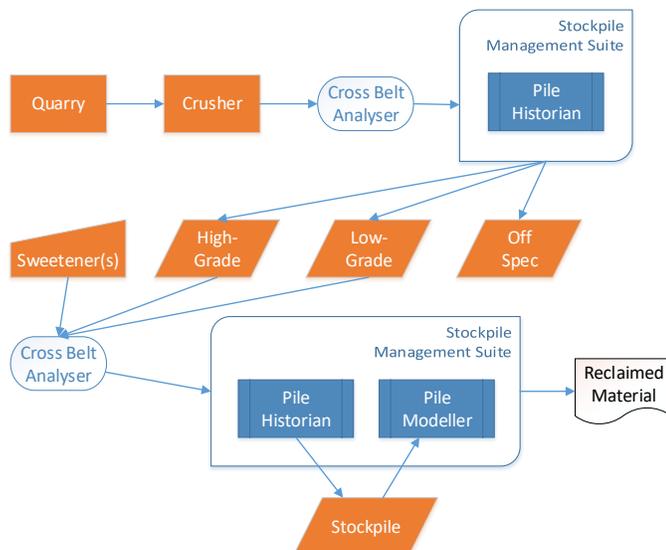


Stockpile Management Suite

Overview

Process excellence is a necessity to achieve high quality products with consistent chemistry at a low operational cost.

The Stockpile Management Suite (SPMS) from PSCL enables plants to achieve process excellence by realizing significant improvements in quarry utilization and quality control of finished products.



SPMS provides benefits from Quarry to Stockpile

SPMS provides the information to achieve optimization of quarry reserves and reduction of raw material preparation cost.

Quarry segregation maximizes the value of quarry operations by separating the run on mine into piles of specific quality ranges (e.g. high MgO, high-grade, low-grade, and off-spec). This extends the life of the quarry by ensuring material is efficiently used.

"We have found the pile modeller to be very beneficial for predicting and minimizing chemistry changes from our pre-blend pile."

Nicholas Ewing, Quality Coordinator, Argos USA Roberta Plant

Historical analysis available through SPMS reveals trends in stockpile quality, and correlation to both upstream and downstream processes and quality. Proactive notification when a chemistry deviates from target allows plant operators to take corrective action, saving time and money.

SPMS calculates material chemistry before it has been reclaimed providing advance knowledge of target deviation.

Since 2005, with over 100 installations across the world and valuable features, the Stockpile Management Suite has been providing critical insight, control, and feedback enabling plants to optimize their raw material quality.

Key Benefits

- Increases revenue by enabling the segregation of material by quality parameters
- Reduces costs by minimizing the use of expensive sweeteners
- Saves cost by removing the need for additional analyser or hardware to provide accurate material chemistry to downstream applications (e.g. Raw Mix Control System)
- Minimize expensive trials by investigating alternate stacking or reclaiming approaches (e.g. will additional windrows increase the homogenization?)
- Reduces waste by providing notifications and alarms before the stockpile chemistry is off-spec
- Better planning for additive management

Pile Historian

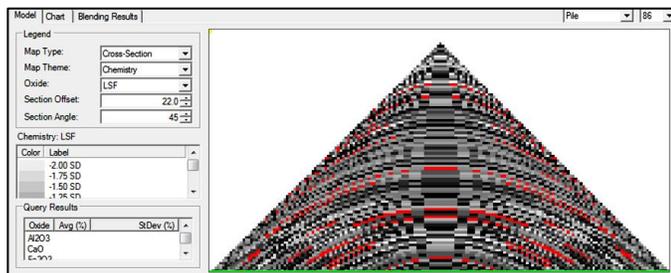
Track pile chemistry and see material quality in your raw feed. Pile Historian gives the insight from run-of-mine data to the stockpile.

The module has the following key features.

- Trending of elemental, mass, numerical analyzer performance and tuning values
- Grid/textual display of data, X-Y Scatter plots
- Statistical Quality Control (SQC) Chart
- Export to Microsoft Excel, Word and text formats

Pile Modeller

Integrate your cross-belt analyzer and stacker / reclaimer process into the plant's intelligence. Pile Modeller gives precision estimates of chemistry at the reclaim using a unique volumetric modelling system. Chemistry over time, location or mass as well as performance and tuning variables are all in one integrated suite.



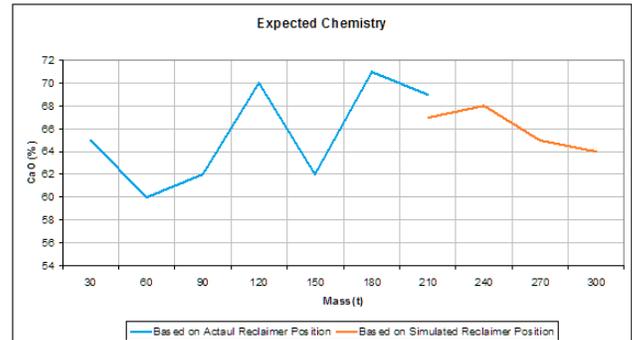
Colour gradients represent deviations from target in the stockpile

- Investigate chemistry by virtually moving through the pile
- Support circular and longitudinal piles, chevrons and windrows
- Predict accurate chemistry of material being reclaimed without the need for a post stockpile analyser
- Simulate pile effects

The Pile Modeller allows you to investigate alternative approaches to stacking and reclaiming of raw materials before any capital expense.

Integration with Raw Mix Control

Accurate prediction of expected chemistry as material is reclaimed provides high frequency material chemistry to downstream control applications such as Raw Mix Control System.



Summary

The Stockpile Management Suite from PSCL leverages the advanced process control available in the modern plant and the frequent analyses provided by Cross-Belt analysers to reduce variation of the material reclaimed from the stockpile, improving quality and reducing both the direct costs of materials and indirect costs of maintenance from feed quality issues.

The improvement in stockpile quality contributes to high quality downstream product and reduction in CO₂, which supports the global vision of a reduced carbon footprint.

Customer Assurance and Support

Our team of experts work with you to customize, install, integrate, implement and maintain the necessary hardware and software.

With an average experience of over 10 years, the Support & Integration team carry out on-site installation commissioning and provide full-time help desk support.