

NEWS AND HIGHLIGHTS 2022

PLEVA
Sensors and Controls



SL smart

- Automatic weft-straightener
- For woven and knitted fabrics
- Distortion detection with high-tech smart camera



Microwave measurement technology series 700

- Improved sensitivity and accuracy by more than 30%
- Automatic and fast adjustment of measuring range
- Quick and easy commissioning and maintenance



PLEVATEC smart

- Modular visualization and control system
- Versatile use for various finishing and drying processes
- Stable, controlled processes: higher quality of end product and energy efficiency

PLEVA

PLEVA GmbH
Rudolf-Diesel-Str. 2
D-72186 Empfingen-Germany
Tel: +49 (0) 7485 1004
Fax: +49 (0) 7485 1009
info@pleva.org www.pleva.org





The new and smart way of weft-straightening

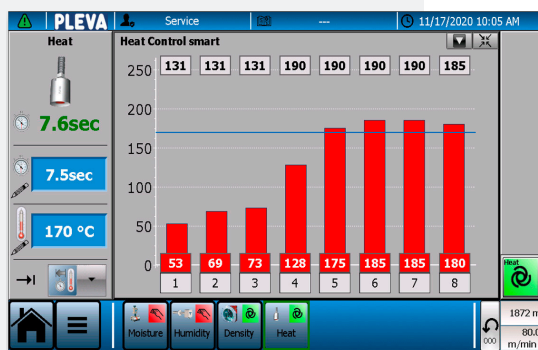
The weft-straightening machine SL smart is designed particularly for knitted and woven fabrics with a maximum fabric width of 3m with a plurality of new design solutions. The heart of the SL smart system is the well-established advanced traversing camera technology which is unique in weft-straightening. The universal high-resolution camera captures up to 20 measuring points per meter of fabric width. Advanced evaluation algorithm enable an ultra-precise distortion analysis for perfect straightening results in a blink of time.



Advanced microwave measurement technology

Our newly improved microwave measurement technology for moisture, coating, application / add-on, dye pick-up and size pick-up measurement offers several benefits for an even more efficient and comfortable usage:

- Connection of up to 2 sensors: AF 120 or AS 120 or RF 120 or connection of 1 AF 310
- Improved sensitivity and accuracy by more than 30%
- Automatic and fast adjustment of measuring range
- Quick and easy commissioning and maintenance
- Interfaces: analog (0/4...20 mA), RS485 (Modbus), CAN (OPTION), Profinet (OPTION)



Get new insights and improve your production

With the modular process control system PLEVATEC smart, all critical data can be collected and optimal controls can be realized. All set-values, tolerances and parameters can be saved and loaded within the integrated recipe management system. The scalable packages provide solutions to a range of different finishing and drying processes e.g. on a stenter frame.

The following PLEVA sensors can be connected:

- Exhaust humidity FSX
- Fabric temperature TDS
- Pick/course density CAM
- Residual moisture RR, RF/AF

Sustainable impact with technological innovation

Nowadays, products have to be meet not only economical but also ecological standards. All of our products do not only help to get the best quality but also improve the sustainability of production. For instance, due to our "first-time-right-principle", only one round through the production line is needed to produce directly the aimed result. This saves energy and valuable resources. In addition, there are no more costly readjustments or wasted fabrics and customer complaints can be reduced drastically.

This makes the PLEVA products: Heroes for Sustainability.

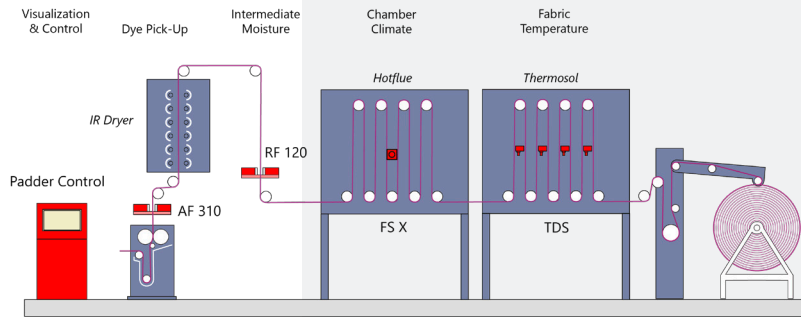


Continuous dyeing

The uniform dye pick-up over the length and width of the fabric is essential for a perfect dyeing result on continuous dyeing processes Pad-Dry / Pad-Steam and ColdPad-Batch.

The PadderControl CIMATIC measures online the dye pick-up by microwave measurement AF 310 and if required controls the pressure for left side, right side and center on dye padder.

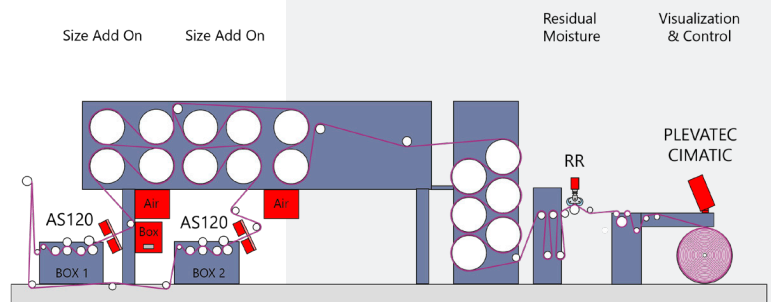
Supervision of predrying after infrared dryer and control of thermofixation can be integrated as an option.



Size application

Uniform size pick-up on warps increases the efficiency of the sizing looms crucially. The desired degree of size pick-up is controlled by a combined pressure setting and control system varying the pressure of the squeezing rollers in size box 1 and size box 2 individually.

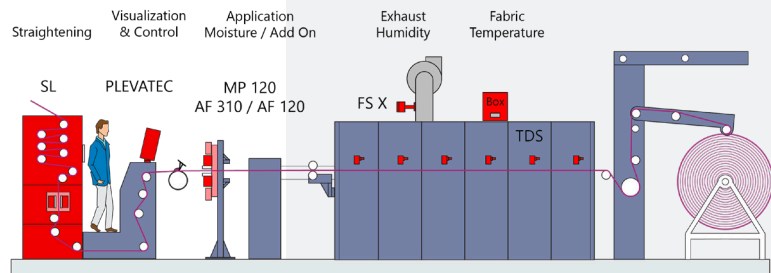
The result is an increase and stabilization of weaving efficiency from 1.5 up to 4 % as well as reducing the amount of applied size by 10 up to 25 %.



Coating application

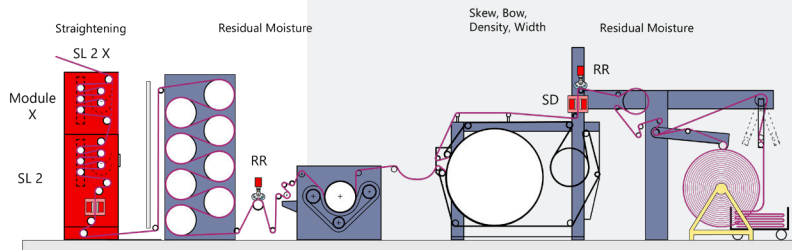
The successful implementation of coating technologies is a big challenge for the textile industry to get the process controlled. PLEVA supplies textile finishers and the carpet industry with well-proven measuring and control systems.

The water based coating is measured in g/m² or % contactless, continuously and accurately by a microwave system. The following drying and curing process is controlled through fabric temperature measurement. Additional sensors for exhaust air humidity and exhaust air speed measurement allow further process optimizations.



Weft-straightening at sanfor

The PLEVA StraightLiner SL are equipped with a traversing structure detector SD with a high-resolution smart camera CAM. The system is working with highest detection capability for all kind of fabrics and allows precise calculation of distortion analysis over the fabric width. Different camera types are available also for Black Denim. Automatic width adjustment after changing of fabric as well as high and fast straightening action by servo drives are advantages for high quality results in production. Additional sensors for pick/course density and residual moisture are available to enhance the product quality and efficiency.



... further solutions, applications and options are always possible.

TDS I Fabric and air temperature



Fabric temperature sensors TDS are used to supervise a heat treatment process e.g. drying, heat-setting, curing, vulcanisation, shrinking, ageing and cross linking of textiles, carpet, paper, fibreboard, plastics and much more. TDS can be used inside dryers and ovens up to 400 °C.

FS I Air humidity



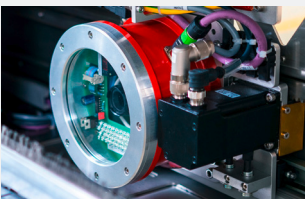
The air humidity measurement FS is used to minimize the energy consumption of drying processes in dryers and stenter. The maintenance-free exhaust humidity sensors type FSX measures the humidity of the process air to control the exhaust air rate for an economic efficiency on drying process. It can be used in processes up to 600 °C.

RR I Residual moisture



The measuring device RR and RR W measures the residual moisture of planiform fabrics. The type RR tandem roller is used for lower moisture values or the measurement of synthetics or mixed fibres with synthetics. The type RR W measures the residual moisture over the full fabric width on two rollers at knitted fabric or at surface sensitive fabrics.

CAM I Pick/course density, distortion analyses



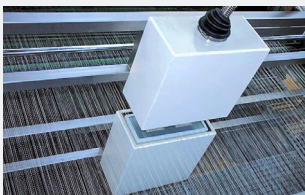
The Dens'nDry system and the StructureDetector SD use the CAM sensor in static or traversing configuration for advanced structure analysis, pick/course density as well as width and alignment measurement. CAM sensors are available for special applications like Denim and automotive to detect reliably the distortion for all kind of fabrics.

OS I Oxygen content



The oxygen sensor OS continuously measures the oxygen content and steam saturation in textile steamers. The content of oxygen has a direct impact on color fixation and reaction processes. Accordingly, the reliable oxygen measurement increases the production safety and allows considerable savings of steam.

AS I Size application



Sizing is the key aspect for a high warp quality and high weaving-efficiency. The AS 120, which is based on microwave technology, measures and controls the size application reliably and continuously. A special construction with integrated protection against steam vapours and high temperatures ensures a reliable and consistent measurement.

AF, RF, MP I Material moisture



The application moisture measurement is based on microwave technology for contactless online measurement of moisture application, coating, continuous dyeing and residual moisture in planiform webs. The types AF 120 and RF 120 are single head measurements, the type AF 310 has 3 heads to measure left side, center, right side. MP 120 is traversing over the whole fabric width for a complete overview of the fabric properties.