

JKTech Specialist Software



Simulating Comminution and Classification Circuits with JKSimMet

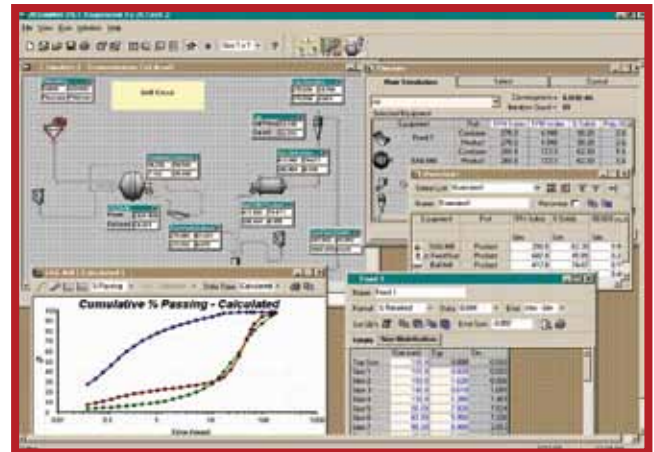
What is JKSimMet?

JKSimMet is an award-winning computer software package, tailored specifically for both plant and development metallurgists who wish to apply process analysis techniques to characterise plant behaviour; and for design engineers who require process simulation models to assess design alternatives.

Developed out of the renowned Julius Kruttschnitt Mineral Research Centre (JKMRC), the package allows for the analysis and simulation of comminution and classification circuits in mineral processing operations. It incorporates models based on a large database of operating plant data and extensively tested in plant operations.

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.

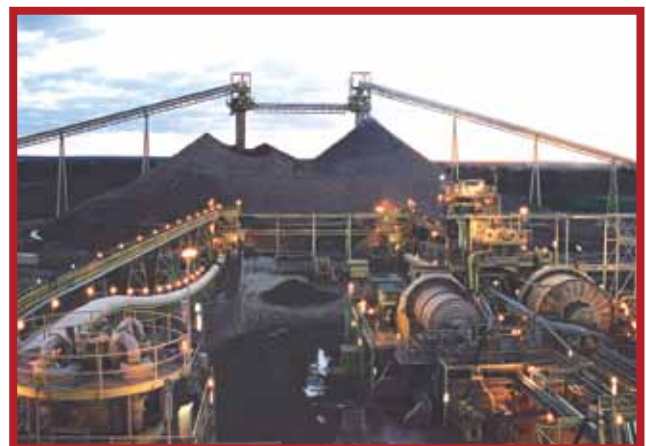
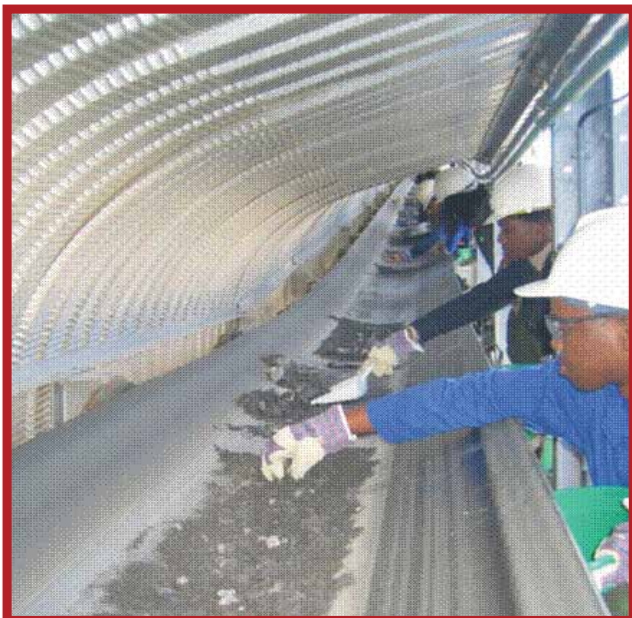
Mass balancing and model fitting of complete circuits are standard features. It is fully interactive and operates with high-resolution colour graphics. These graphics facilitate the display of detailed plant flowsheets and accompanying information.



Once a model of the comminution circuit is established in JKSimMet, rapid simulations can be run to predict the effects on the circuit of changing operating conditions such as water additions, cyclone orifice sizes, mill speed, ball size ball load, AG/SAG mill grate configuration and circuit feed conditions (size distribution, breakage properties and flowrate).

The results of these simulations include the size distributions, pulp density and flowrate of all streams in the circuit and the important equipment operating variables including crusher and mill power, AG/SAG mill load and cyclone operating pressure. These results are available in graphical and tabular form and are easily copied to Excel or Word documents.

JKSimMet replaces much of the hard work involved in testing operating strategies.



JKSimMet Allows the User to:

- Build a graphic-based flowsheet of the processing plant
- Assign machine criteria and model parameters to each plant case study
- Simulate the effect of changes in operating conditions to predict product flows and size distributions
- Determine optimum conditions, including plant throughput



Standard Features

- Graphical user interface
- 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

- Rod and ball mill
- Autogenous and semi-autogenous mill
- Crusher
- HPGR
- Simple degradation
- Vibrating screen – single and double deck
- DSM screen
- Hydrocyclone
- Efficiency curve
- Splitter

Operating Requirements

Intel Pentium or compatible PC, 400 MHz with:

- 128Mb minimum - recommend 512Mb
- CD-ROM drive
- Hard drive with 100 Mb free space
- SVGA video card

JKTech Services

- Consulting (comminution, flotation, mineralogy, mining & geometallurgy)
- Process Mineralogy and In-House Instrument Analysis
- Specialist Software (JKSimMet, JKSimFloat, JKMultiBal, JKSimBlast)
- Specialist Equipment (ore breakage characterisation, flotation characterisation)
- Metallurgical Laboratory Services
- SMI Knowledge Transfer

Contact

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