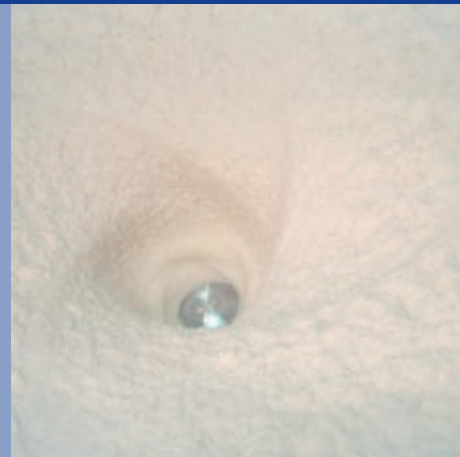


## OnQ WetEndControl for Retention Stability in the wet end and low chemical costs



### Problem

Retention is influenced by stock characteristics, additives and machine settings. Since these values vary over time, retention also fluctuates.

However, unstable retention negatively affects the quality constancy of the finished paper and runnability.

Thus, in order to nonetheless be able to reliably operate related processes such as fiber recovery, high retention settings are applied in many cases. This leads to excessive consumption of chemicals.

### Solution

OnQ WetEndControl for Retention controls addition of the retention agents on the basis of white water consistency (WW-Cons.). The model-based control provides for stable retention, since all significant influences on the WW-Cons. are taken into account in advance.

The enrichment time is thus noticeably shortened in the short circulation and the dosage of the retention agent is reduced to what is absolutely necessary.

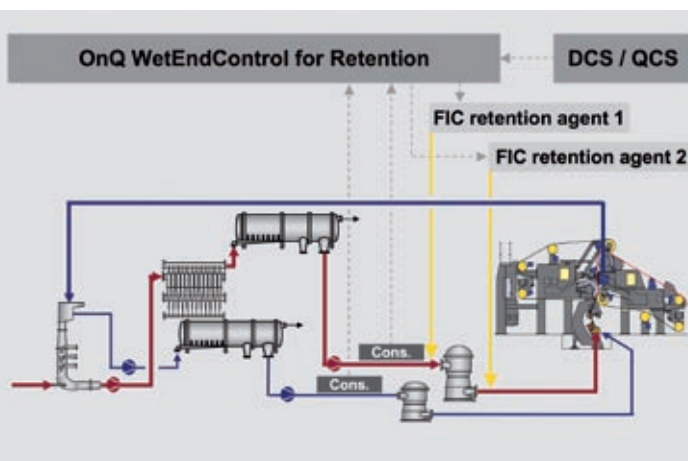
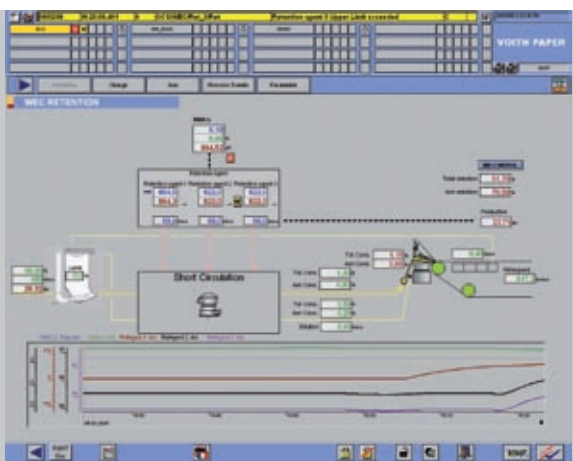
In addition, integration into the grade table allows fast change between grades and adaptation of the set point to the respective requirement of the grade.

### Advantages

- fewer chemicals save costs
- improved uniformity of the basis weight and ash content in the paper
- fast grade change
- uniform formation due to prevention of excessively dosed retention chemicals
- stabilized dewatering in the former
- increased runnability
- fewer deposits
- lower load of fiber recovery
- robust, model-based control
- coordination of up to 3 chemicals per layer

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### Scope of supply

- OnQ WetEndControl for Retention to control white water consistency with integration into the OnQ GradeManager grade table automation system
- OPC or Profibus connection to an existing process control system
- engineering for hardware components
- start-up and optimization
- operator training

### Practical example

#### Initial situation:

Due to variations of retention, problems in fiber recovery come about. Because with rising white water consistency, the clear water values worsen. This leads to slime deposits on the spray nozzles and thus to more breaks.

In addition, the tendency to form deposits in the dryer section increases with rising white water consistency.

#### Solution:

OnQ WetEndControl for Retention stabilizes the WW-Cons. via the dosage of retention chemicals. This leads to constantly good clear water values and fewer deposits. At the same time, the dosage of the retention agents can be reduced.

Compensation for the influences of other additives increases the dynamics in the short circulation and allows quick and reliable changes. This optimizes the use of resources and the paper quality.

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