

New dosing Technology increases Efficiency at Smurfit Kappa Zülpich Papier

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Depending on paper grade produced, energy, fibers and water account for more than 70% of manufacturing costs. This is why Voith places a strong emphasis on reducing the consumption of raw materials when developing new products. The dosing of chemicals and additives is especially significant with a view to producing paper efficiently. The way in which chemicals are added in the approach flow system or wire section not only influences their effectiveness but also has a crucial impact on the efficiency of the process. The FlowJec dosing system newly developed by Voith uses an application method to dose all process and functional chemicals and additives. Voith developed a special mixing principle to ensure particularly homogeneous dosing and blending of the chemicals into the process flow. The key to the new dosing system is the specially developed AddJector™ mixing nozzle. The FlowJec dosing system allows paper to be produced in a highly environmentally compatible manner. It not only saves on chemicals but also substantially reduces the fresh water requirement.

A good example of the significant efficiency improvement in the paper production process achieved with FlowJec is the dosing of a cationic polyacrylamide. On Smurfit Kappa Zülpich Papier's PM 6, a two-ply packaging paper machine for testliner and corrugating medium, FlowJec is used to add the retention agent to both plies. The PM 6 features a closed machine loop with no waste water. Because FlowJec allows the retention agent to be dosed at a higher polymer concentration, less fresh water is used to dissolve the chemicals and there is no need to re-dilute the retention polymer with fresh water. The improved stock consistency in the headbox results in better ash distribution and formation, which in turn enhances runnability. The higher process availability increases efficiency.

This shows that producing paper in a resource-saving and thus sustainable manner improves the economic efficiency of the production process. Sustainability and efficiency are therefore not contradictory but go hand in hand, and can actually give a company a competitive edge.