

# Process for obtaining ferric oxide from aquos solutions containing iron



Energiac

Sustainable processes

## Description

This technology allows recovering iron as iron oxide with high purity, instead of producing no commercial iron-waste. Iron oxide without impurities such as sulfur, phosphorus, silicon and others decreases the cost of steelmaking. The process includes the following benefits:

- ✓ Purging formation or bleeds to control ferrous iron in hydrometallurgical processes is avoided.
- ✓ The exchange of iron for acid in the ferriferous solution allows its reuse.
- ✓ It prevents the buildup of iron containing toxic or valuable metals.
- ✓ The disposal costs of residues decreases.
- ✓ It only produces pure powder iron oxide commercially valuable.
- ✓ No fossil fuels are consumed.
- ✓ It does not require additional power.
- ✓ It does not generate greenhouse gases.
- ✓ It increases the efficiency of electrolysis and leaches.
- ✓ It can take scrap metal and waste of the

process.

## Application

The proposed process allows the recovering of ferric oxide from aqueous solutions steel pickling, leach solutions, copper bioleaching, and intermediate solutions for obtaining vanadium, copper impure electrolyte, solutions of acid drainage, solutions of hydrometallurgical processes and other ferrous solutions.

## Stage of development

The process was tested at laboratory scale with successful results.

## IP status

Patent application No. MX/a/2012/000452.

## Inventor

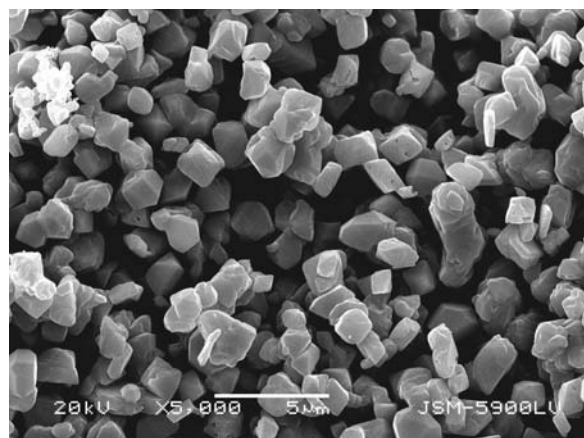
Dr. Antonio Barrera Godínez.  
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## Market potential

The increasing demand of raw materials for construction in developed countries makes the iron oxide an excellent alternative for producer countries due to its high price.

## Transferring conditions

- ✓ Technological development agreement (optional).
- ✓ Licensing (includes front payment and royalties)



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