SELFRAG
HIGH VOLTAGE PULSE
POWER FRAGMENTATION

SEPTEMBER 2012

TIME TO CHANGE YOUR MIND WHEN IT COMES TO COMMINUTION!

How is your company solving the future challenges in Comminution? Is there cost pressure? Still using out dated comminution technologies?

These are the questions everyone in the mining and minerals processing industry will have to face sooner or later.

Nowadays most mining companies are confronted with declining head grades and increasing ore hardness. So to extract the same amount of metal/mineral, more energy is needed, which increases the costs and questions the economics of existing operations and prospective deposits.

The breakthrough technology developed by SELFRAG weakens the ore considerably and improves liberation of the valuable minerals significantly.

Tests on different commodities ranging from base metals, precious metals and industrial minerals for top tier mining companies have been successfully run. Grindability data for ball milling indicates up to 30% reduction of Bond Work index for fine grinding of hard ores (BWi → 20kWh/t). Axb ore softness factor of coarse products were changed by up to 60% (from 30 to 55 Axb). SimMet- simulations indicate a large energy saving potential and/or a through-put increase of up to 30%.

These results have already convinced leading mining companies to regard SELFRAG technology as the future step-changing solution and are re-visiting up-gradation plans by adding SELFRAG in their milling circuits .

Be ahead of competition and move today towards more profitability and reduction of mine costs!

Continue reading on this topic:
New publications such as 'Factors affecting electrical comminution performance', The University of Queensland, Sustainable Minerals Institute, Julius Kruttschnitt Mineral Research Center, are available on our homepage www.selfrag.com
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Customers

The Julius Kruttschnitt Mineral Research Centre in Queensland, Australia owns a Selfrag lab since several years and has made great progress in their research. This has led to the following important publications (amongst others):

- Pre-weakening of mineral ores by high voltage pulses (Minerals Engineering 2011)
- Mineral liberation by high voltage pulses and conventional comminution with same specific energy levels (Minerals Engineering 2011)
- Factors affecting electrical comminution performance (Minerals Engineering 2012)

These publications can be downloaded on the Selfrag homepage: www.selfrag.com

SMI JKMRC
Julius Kruttschnitt Mineral Research Centre

R&D update
New product in final testing stage

A new Selfrag product is currently in the final testing stage. It is built mainly for size reduction in the mining and silicon industry. With an inverted process zone designed for bigger feed-in sizes (-400mm), a throughput of several tons per hour has been reached, while pulsing at 10Hz. The output material sizes can be regulated between 10 and 50mm. Further tests for controlled output sizes on 1-50mm are currently ongoing. Customized solutions will be ready for sale Q4 2012.

Applications:
Pre-weakening effect

Low energy introduction occurs size reduction and latest studies indicate a considerable enrichment of target material (pyrite, chalcopyrite, pendlandite and others) into the fraction -300um. The deportment includes enrichment of up to 20-30%. This fraction goes directly to floatation for best recovery of target material. This shows the unique liberation of the technology and a significant value gain for our clients.

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