

DELMIA

Operations Intelligence for Composites

Reduce Composites Quality Errors and Rework with Fact-Based Answers

DELMIA Operations Intelligence for Composites enables users to extract risk patterns from production history that resulted in both high- and poor-quality composites.

In the composites industry, manufacturing engineers and process and quality experts are in charge of successful new product introductions, ramp-ups and continuous improvement of first-pass yield. A typical challenge they face is to determine which critical process and product attributes to monitor, and the right combinations to prevent variations.

DELMIA Operations Intelligence for Composites answers this challenge by detecting risk patterns with a fact-based approach supported by actual data. From this analysis, rules are identified that will improve the composite's quality and reduce scrap and rework. Using these rules, DELMIA Operations Intelligence for Composites monitors real-time

shop floor information, analyzes the risk of quality defects and alerts the operators of issues while there is still time to correct the situation. When a potential problem is identified, the level of risk is quantified based on best practices, a risk analysis is published and preventative or rectifying actions are proposed to the operators.

Manufacturing Challenges

- Understanding patterns of production parameters that result in defects
- Gaining real-time visibility of the shop floor to monitor progress and collaboratively solve production problems
- Communicating preventative or rectifying actions to operators quickly
- Improving production without having to re-engineer processes

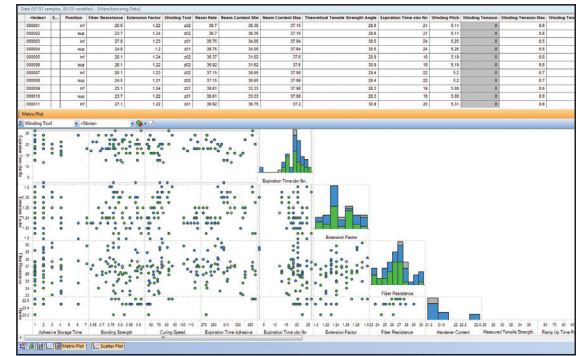
Solution

- **Remove Unpredictability** Analyze your shop floor data to discover hidden root causes of previously unexplained voids and delamination defects. Simplify execution and control of complex and highly engineered composite processes.
- **Formalize your Manufacturing Know How** Capture best practices in natural language rules from past production data for clear recommendations to shop floor workers during real-time execution. Improve yields by capitalizing and industrializing best practices.
- **Scale up Production Volume** Monitor shop floor data to quantify risk of defect and proactively prevent scrap and rework. Increase product quality through a closed loop, continuous improvement process.

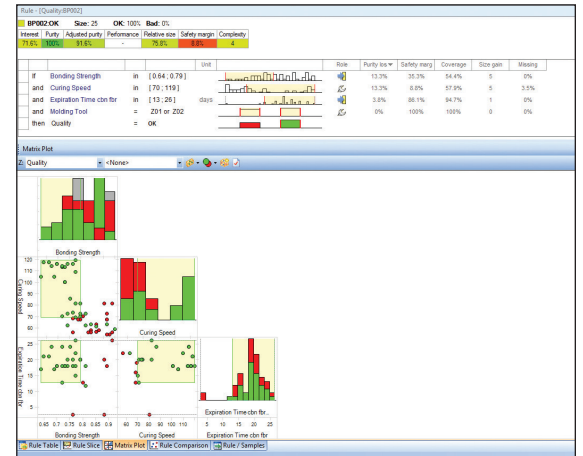
With a typical rework rate of 25%, composite manufacturers are anxious to improve first-time quality and cycle times.

Key Features

- Create risk probabilities of failure for ongoing processes at dedicated checkpoints
- Real-time adjustment of the production settings while staying within tolerances
- Leverage standard statistics indicators to filter variables
- Data import from many sources
- Knowledge is formalized by the automated creation of rules
- Publication of best practices
- Real-time traceability and reporting provides the insight needed to run critical operations
- User friendly and intuitive



User Interface View shows a rule of Risk Situation discovered in the data.



Visualization of Rules and Related Samples
A graphical view enables users to understand how samples are distributed within and outside of a rule.

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