

JKSimMet Software Training

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

This training course provides training for those who wish to model, simulate and optimise crushing and grinding circuits. It will cover each of the models and demonstrate the model fitting procedure.

JKSimMet Software

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).

Course outline

The topics covered will include:

- Overview of comminution modelling at the JKMRC
- Mass balancing (including size-by-assay data)
- Hydrocyclone modelling
- Ball mill modelling
- AG/SAG mill modelling
- Crusher, HPGR and screen modelling
- Data sampling and collection techniques
- Comminution circuit design
- Conducting plant surveys



Course materials

A full set of notes is provided for each participant and directions to supplementary reading material, plus Excel spreadsheets for many of the methods discussed.

A wide range of numerical examples taken from real mineral processing case studies are used to illustrate the methods described. Excel-based examples allow participants to develop and refine their analytical skills. Tutorial questions and answers provide a library of additional case studies for future reference.

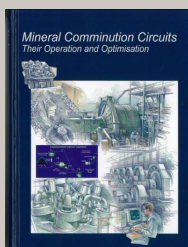
Course objectives

- Analyse industrial plant data
- Review the JKMRRC comminution and classification models
- Review plant sampling principles
- Review ore characterisation using the JK Breakage Tests
- Learn and practice the concepts of mass balancing and model-fitting
- Simulate and optimise grinding and classification circuits as well as crushing and screening circuits

Benefits to participants

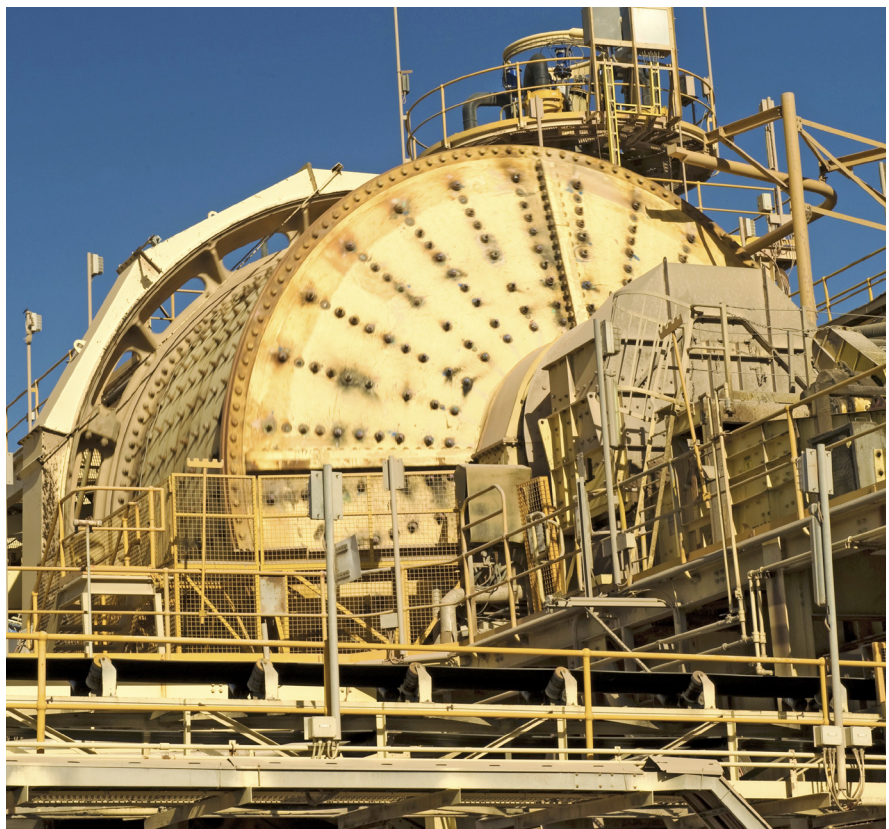
- Advanced technical knowledge and capabilities in metallurgy and mineral process engineering
- The ability to identify changes in design and operational strategies that lead to improved circuit performance and efficiencies, while reducing the risk of subsequent plant trials
- Engineers equipped with the right tools and knowledge of international best practice in improving mine site performance

Mineral Comminution Circuits – Their Operation and Optimisation



One copy of the Monograph "Mineral Comminution Circuits – Their Operation and Optimisation" is given to each participant as part of the open course registration, with each in-house course receiving two copies per course delivery. Not included for remote courses.

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



Who should attend?

This course is suitable for metallurgists and engineers who wish to learn the principles of applying simulation to the design and optimisation of grinding and crushing circuits.

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