New ABB Strength Virtual Measurement enables mills to optimize quality with accurate, online strength prediction

Innovative soft sensor application blends machine learning with digital and domain expertise to help produce more on-spec product at a lower cost

ABB has today launched Strength Virtual Measurement, an ABB Ability™ Performance Service that enables mills to predict strength properties through accurate online measurements – also known as a soft sensor – resulting in a stronger, lighter product that costs less to produce.

The solution, suitable for all grades, works by leveraging machine-learning generated models to produce online strength calculations for one or more properties at a frequency needed to meet machine-specific requirements. Frequent measurements, with an accuracy that approaches lab results, help operators maintain strength properties closer to their lower limits, reducing raw material usage, increasing machine speed and enabling faster grade changes.

This is delivered through ABB Collaborative Operations, a service which connects production, headquarters and ABB personnel with remote access to ABB digital technologies, data analytics and domain expertise, providing them with the right information to keep operations running. It incorporates ongoing performance monitoring, enabling optimization actions to be implemented in real time to improve the accuracy and robustness of online strength calculations.

“Our new approach to soft sensors combines unrivalled proficiency in advanced analytics, a patent-pending online calculation engine with auto-correlation and ongoing performance analysis to create a virtual measurement with proven accuracy and reliability,” said John Schroeder, Global Product Manager for ABB Ability™ applications for pulp and paper. “With built in performance indices, operators can monitor process parameters, respond to alerts and rapidly adjust paper machine settings to optimize paper strength, reduce costs and increase production throughout, ultimately increasing profitability.”

Strength Virtual Measurement integrates seamlessly with third-party systems and ABB offerings including ABB distributed and quality control systems, ABB L&W Autoline and other ABB Ability™ solutions, providing superior visibility for precise actions to optimize strength properties. It is the first of several new Virtual Measurement soft sensor solutions to be released during 2020 and forms part of the ABB Ability™ Performance Service for paper mills suite, focusing on maximizing equipment and process efficiency.

ABB is a trusted partner and leading supplier to the pulp and paper industry, offering deep expertise and a comprehensive portfolio of integrated digital solutions, automation and electrification systems, industry-focused products and comprehensive services to help our customers optimize all phases of the papermaking process. We are committed to serving packaging, paper, tissue and pulp producers to help drive availability, performance, cost and quality improvements. Active worldwide, ABB has over 1000 pulp and paper professionals who serve customers in over 50 countries. www.abb.com/pulpandpaper

ABB (ABBN: SIX Swiss Ex) is a leading global engineering company that energizes the transformation of society and industry to achieve a more productive, sustainable future. By connecting software to its electrification, robotics, automation and motion portfolio, ABB pushes the boundaries of technology to drive performance to new levels. With a history of excellence stretching back more than 130 years, ABB’s success is driven by 144,000 talented employees in over 100 countries. www.abb.com

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