DEPOSIT CONTROL WITH AN EASY TO APPLY POLYMER COMBINED WITH ONLINE PARTICLE MEASUREMENT AND ADVANCED PROCESS CONTROL

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ABSTRACT

Since decades paper makers have been facing various challenges. Decreasing fibre quality and system closures led to increasingly contaminated systems. These contaminations may lead to sticky deposits causing runability and quality issues.

The newly developed, quick inversion polymer, FennoPol ER 9920E, is an easy to apply polymer which is able to efficiently remove hydrophobic contaminants from the system.

Obviously, the amount of contaminating substances in the papermachine system depends on various factors, e.g. load of disturbing substances in the furnish, runability of the paper machine and running time of the paper machine after the last system cleaning. Accordingly, online measurement of the amount of disturbing substances and an advanced automized control loop are highly desirable.

Fully automated online measurement of the hydrophobic particles can be done with the online device FlytoLite. These data can then be used by the advanced predictive control platform KemConnect Agile to control the dosage of FennoPol RE 9920E. This way control of sticky deposits can be done efficiently and unnecessary overdosing is avoided leading to a stable machine situation and paper quality.

During the presentation the different components are explained. Subsequently, a case study is presented on the introduction of FennoPol ER 9920E at a paper machine. Further case studies will demonstrate the combination of online particle measurement with an advanced process control controller and the achievable benefits.

Keywords: Advanced process control, deposit control, emulsion polymer, stickies