



BTG

Manage your charge

Confidence in the future



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BTG manages your charge

Charge is one of the basic properties of matter that causes it to experience forces: anionic charge attracts cationic charge. In the papermaking process, anionic contaminations are eliminated with a cationic fixing agent; other cationic additives like strength agents are designed to attach to anionic fibers.

The efficiency of these charge attachments is directly connected to the efficiency of the papermaking process: fixing agent accidentally adsorbed to fibers for example will subdue the fibers' ability to take strength agents. This in turn means, that measuring the charge to understand how materials interact, permits to optimize these interactions and as such, optimize the entire process.

BTG makes it easy

BTG offers a portfolio of solutions related to charge management. Different instruments cater for the optimization of fiber charge as well as dissolved charge. And our experts will gladly support you developing your individual charge management concept.

Benefits

Primary benefits: chemistry management	Reveals the current additive demand	Avoids overdosages or wrong reactions to save chemical additive costs (~20-40%)	Avoids unnecessary addition of additives
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Secondary benefits, as a consequence	Increased production (~5%)	Fast grade changes	Increased machine speed (~15%)	Increased sheet strength
	Web brakes reduction (~50-70%)	Broke reduction	Reduced foaming in white water	Reduced wet-end deposit issues

System Zeta Potential (SZP)

The SZP measures the charge of solids (fibers, pigments), and in particular:

- It reveals the fiber capacity to interact with additives
- It checks effectiveness of chemical reactions on fibers
- It detects unwanted process water additives on fibers to prevent overdosages
- It determines the stability of a liquid/solid suspension



SZP is targeted at

- Paper mills for process surveillance and quality management
- Chemical suppliers for process optimizations and customer service
- Manufacturers of pigments, dyes, lacquers in process development

Particle Charge Detector (PCD)

The PCD measures colloids such as anionic trash and chemical additives, and in particular:

- It reveals the chemical additive demand of colloidal dissolved contaminations
- It checks the effectiveness of chemical reactions in the water phase
- It detects excess fiber-additives in water phase to prevent overdosages
- It measures the charge density of chemical additives



PCD is targeted at

- Paper mills for process surveillance and quality management
- Chemical suppliers for process optimizations and customer service

Single Point Charge (SPC)

The SPC measures the colloidal dissolved charge, and this is done online:

- It continuously measures the chemical additive demand of colloidal dissolved contaminations in the process water
- The continuous measurement allows to respond to charge variations with an automatic control loop for chemical additive dosages. The main application is closed loop control of a fixative to eliminate dissolved contaminations for better reaction efficiency of fiber additives dosed later in the process



SPC is targeted at

- Paper mills for online control solutions

About us

The BTG Group is a multinational provider of integrated, highly specialized process solutions for the global pulp and paper industry. Every day our people help customers achieve sustainable gains in business performance through our application know-how and industry-leading technologies. This includes world-leading pulp and paper process control sensors and laboratory instruments as well as rods and beds for film-metering size presses; high-performance ceramic and cermet coating blades; high-performance tissue creping doctors and doctor holders, specialty doctor blades. All of these technologies are supported with expert services and application support.

Our advanced integration philosophy combines high-quality instrumentation, detailed and versatile data analytics and our unique, expert applications experience to provide BTG customers with operational advantages that realise new gains in productivity and profitability.

Headquartered in Eclépens, Switzerland, BTG employs about 600 professionals across the world and operates four manufacturing sites, three research centers and several regional application centers. The BTG Group is an operating unit of Voith Paper (www.voith.com).



Contact

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