

Electrolytic reactor for purification of industrial effluents

Title of technology to be offered	Removal of pollutants from industrial effluents by electrochemical technology
Type of technology	Electrochemical
Area of technology	Environment
Details of collaborating agency	N.A
Uses	Removal of pollutants from wastewater
Salient features	<ul style="list-style-type: none"> - Micron size and sub micron size particles including low density fats and proteins dispersed in water can be easily separated. - Dissolved organic compounds in water can be effectively oxidized and removed. - No need for external addition of oxidizing agents/chemicals. - Require less space and easy construction. - Pathogenic bacteria present in wastewater can be simultaneously eliminated. - The resultant water can be recycled.
Scale of development	Pilot scale (1M ³ /h)
Major raw materials	Aluminum rods and plates, steel rods and plates, stainless steel and Ti based rods and plates, perspex or poly propylene sheet.
Major plant equipment and machinery	Conditioner, pumps, rectifier/DC Power supply unit, volves.
Details of specification/application	The technology is useful for the purification of wastewater generated from different industries.
Status of development	Pilot plant was designed and the technology was demonstrated in the tannery industries situated in Ambur, Erode and Chennai.
Ecological/Environmental impact	Nil
Patenting details	Electrolytic reactor for purification of industrial effluents (Ref. No: PAT-313/2003) Applied for patent vide letter no. NML/BMD/PAT/312-315/CR-32/2003 Dated 09 th September 2003.

Commercialization status	Yet to be commercialized.
Techno economics	<p>The techno economics depends on the complexity of the wastewater to be treated. To process typical tannery wastewater, the energy consumption is 5.0 kWh/m³ of wastewater.</p> <p>The cost of capital equipment : Rs 10.0 lakhs (plant to treat 1M³/h).</p>
Key words	Suspended solids, COD, Electrocoagulation, electrooxidation, purification, effluents, wastewater, wastewater treatment

Electrolytic process for the purification of wastewater

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Type of technology	Electrochemical
Area of technology	Environment
Details of collaborating agency	N.A
Uses	Removal of pollutants from wastewater
Salient features	<ul style="list-style-type: none"> - Micron size and sub micron size particles including low density fats and proteins dispersed in water can be easily separated. - Dissolved organic compounds in water can be effectively oxidized and removed. - No need for external addition of oxidizing agents/chemicals. - Require less space and easy construction. - Pathogenic bacteria present in wastewater can be simultaneously eliminated. - The resultant water can be recycled.
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Details of specification/application	The technology is useful for the purification of wastewater generated from different industries.
Status of development	Pilot plant was designed and the technology

	was demonstrated in the tannery industries situated in Ambur, Erode and Chennai.
Ecological/Environmental impact	Nil
Patenting details	Electrolytic process for the purification of wastewater (Ref. No: PAT-314/2003) Applied for patent vide letter no. NML/BMD/PAT/312-315/CR-32/2003 Dated 09 th September 2003.
Commercialization status	Yet to be commercialized.
Techno economics	<p>The techno economics depends on the complexity of the wastewater to be treated. To process typical tannery wastewater, the energy consumption is 5.0 kWh/m³ of wastewater.</p> <p>The cost of capital equipment : Rs 10.0 lakhs (plant to treat 1M³/h).</p>
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