THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

JKTech

JKSimFloat Software Training

JKSimFloat models have been applied to over 100 flotation operations worldwide.

JKSimFloat is the global industry standard in simulation software for flotation plant operations. it enables users to optimise grade and recovery in flotation plant circuits.

The package is designed to service the needs of plant and project metallurgists, design engineers, researchers and consultants.

JKSimFloat is a powerful process simulation tool built around industrial-strength models developed at The University of Queensland's Julius Kruttschnitt Mineral Research Centre. It integrates tasks associated with data analysis, plant design and optimisation as well as circuit simulation focusing on sub-processes within the flotation process.

JKSimFloat provides a single platform that combines both the ore and the machine characteristics to predict and optimise the recovery and grade of the product.

Course outline

This course provides attendees with an overview of the AMIRA P9 flotation concepts, understanding of cell characterisation equipment available, methods for measuring and optimising flotation cells and circuits, and ways of obtaining more information out of current sampling and characterisation methods. It includes simulation exercises using JKSimFloat.

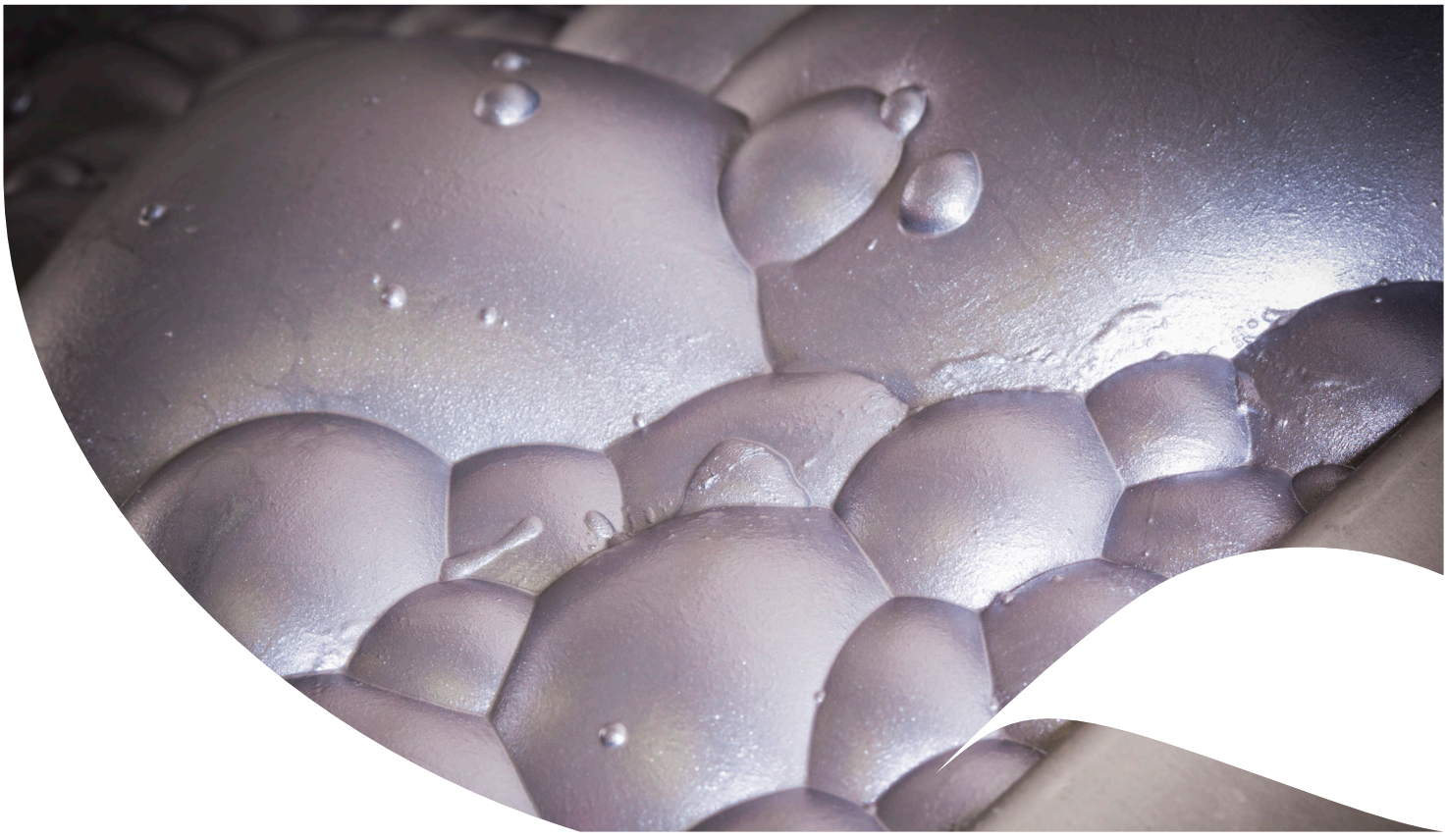
The topics covered include:

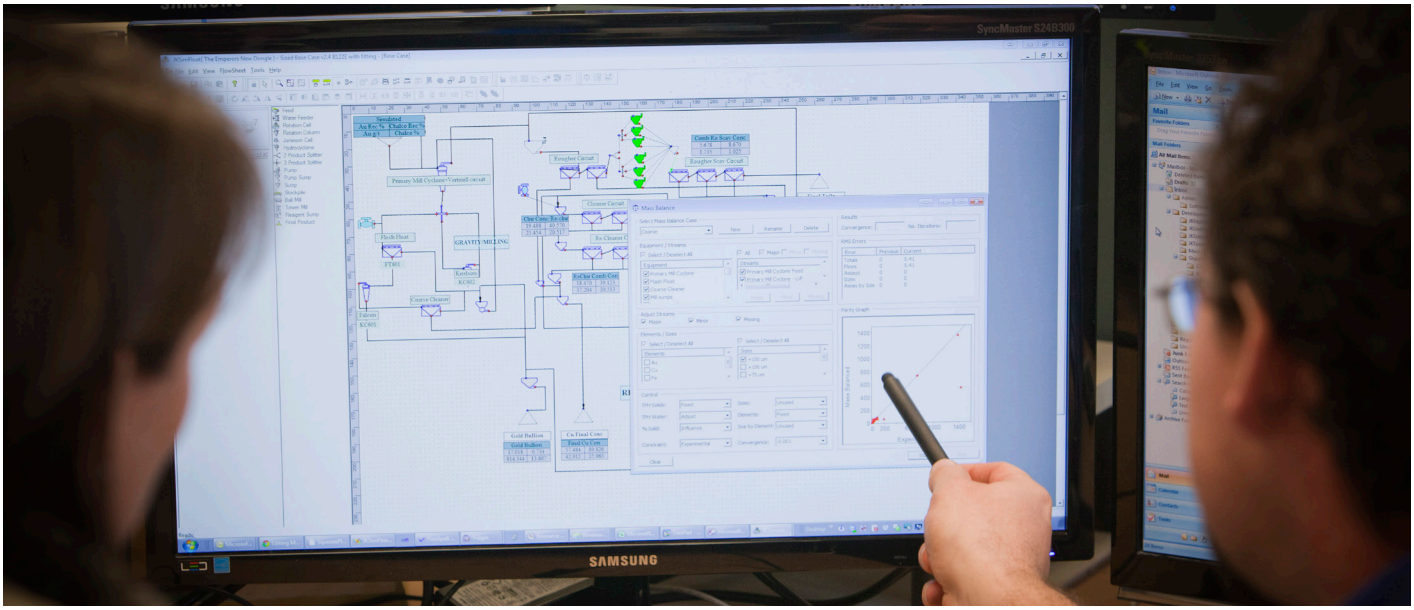
- Introduction to flotation optimisation
- Surveys and sampling
- Mechanics of flotation and cell hydrodynamics
- Froth recovery and entrainment
- Residence time
- Principles of Floatability component estimation
- Mass balancing, model fitting and simulation in JKSimFloat

This course is run in a series of modules, with tutorials and case studies after selected topics.

Course objectives

- Introduce the principles and development of the AMIRA P9 flotation model
- Introduce various techniques for measuring important parameters in industrial cells
- Flotation plant surveys and sampling techniques
- Demonstrate the effect of changing cell operating conditions on cell performance
- Introduce the features of JKSimFloat





Floatation circuit design

- Scale-up strategy to full scale flotation circuits from pilot scale tests
- Estimate future expansion needs

Optimisation of Circuit Configuration

- Evaluate process control strategies
- Evaluate effect of circuit disturbances
- Identify problem areas in the process circuit

Course Materials

All attendees receive a set of notes and further resource materials on USB.

Who should attend?

This course is suitable for metallurgists or engineers who wish to understand the principle of flotation modelling and apply process knowledge to analyse and optimise flotation circuits by simulation.

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

Benefits to companies

- Accelerated performance and productivity of engineers in their early careers
- A developing culture of process improvement
- A cohort of future technical leaders with the ability to analyse and solve problems
- Engineers equipped with the right tools and knowledge of international best practice in improving mine site performance

Benefits to participants

- Advanced technical knowledge and capabilities in metallurgy and mineral process engineering
- The skills to negotiate workplace-related tasks and employ analytical techniques in problem solving in accordance with industry best practice
- Confidence to generate ideas, adapt to changing environments, identify problems, create solutions, innovate and improve current practices

JKTech Pty Ltd

P: +61 73365 5842
E: jktech@jktech.com.au
W: jktech.com.au/professional-development

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