

PULP AND PAPER

Food packaging manufacturer reduces rejects with web imaging with dirt count



A Canadian linerboard manufacturer was looking to go after new markets and wanted to ensure the highest quality for food-grade packaging. The mill installed the ABB Web Imaging System (WIS) in 2018, with the goal of reducing rejects and maximizing profit potential.

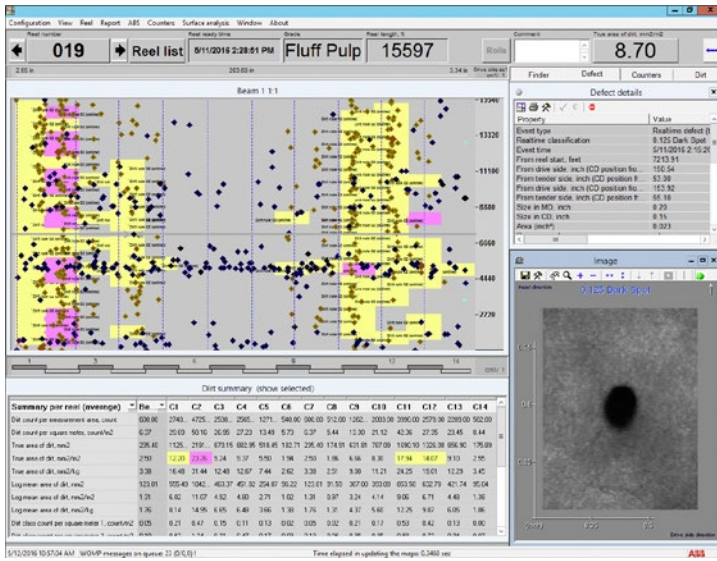
Challenge

As a packaging supplier, quality is of the utmost importance to meet customer specifications. Specifically, for food grade products, the finished sheet cannot have dirt. While the mill's quality was already high, management wanted to certify the quality of their product to go after new markets and ensure profit wasn't being lost due to unnecessary rejects.

Solution

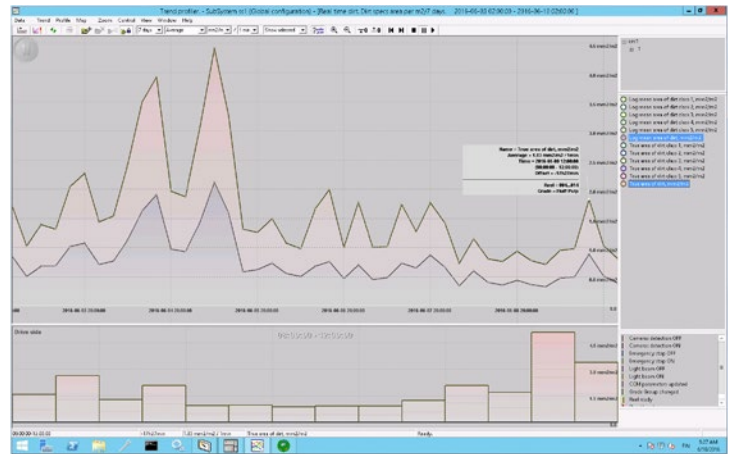
The visible dirt in a sheet can significantly affect the quality of the end product. Both the amount and visual impact (area and intensity) of the dirt may be important quality factors. Thus, one of the most beneficial quality testing procedures is dirt counting and dirt area classification, which analyzes the content of foreign materials in the product.

To help see and quantify the dirt on the final product, ABB installed a Web Imaging Dirt Count system capable of capturing accurate dirt count across the full sheet. Unlike other technology that counts dirt based on single sheets or narrow webs, ABB Web Imaging Dirt Count detects, classifies and statistically quantifies information across one hundred percent of the web, providing more certainty if rolls need to be downgraded.



01

01 Defect map with dirt summary tab
02 Dirt analysis, trend and profile



02

Custom configuration

ABB worked with the mill's team to understand the system requirements and create a custom web imaging configuration to address on-going quality needs. The result was a five-beam system, with the dirt count feature added after initial installation.

Results

Since the Web Imaging System was installed, the mill has seen significant improvements in quality and process efficiencies.

One of the identified issues was flying insects during certain times of the year. With this information, the mill quickly adapted corrective measures to maintain consistent quality year-round.

After installation of the Web Imaging Dirt Count feature, visibility across the entire sheet was now possible, helping the mill quickly identify issues and make process changes. Full sheet dirt count also helped the Canadian packaging manufacturer with potential new markets for their products.

In addition, the mill has experienced positive feedback from their conversion mill, who have reduced the number of rejected rolls.

Benefits

- Identified issues not caught with other quality systems (i.e. bugs)
- Enabled faster corrective actions
- Improved quality
- Reduced rejects
- Produced best-in-class sheets for customers with higher specifications
- Maximized profitability

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