

EKATO MINERALS PROCESSING

Innovative solutions for high pressure oxidative and acid leaching autoclaves, atmospheric leaching and other applications

EKATO

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More than 250,000 EKATO agitators are successfully operating worldwide in various industrial applications. EKATO's product range consists of efficient and tailor-made industrial agitators, entire agitator systems with reactor vessel, as well as complete process plants, which are individually designed for specific mixing requirements.

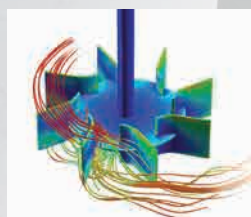
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Advanced Process Solutions



- More than 85 Years Experience
- Full Scope Engineering Services
- Scale-up Expertise
- Optimized Mixing Equipment

More information:



Your local contact:



EKATO Service Portfolio for Minerals Processing

- Analysis of mixing processes
- CFD simulations and testing from 3l to 100m³ vertical and 3l to 15m³ horizontal vessels
- Design optimization, e.g. best locations for acid feed pipes, slurry draw-off positions and gas feed pipes
- Stress calculations of vessels and internals using FEA
- Consulting, revamping and modernization, as well as training at customer's plant site
- Worldwide service facilities with full after-sales service
- Special impeller designs and wear resistant materials

EKATO Lab Testing

- Mixing time characteristics
- Solids suspension
- Residence time distributions
- Mass transfer
- Flow velocities
- Power numbers ungassed / gassed
- Radial forces on the shaft
- Rheological properties
- Particle characterization (microscopy)
- Validation of CFD models
- Scale-up to commercial scale designs

The Innovative EKATO Solutions for Horizontal Autoclaves

Pressure Oxidation (POX)

- Flow-optimized Rushton impeller design (EPOX)
- Corrosion and wear resistant materials
- Optimization of the feed point designs and locations (slurry, oxygen)
- Basic / detailed engineering of autoclave internals
- Specifically designed EKATO mechanical seals and seal supply systems for mining autoclaves

Benefits:

- Efficient mixing, blending and gas dispersion
- High oxygen transfer rate during acidic pressure oxidation (POX) of the sulphides
- Minimized abrasion of the impeller blades

High Pressure Acid Leach (HPAL)

- Flow optimized EKATO hydrofoil impeller (EPAL)
- Corrosion and wear resistant materials
- Optimization of the feed point designs and locations (slurry, acid)
- Basic / detailed engineering of autoclave internals
- Specifically designed EKATO mechanical seals and seal supply systems for mining autoclaves

Benefits:

- Highly efficient, homogeneous solids suspension
- Rapid blending of the slurry and sulfuric acid
- Power reductions up to 30% can be achieved compared to standard impeller systems

Atmospheric Leach

EKATO specializes in design of agitator systems for specific gaseous mass transfer requirements as for Bio-Leaching. EKATO systems combine agitator and sparger designs that enable extremely high gassing rates without affecting solids suspension, and at the same time minimizing the required installed power for the agitator.

Other Applications

EKATO supplies agitators for a wide range of applications: CIL, CIP, CN-Detox, Autoclave Feed Tanks, Neutralization Tanks, Hydrogen Reduction Autoclaves, Sulphide Pressure Leach Autoclaves, Sulphide Precipitation Autoclaves, Storage Tanks, Urban Mining, etc.

Specific Impeller Types

- Flow optimized impeller geometries, reduced wear = **Type (R)**
- Specially designed ceramic impellers, substantially reduced wear = **Type (C)**
- Gas sparger integrated into the impeller, no plugging = **Type (+)**

Sealing Systems

Best matched sealing systems for agitators, engineered and build by EKATO. Everything from one source.

- Extra robust double-acting seals
- Seal installation panel with pressure compensator
- Stand alone supply skids for: cooling, flushing, automatic refilling

