

Decompose and treat persistent organic substances, that cannot be remove completely by biological treatment in the wastewater.

ELCAT™: Electro Catalytic Treatment System

Features

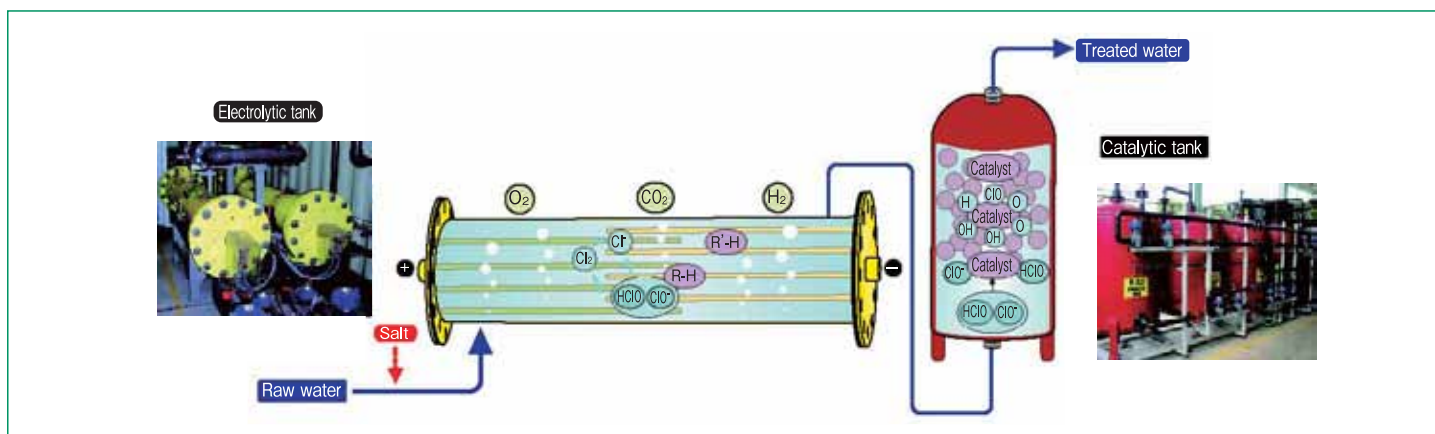
- Generates hypochlorous acid by adding salt.
 - More Economical than the addition of hypochlorous acid (for a reduction in running cost)
- It is Possible to treat even persistent organic substances that cannot be remove completely by biological treatment.

Overview

(Technical principles, actions, etc.)

The electro catalytic treatment system ELCAT™ is wastewater processing equipment that uses a combined process with an electrolytic tank and catalytic tank.

This system decomposes persistent organic substances efficiently at two stages, i.e., the electrolytic tank generates hypochlorous acid and oxidizes the persistent organic substances in wastewater, such as phenols, cyanide, dye, and detergent. Then the catalytic tank generates radicals and the oxidized organic substances into single molecular gases.



Outline of ELCAT Technology

Introductory Track Record

- An Indonesian synthetic fiber plant

Effects

Efficiently Processes Persistent Organic Substances

The oxidation process in the electrolytic tank converts persistent organic substances into easy to decompose organic substances. Then the radical reaction in the catalytic tank decomposes the organic substances.

Energy and Cost Saving

An energy- and cost-saving method that processes wastewater with optimum electric power according as the quality of the wastewater.

Decomposes Persistent Organic Substances in Wastewater with Wide Range of water quality

The system treats wastewater with wide range of water quality by adjusting the operation condition, according as the quality of wastewater.

- Recycling of industrial wastewater and purification of drinking water
- Post-biotreatment (removal of persistent organic substances after biotreatment)

Target materials

Dye, detergent, phenols, cyanide, insecticides, herbicides, etc.

Efficiency (typical examples)

Dye	98~100%
Detergent	75~85%
Phenol	90~99.9%

Application Example

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*Note: This publication introduces examples of technologies and products believed useful towards solving environmental and energy issues. In no way does it constitute guarantees concerning their transfer or sale.

Applicable field
 Recycling of industrial wastewater / Treatment of wastewater and sewage
 discharged from factories, buildings, livestock farms, and agricultural farms

Water

Energy saving/Energy recovery

ENERGY
Energy storage/Energy creation

New energy

Waste disposal/
Recycling/
Resource saving

Air

Soil

Other