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New Polymer Concentration Measurement System for Paper and Board Polymer Applications

In paper and board processes, chemicals, typically polymers, are added to improve retention of fine particles and fillers during web formation. Accurate information about polymer concentration helps optimise wet end retention and increase process efficiency. Valmet has introduced a new Valmet Polymer Concentration Measurement (Valmet PCM), which is the first advanced optical inline polymer measurement for municipal and industrial wastewater treatment, as well as pulp and paper processes. Real-time, continuous polymer concentration data creates new opportunities for process optimisation, such as more accurate polymer dosage, savings in polymer usage, faster reaction to process disturbances, among others.

Knowing the actual polymer levels allows facilities to significantly reduce polymer consumption through accurate preparation and dosing. Steady polymer concentration in turn improves flocculation, clarification, dewatering and other key processes. Better performance saves energy and lowers sludge transport and incineration needs, furthering the positive environmental and social impacts of efficient wastewater treatment. Despite a compact probe design, the optics maximise measurement volume. With more optical channels to collect scattered and reflected light, the probe delivers six times more information compared to conventional solutions improving the performance. To counter probe contamination common in wastewater applications, Valmet developed a new automatic flushing system to keep the Valmet PCM probe clean and measurements stable. The integrated sensor probe flushing unit also includes support for a manual lab sampling valve.