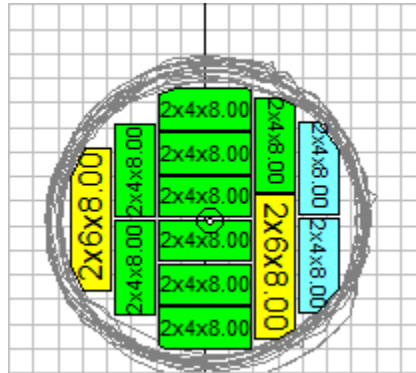


MPM ENGINEERING LTD.

RESEARCH ENGINEERING SALES

Breakdown Optimizer

MPM's *Breakdown Optimizer* finds the optimal cutting solution for a log based on the defined downstream machines and board products.



To do this, the *Breakdown Optimizer* incorporates four key elements: image analysis, external inputs (e.g. PLC controls), product definition, and sawmill machinery modeling.

Image Analysis

The detection and application of surface features is used in the processing and optimization routines.

For example, depending on the scanning equipment used, the log shape and how it lies after *Infeed* positioning can be accurately modeled.

External Inputs

An interface is available for our optimization system to receive data from various external locations. This data can be used in conjunction with our internal optimization system, or can be just recorded in the databases for reporting purposes.

For example, a PLC can be used to tell the optimizer whether curve sawing should be considered or certain saws are disabled.

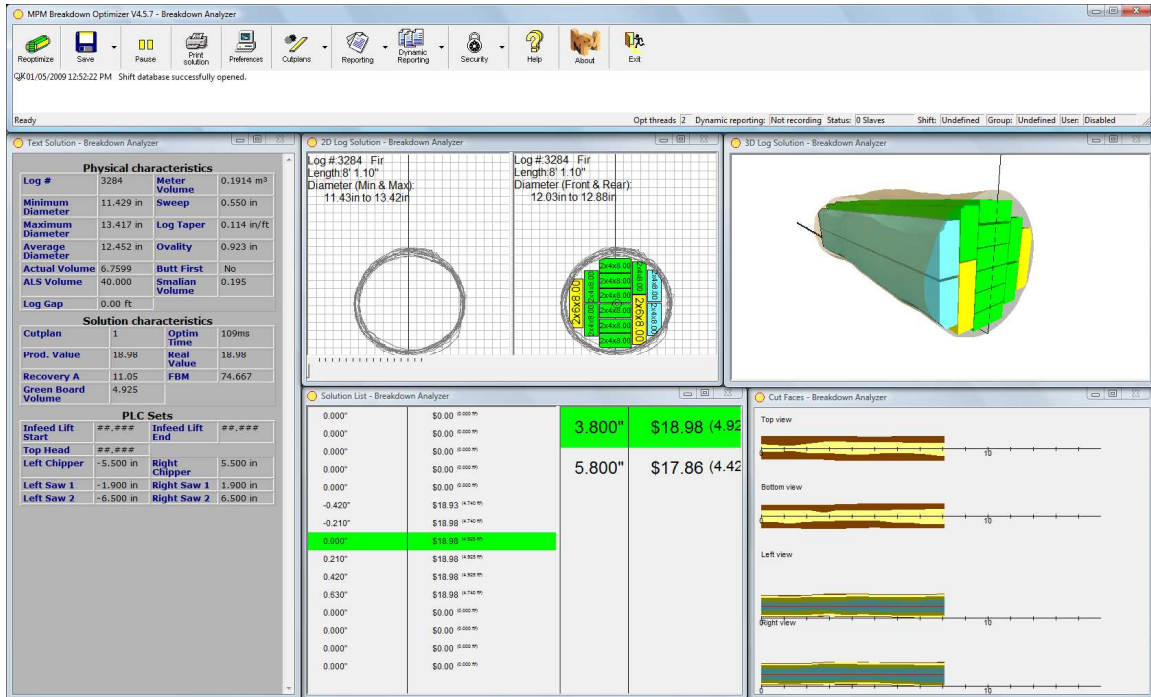
Product Definition

Full product definitions, organized into groups and grades, are used in the patterns and product fits for determining the best solution. Using settings such as *Wane*, *Length*, and *Value*, a multitude of situations can be optimized for.

Sawmill Machinery Modeling

MPM's optimization systems contain detailed machine models in order to closely represent the sawmill process – and the Breakdown Optimization system is no exception. Whether the sawline is straight or curve sawing, skewing, profiling, or has multiple center cant saw clusters, our machine models are manufacturer specific and configured to all limits defined by the customer and manufacturer's recommendations.

Key Features:



- Scanner type independent for customer flexibility.
- Simulations can be run off-line to evaluate different parameters and machinery configurations.
- Optimization can be based on price or volume while allowing product priority to attain specific production requirements.
- Optimizes using a variety of downstream machine types/brands and their specific features. (*Infeeds, Breakdowns, Gangs, etc.*)
- Optimizes for a product by considering features such as *Wane, Pith Location, Length, Location, etc.*
- Depending on the machines defined, curve sawing can be factored in during optimization.
- Settings can be linked between multiple MPM systems for centralized setting configuration.
- A variety of graphical displays help the user to analyze a solution.
- Extensive and customizable production reports.



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