



Solutions for Alumina Refineries

Leading evaporation and precipitation technologies

GEA has provided innovative solutions in the alumina market for more than 100 years. We combine our extensive expertise in evaporation and precipitation with research and development, to generate added value with respect to both process and production. Our process designs are based on our own know-how. Our aim is to offer innovative but proven solutions which respond to our customer's needs in evaporation, corrosive applications and reduction in energy consumption. Our strength is the global cost effectiveness and long term reliability of our systems. GEA has a team of experts in process & mechanical engineering, 2D/3D Drawings, R&D, instrumentation and control, erection and services.

GEA's expertise has been gained from industrial operating plants as well as from numerous tests carried out in our development centers to accompany the process design with laboratorial scale investigations, process simulations as well as pilot plant testing before scale-up to the industrial phase.

GEA has supplied more than 130 evaporation lines to the alumina market with a total evaporation capacity of about 14,500 t/h - which is more than 1/3 of the world alumina production.

Leading evaporation and precipitation technologies for the alumina market

Caustic Liquor Concentration

- Multiple effect evaporation units with associated flash tanks
- Multi flash train evaporation

Liquor Purification

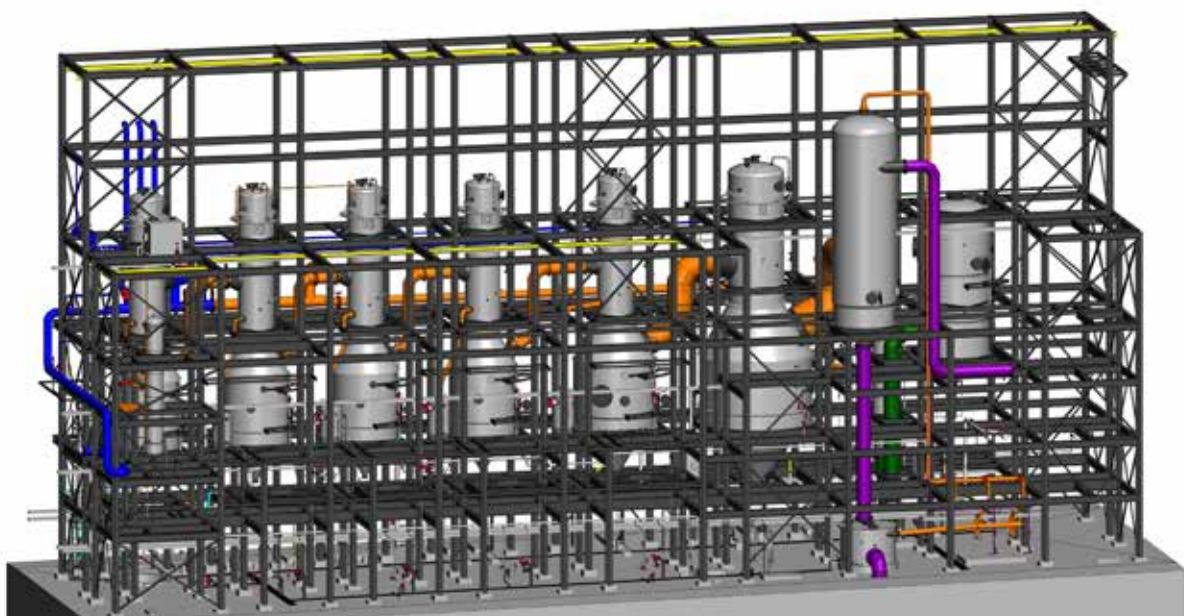
- Expertise on salting out technologies
- Salting out units (carbonates, oxalates, sulphates,...)
- Liquor burning units (organic impurities)

Energy Savings

- High energy savings by using Mechanical Vapor Recompression (MVR), Thermal Vapor Recompression (TVR), multiple effects, multiflash
- Energy optimization by coupling Spent Liquor Evaporation (SLE) & Salting Out Evaporation (SOE) technologies
- Re-use of the vapor of blow off tanks

Service & Consultancy

- Laboratory, semi-industrial pilots, test center
- Design and project management
- In-house global expertise
- Skids, modular & tailor-made units
- Plant & process optimization
- Revamping, debottlenecking...



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