JKSimMet Software

With over 600 licenses worldwide, JKSImMet is an award-winning, general-purpose software package.

JKSimMet was developed for the analysis and simulation of comminution and classification circuits in mineral processing operations.

It is designed for metallurgists who wish to apply process analysis techniques to characterise and optimise plant performance; and design engineers who require process simulation models to assess design alternatives.

JKSimMet integrates all tasks associated with data analysis, optimisation, design and simulation, including the storage and manipulation of models, data and results, within one package. Mass balancing and model fitting of complete circuits are standard features.

It is fully interactive and operates with high resolution colour graphics. These graphics facilitate the display of detailed plant flowsheets and accompanying information.

JKSimMet was designed by researchers from The University of Queensland’s Julius Kruttschnitt Mineral Research Centre (JKMRC).

JKSimMet allows the user to:

- Build a graphic-based flowsheet of the processing plant and test its performance
- Mass balance mineral processing circuits
- Calibrate model parameters for the specific equipment in the circuit
- Simulate the effect of changes in operating conditions and flowsheets to predict product flows and size distributions
- Determine optimum conditions, plant throughput, and product size
- Conduct conceptual flowsheet greenfield and brownfield design studies

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JKSimMet training course is suitable for metallurgists and engineers who wish to learn the skills of applying simulation to the design and optimisation of grinding and crushing circuits. It is an intensive four day course with an emphasis on worked examples from real-life circuits and data.

JKSimMet benefits

- Increased mill throughput
- Improved comminution circuit product size
- Improved circuit designs
- More informed and reliable mill sizing
- Reduce operating and capital expenditures

Standard features:

- Flowsheet specified interactively on the graphics screen
- Models selected from a built-in library
- Model parameters can be specified by the user
- Range of data output displays and printed reports
- Simple data import and export

Models available:

- Jaw, gyratory, rolls and cone crushers
- Autogenous and semi-autogenous mill
- HPGR
- Rod mill and ball mill
- Vibrating screen – single and double deck
- DSM screen
- Hydrocyclone
- Splitter and separator
- Size converter

JKSimMet training is offered as either an in-house course or an open course.