

ALMA OXI Fenton

Oxidation process according to Fenton



The **ALMA OXI Fenton** process is an advanced oxidation process (AOP process) and represents a highly effective method for eliminating poorly degradable substances through the targeted addition of iron(II)sulphate and hydrogen peroxide in a two-stage, mixed reactor. The controlled addition of iron(II)sulphate in a defined pH range produces highly reactive hydroxyl radicals from the hydrogen peroxide. These radicals act as oxidizing agents and break down molecular structures that are difficult to biodegrade, which are then bound in a sludge floc. The two-stage design of the reactor optimizes the consumption of ferrous sulfate, ensuring a cost-efficient use of treatment agents. This advanced technology is characterized by its effective and reliable removal of trace substances, PFAS, AOX, hydrocarbons and pharmaceutical residues.

Applications

- Trace substances removal
- Detoxification and decolorization
- Textile industry
- Pharmaceutical industry
- Paint and coatings industry
- Chemical industry



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Specifications

- Hydraulic capacity of 20-1,000 m³/d
- Elimination efficiency of > 90% measured against selected trace substances
- Reactors made of stainless steel or PE
- High-performance agitators
- Integrated control via 9" touch panel

Advantages

- Low energy requirement
- As batch or continuous system
- Effective removal of PFAs and PAHs, organic complexing agents
- Design based on preliminary investigations

Reference plant





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ALMAWATECH GmbH - Your plant manufacturer and service provider in industrial water and wastewater technology offers everything from a single source

**Analysis &
Optimization**

**Planning &
Consulting**






**Water
chemicals**

**Operations
Management**








Plant engineering

Wastewater and process water

-  Treatment for direct and indirect dischargers
-  Pre- and post-treatment of wastewater
-  Process water Recycling
-  Ultrapure water production
-  Individual system solutions for all branches of industry

Procedure

-  Biological (aerobic/ anaerobic/ anoxic)
-  Precipitation, flocculation and neutralization
-  Filtration & reverse osmosis
-  Oxidation & hygienization
-  Modular systems

Specialized water chemicals from ALMAWATECH for wastewater applications, cooling water circuits, membrane systems and boiler plants.