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CHEMOCON CMC

Online control system for determination of pH and conductivity values

Avoidance of expensive and time-displaced testing

In the course of finishing, textile materials are subjected to cleaning processes to remove unwanted substances.
Control of the washing process currently involves both testing the pH-level of the washing baths (with adjustment if necessary) and testing the pH-level of the material using indicator solution, with alternative time-displaced testing in the laboratory. Further tests are not carried out generally.

Advantages

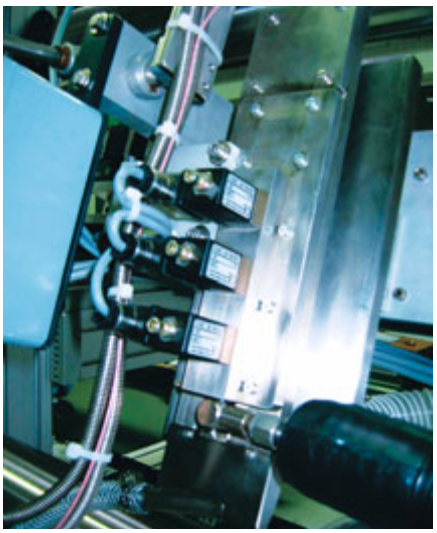
- Continuous record of pH and conductivity values for on-line material
- No substrate impairment
- Improved finishing quality
- Optimisation of process management
- Cost-saving by reduction of washing process safety margins

System

Chemocon obtains an extract from the squeezed on-line material after exiting the wash bath. The extract is derived in such a manner as to include not only the surface water adhering to the material but also water from the inner fibres. Threshold range regulation of the washing process is facilitated using the information regarding the internal condition of the material.
pH and conductivity measurements are carried out on this extract. Acid/base and salt content of the material can be determined from these two values using mathematical models.

This results in material of a constant standard accompanied by reduced costs incurred for water, energy and chemicals

Operating and display unit with printer



Extraction unit

Procedure

A water/steam mixture is sprayed through the on-line material and extracted again by means of a vacuum blower. The extract thus obtained is cooled and conveyed to the measuring cell for pH and conductivity analysis. The readings obtained may be either used for manual adjustment or transferred to a computer for automatic control procedures.

Measurement
Control
Automation

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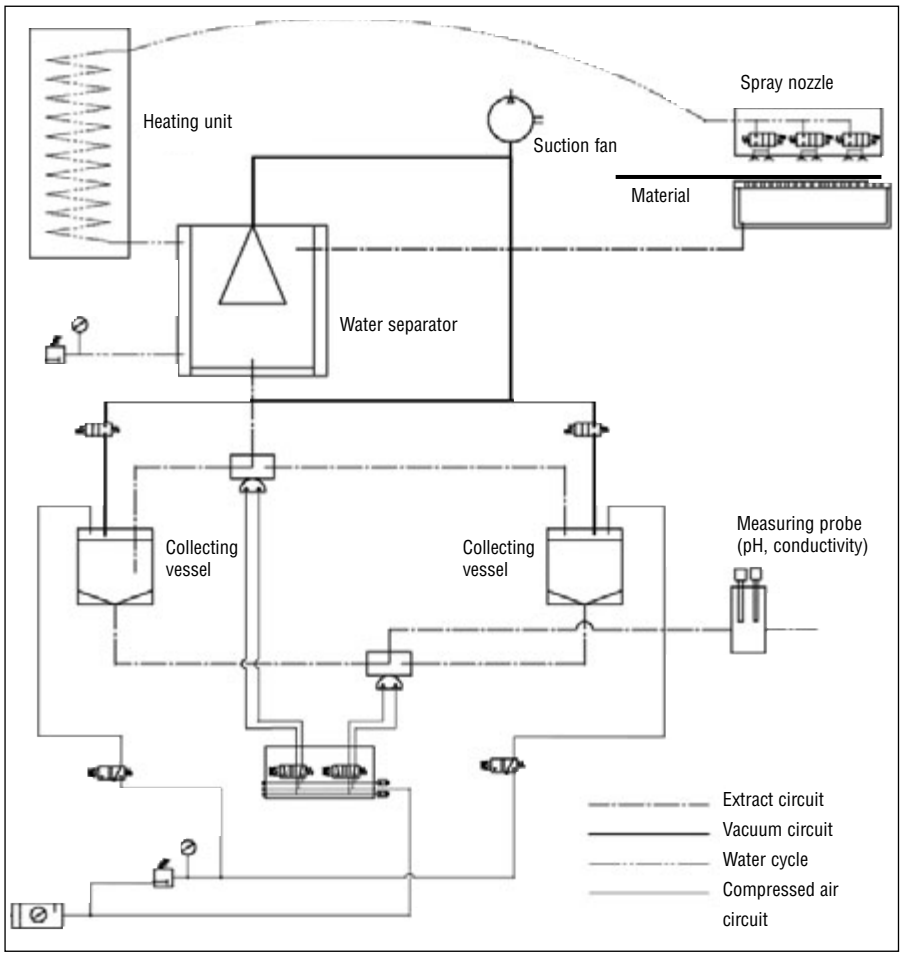
CHEMOCON CMC Technical Data

Steam supply:	saturated-steam 105-130 °C (pressure-dependent)
Water supply:	
Cooling:	tap water max. 20 °C
Extraction:	deionised water, consumption max. 6 l/min (material-dependent)
Drainage of extract, condensate, cooling water:	by means of a hose connection
Electricity supply:	380/400V 3~, 50/60 Hz, ca. 13kVA
Compressed air supply:	dry, 4-6 barr

Flow sheet



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