

Special oxide pilot plant

Demonstrate your process with the ANDRITZ METALS spray roast technology



www.andritz.com



Experts in process development Are you looking for a closed loop leaching process? Do you have unused metal ore fractions or solutions?

Together we develop your process and prove technical feasibility on a pilot scale. We produce valuable metal oxide samples for product demonstration and further investigation. Benefit from our expertise!



Features

- Spray roast acid regeneration pilot plant
- Test production of metal oxides (Fe, Mg, Co, Ni, Mn, Al, special and mixed oxides)
- Regeneration of HCI, HNO₃ and HF
- Modular design to adapt for your specific test requirements
- Capacity: 40-70 l/h of metal solution (typical 100g Me/l)
- Location: Vienna, Austria

ferrite **Ni** mixed oxides **Fe** magnesia synthetic rutile mining processes waste processing **titanium oxide TiO**₂ FeCl₃ ore beneficiation **Mg** ilmenite **Co** FeCl₂ alumina FeCl₂ **Mn** brine synthetic rutile magnesia ferrous chloride **Al** serpentine **nickel** iron cobalt ferric chloride magnesium



Processed feed solutions

DECOMPOSITION IN THE REACTOR (EXAMPLE)			
Iron: 2 FeCl ₂ + 2 H ₂ O + $\frac{1}{2}$ O ₂		Fe ₂ O ₃ + 4 HCl	
Nickel: NiCl ₂ + H ₂ O		NiO + 2 HCl	
Cobalt: 3 CoCl ₂ + 3 H ₂ O + ½ O ₂	>	Co ₃ O ₄ + 6 HCl	

Established technology from steel pickling process ...

HYDROCHLORIC ACID REGENERATION PLANTS		
Plants built	> 200	
Туре	Spray roaster, Fluid bed	
Standard single plant capacity	up to 20,000 l/h	

PYROMARS: MIXED ACID REGENERATION PLANTS (HNO ₃ + HF)		
Plants built	22	
Туре	Special spray roaster	
Standard single plant capacity	up to 8,500 l/h	

METAL OXIDE PLANTS		
Plants built	18	
Туре	Special spray roaster	
Standard single plant capacity	up to 25,000 l/h	

... for magnesium oxide, nickel oxide, cobalt oxide, aluminum oxide, mixed oxides, etc.

Make our experience your advantage



ANDRITZ METALS spray roast pilot plant





▲ Spray roast metal oxide

ANDRITZ METALS is one of the leading global suppliers of complete lines for the production and further processing of coldrolled carbon steel, stainless steel, aluminium and other non-ferrous metal strip. These lines consist of equipment for cold rolling, heat treatment, surface treatment, strip coating and finishing, punching and deep drawing, laser and resistance welding, and for the regeneration of pickling acid. ANDRITZ METALS also supplies turnkey industrial furnace systems for thermal processes, such as heat treatment of slabs and forged pieces, as well as refining furnaces for the copper industry.

AUSTRIA

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