be reduced
Upgrade Kit 05 - Burner upgrade to Maxon burners

Application:
• For all BRÜCKNER lines

Benefits for the customers:
• Exact and permanent temperature control
• Higher control range (1:40) with less operating cycles of the burners (in comparison with many other burners)
• Improved flue gas values
• Very good availability of spare parts
• Cost-effective maintenance
• Wider temperature profile
• For processes with high or low temperature requirements the temperature will remain constant since normally there are no switching operations during the production

Technical Data:
• High-capacity liquid or natural gas burners with 80° to 210° temperature range (other ranges are possible if required)
• Control range 1: 40
• Operating pressure will be adapted via a controlled system if desired
• State-of-the-art programming and temperature controller (Profibus connection possible)
• Safety equipment according to all prevalent standards
• The installation is made at adapted burners plates

When do we recommend the modification:
• The flue gas standards have to be met
• The control range of the existing burners is not sufficient for the process
• Sensitive fabric is damaged due to imprecise control
• The spare parts supply shall be ensured anytime
Upgrade Kit 06 - Remote maintenance via micro PC

Application:
• For all BRÜCKNER lines with S7 control system

Benefits for the customers:
• Acceleration of fault analysis in case of troubles
• Fast and selective assistance to eliminate malfunctions
• Continuous remote diagnosis of electronic components such as CPU, frequency inverters and control panels
• Parametrisation and software update of PLC, inverters and process visualization system
• Cost-efficient possibility to optimize the process in case of modifications and modernizations
• Adaptation of the machine software and the process visualization system in case of later individual modifications
• Direct access to the technical knowledge of BRÜCKNER's specialists and/or remote training
• Reduction of the service cost on site, solution of many problems without the visit of a technician and/or concerted preparation of the visit
• Prevention of long standstill times due to fast and exact fault diagnosis

Technical Data:
• Installation of a micro PC, completely prepared with Team-Viewer software in the existing control cabinet
• Connection to the existing customer network with internet broadband or direct DSL connection via ethernet cable
• Team Viewer Software „tunnels“ a safe connection with BRÜCKNER

When do we recommend the modification:
• A high availability of the line shall be ensured
• Fast support of the customer in case of trouble
• Prevention of long standstill times due to fast and exact fault diagnosis
Upgrade Kit 07 - Readout and archivation of process data

Application:
• For all BRÜCKNER lines with SIEMENS S7 control system

Benefits for the customers:
• Easy and cost-effective archivation of the process data for quality assurance and monitoring

Technical Data:
• Integration of an ethernet interface into the PLC control system
• Connection of the interface with the customer’s network
• The data are memorized as CSV files on the customer’s computer
• Subsequent processing of the CSV files by the customer is possible (for example with Excel)

When do we recommend the modification:
• An archivation of the process data is requested
• The production parameters shall be documented
• Recording of the emission data for the environmental authorities
Upgrade Kit 08 - Additional compartments

Application:
• For all BRUCKNER lines

Benefits for the customers:
• Increase of the production speed
• Increase of the dwell time possible
• Flexible use of existing lines for different products
• Adaptation of existing lines to higher quality requirements

Technical Data:
• Drying compartment including transport system and width adjustment
• Heating system at option (burners, heat exchangers)
• Exhaust air control for additional compartments with additional exhaust air fan (if required)
• Electrical switching system connected to the existing system

When do we recommend the modification:
• The productivity shall be increased
• The requirements for the product have changed
• The process has changed
• The flexibility of the line shall be improved
Upgrade Kit 09 - Additional water extracting and/or finishing padder

Application:
• For all lines (stenters, also from other manufacturers)

Benefits for the customers:
• Operation with variable linear pressures is possible due to centre-supported rollers
• Trough hinged for draining (available in heated and unheated execution)
• Control elements completely integrated
• Compensating roller at the padder exit for fabric tension control and speed synchronisation
• Particular requirements regarding the uniformity of the linear pressure due to centre-supported roller (optional)

Technical Data:
• Shorehardnesses up to 98° available 1:1 exchange due to identical fixing elements
• Maximum linear pressure: 500 N/cm
Upgrade Kit 10 - Economic trough for the finishing padder for a precise liquor control

Application:
• For all BRÜCKNER lines with BRÜCKNER FS 2 padder

Benefits for the customers:
• Exact and permanent liquor control
• High saving of chemicals due to exactly appropriate liquor quantity
• Simple and easy exchange of the trough
• Liquor quantity control between minimum and maximum to permanent control (optional)

Technical Data:
• Finishing padder trough with lower volume but identical construction made of stainless steel
• 1:1 exchange due to identical fixing elements
• Option: modification from floating switch to permanent control system via digital controller

When do we recommend the modification:
• Liquor/water quantity shall be reduced
• Lower residual liquor quantity required
Upgrade Kit 11 – IR gas radiation dryer POWER- INFRATHERM

Application:
• For all BRÜCKNER POWER COLORHERM (Thermosol) and stenters and for machines from other manufacturers
• For lines for technical articles (glass, nonwovens, coating) we have tailored solutions for the product

Benefits for the customers:
• Immediate readiness for production due to a fast heating-up time (3 bis 5 s)
• High reliability with uniform migration-free drying and wrinkle-free fabric flow
• Reproducible dyeing, temperature range continuously adjustable (500- 900 ° C)
• Radiation segments designed as parallelogram for perfect overlapping of the radiation
• No risk of stripes formation even with delicate articles
• Short cooling periods, even in case of emergency stops no burning of the fabric
• Long service life with low maintenance

Technical Data:
• Working widths 1.6 m – 3.6 m
• Design 1- 3 sections
• Vertical fabric passage: 1 section -1500 mm, 2 sections -2100 mm, 3 sections -2600 mm
• Radiator material made of sintered special metal fibre
• Temperature range 500- 900 ° C
• Heating (3 bis 5 s) and cooling times (3 to 5 s)
• Margin cutoff for wide ranges to save energy (option)

When do we recommend the modification:
• The quality of dyeing shall be improved
• The reproducibility of dyeing shall be ensured
• Continuous drying power for adaptation to a wide range of articles
• Low maintenance and long service life
Upgrade Kit 12 - Universal three-step controller for constant temperature control

Application:
• For all existing BRÜCKNER lines as replacement for devices which are no longer available

Benefits for the customers:
• Simple control via digital display
• Exact temperature profile in all compartments
• Connection to the process visualisation system is possible (SIEMENS)
• Easy modification and re-commissioning

Technical Data:
• Installation of universal three-step controller instead of analoguous displays
• Modifications in the range of +/-1°C is possible
• Easy adaptations of parameters via self-optimisation
• Temperature controller with interface for a connection to the automation system

When do we recommend the modification:
• The temperature control functionality shall be extended (for example option interface)
• The spare parts supply shall be ensured anytime
Upgrade Kit 13 - Transport system VN chain rails

Modernisation of the VN lines to SK 999 STAR DUR with Longlife gliding elements (applicable for SK 960, SK 962 and SK 969)

Application:
• For all BRÜCKNER lines with “old” vertical transport chain system

Benefits for the customers:
• The chain rails are completely maintenance-free since all gliding elements are fixed at the stenter chain and a reduction of the maintenance costs is possible
• High availability of the lines, little maintenance efforts
• Low-lub gliding surface due to the Longlife gliding elements
• Short modification period

When do we recommend the modification:
• General overhaul of the transport system
• High maintenance efforts due to wear of the existing carbon rail system
Upgrade Kit 13 - Transport system HN chain rails

Modernisation of HN lines from carbon rails to Longlife gliding elements

Application:
• For all BRUCKNER lines with “old” horizontal transport chain system

Benefits for the customers:
• The chain rails are completely maintenance-free since the gliding elements are fixed at the support
• Reduction of the maintenance costs are possible
• High availability of the lines, little maintenance efforts
• Low-lub gliding surfaces due to the Longlife gliding elements

When do we recommend the modification:
• High maintenance efforts due to wear of the existing carbon and Vespel rails
• Reduction of lubricants consumption
• Existing transport unit shall be upgraded to low-maintenance
• The existing chain type is no longer available

Technical Data:

Version 1:
The existing transport chain remains. The chain rails system will be modified. This means that the main wear parts (carbon and Vespel rails) are no longer required. The existing clips are revised and modified or possibly replaced by pin bar carriers.

Version 2:
Existing transport system such as chain rail, chain, clips or pin bar carriers are completely upgraded to a state-of-the-art version of the transport system.
Upgrade Kit 14 - Edge cutter

Application:
• For all BRÜCKNER stenters

Benefits for the customers:
• Precise and reliable edge cutting in a higher speed range
• Easy control and maintenance
• Regrinding of the blades without dismantling and with less wear
• Fabric tension adjustable with the depinning roller
• Powerful evacuation of the cut edges
• Monitoring of the evacuation of the cut edges (optional)

Technical Data:
• Frequency-controlled cutting blade
• 4.2 kW evacuating fan for the cut edges
• Control via touch panel (optional)
• Photocells at the evacuation nozzle for the monitoring of the cut edges
• Torque-controlled servomotors at the depinning roller for the fabric tension control
• Width of cut edges adjustable between 8 and 30 mm depending on the fabric type

When do we recommend the modification:
• The existing edge cutter is not strong enough
• The quality of the cut is insufficient
• Maintenance takes too much time
• Productivity is reduced by inefficiencies
• The cut edge does not correspond to the desired width
Upgrade Kit 15 - Centre cutter

Application:
- For all BRÜCKNER lines

Benefits for the customers:
- Cutting of the fabric in several webs, it is possible to use several blades
- Control via touch panel
- Motorized adjustment of the cutting width
- Pneumatic movement of the cutting blades
- Clean cut of very different fabric types
- Easy control and maintenance of the unit

Technical Data:
- Pneumatic movement
- Linear drive for adjustment of the blade via toothed rack
- Central control unit with all functions
- Frequency-controlled cutting blade
- Cutting blade made of powerful high-precision steel

When do we recommend the modification:
- The product has to be cut in several webs for subsequent processing
- The quality of cutting shall be improved
- Inefficiency of the existing blade
- The maintenance efforts shall be reduced
Upgrade Kit 16 - Intensive steamer

Application:
• For all BRÜCKNER lines

Benefits for the customers:
• Increase of the fabric quality is possible
• High volume or pile development
• Gentle relaxation with elimination of internal tensions

Technical Data:
• Intensive steamer with combined electric / radiation heating
• High steam volume (200 kg/h)
• 3 bar steam connection

When do we recommend the modification:
• For very sensitive fabric, which received internal tensions during knitting or weaving
• The articles are relaxed with steam to be dimensionally stable after heat-setting
Upgrade Kit 17 - Vacuum water extraction unit

Application:
• In front of BRÜCKNER dryer for woven and dimensionally stable knitted fabric

Benefits for the customers:
• Increase of the production speed
• Recovery of chemicals and dye in case of pigment dyeing
• Energy saving because less drying power is required

Technical Data:
• The technical design is exactly adapted to the existing BRÜCKNER line and the production process to be used. This ensures an optimum function.

When do we recommend the modification:
• Use for articles with a portion of synthetics or 100 % synthetics
Upgrade Kit 18 - Tension measurement system for the process visualisation system

Application:
• For all BRÜCKNER lines with SIEMENS S7 control system

Benefits for the customers:
• Appropriate for HN/VN single layer stenters with individual width adjustment and high crosswise tensions

Technical Data:
• Modification of the width adjusting spindle for the measuring unit
• Installation of special electronic sensors at the width adjustment spindles and of the evaluation electronics at a central point
• Upgrade of the control system for the monitoring
• Control via the display

When do we recommend the modification:
• The fabric quality shall be improved
• The monitoring of the fabric tension shall be ensured
• The costs for the maintenance of the transport unit shall be reduced
Upgrade Kit 19 - Heat-recovery, exhaust air cleaning

Application:
• For all BRÜCKNER lines

Benefits for the customers:
• Energy saving
• Productivity increase due to a better heat transfer
• High condensation and separating power for aerosols and noxious gases
• Reduction of the production costs
• Public support programs (depending on the country)

Technical Data:
• Modular design in 3 stages
• Robust design in stainless steel
• Available in several sizes
• SIEMENS S7 control

When do we recommend the modification:
• The environmental specifications have to be met
• The energy costs shall be reduced