Caspeo

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USIM PAC

The process engineer's toolbox

Process design

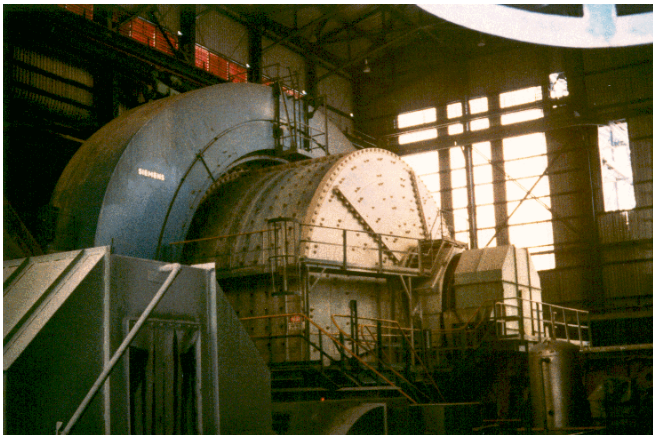
Define the main treatment stages to reach a given objective

Determine the forecasted material balance for each stream

Size the main equipment and define the settings

Estimate the investment and operating costs

Contribute to the technical and economical feasibility studies



New in version 3.2

Improved interface for unit management of the model parameters

Additional models:

Chemical Reactions per size class, Screen Double and Triple Deck, Cone Crusher, Knelson, Sluice, Hydrosizer, DDLIMS, Leaching and precipitation

Updated models:

Crusher, Hydrocyclone, SAG/AG mill, Pebble mill, Flotation, Thickener

Process optimization

Increase the process capacity

Improve the final product quality

Savings reduced energy, water and reagents consumption

Evaluate and limit environmental impact

Adapt the process to the raw material variability

Increase reactivity, facing up to the market variations

Process monitoring

Control the performances

Plant survey

Mineral industry for all types of minerals and ores

Iron, base metals, sulfide and oxidized ores

Precious metals, Diamonds

Phosphate, potash

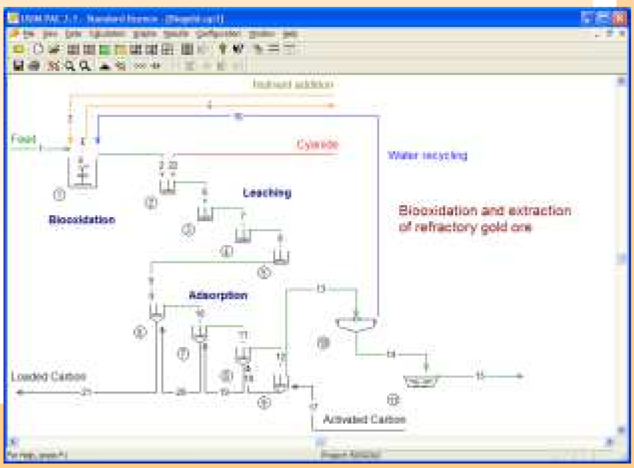
Industrial minerals (kaolin, feldspar, carbonate, talc…)

Building materials: aggregates, cement, plaster

Uranium, coal

Other industries

Industrial and urban waste management



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A user-friendly interface focused on process engineers' tools

The flowsheet is easily drawn using a set of unit operation icons.

Clicking on a stream gives access to:

- The material flowrate, size distribution and composition;
- The size distribution and washability curve.

Clicking on a unit operation gives access to:

- The unit size and settings, the mathematical model parameters;
- The partition curve and the split curve.

Tables permit display of global plant performances.

A library of unit operation mathematical models

Crushing, grinding, attrition, fine grinding; Size classification, gravity and magnetic separation, flotation;

Solid-liquid separation: settling, thickening, filtration ;

Hydrometallurgy : leaching, CIP, CIL, precipitation, solvent extraction, electrowinning

Powerful algorithms and methodologies for:

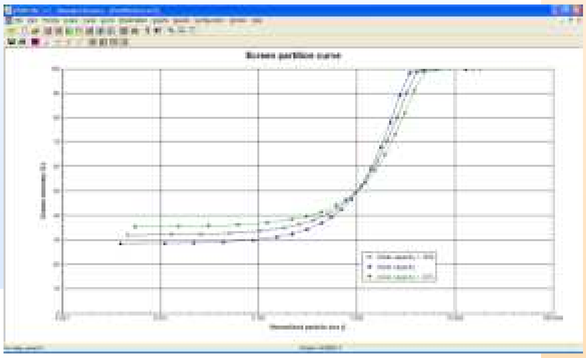
Process simulation;

Equipment sizing;

Equipment setting optimization;

Capital cost estimation;

Sensitivity analysis to evaluate process flexibility.



Better knowledge of the process

Reduction of pilot and industrial tests

Identification of bottlenecks

Fast evaluation of configurations

Evaluation and use of the process flexibility

Increase in reactivity

Reduce consumption of reagents, energy and water

Productivity increase

Cost reduction

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