CR-Enviro Case Study Application

Electrocoagulation Waste Water Treatment Plant

ENGINEERING SOLUTIONS FOR OUR ENVIRONMENT, INDUSTRY AND COMMUNITY

Case Study Application

CR-Enviro means Cost Reduction on your Environmental Management!

Cost reduction is the process used by companies to reduce their costs and increase their profits. Depending on a company's services or product, the strategies can vary. Every decision in the product development process affects cost.

As one of the leader for EPC for Hazardous Waste (Limbah B3) treatment plant in Indonesia, CR-Enviro always try to keep its value in delivering high quality products and services to the customer to help customer in reducing their operational cost. One of cost reduction case study happens at one of the largest automotive spare part industry based in Jakarta – Indonesia is having issue with their 12 m3/day waste water treatment plant. Their current traditional treatment utilizing chemical treatment cannot fulfill the local effluent parameter required by the government regulation. The main waste water source comes from electroplating, spray booth paint, machining, coolant, boiler blowdown, tank wash, cooling tower waste, degreasing and domestic waste water.

The substitution of conventional chemical system into advanced electrocoagulation waste water system fabricated by CR-Enviro have created significant cost reduction within their daily and monthly operating cost. The company have recorded cost reduction rates at almost 26% compared to previous conventional technology.

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Below is the comparison table result which is submitted from our clients based on their monthly record for waste water treatment:

Conventional Waste Water Treatment Plant

Component	Cost	Unit	Vol	Unit	Total	Unit
Chemicals Supplied	4,500	M^3	288	M3/day	1,296,000	Rp/day
NaOH						
CaO						
PAC						
Caustic						
Polymer						
Sludge Waste Treatment	1,200,000	Ton	4.2	Ton/day	5,040,000	Rp/day
Coolant Waste Treatment	1,400,000	M^3	1.5	M3/ day	2,100,000	Rp/day
			Total Cost	**Rp.**	**8,436,000**	**/day**
				Rp.	**253,080,000**	**/month**

Advanced Electrocoagulation Waste Water Treatment Plant

Component	Cost	Unit	Vol	Unit	Total	Unit
Electricity	1,300	Rp/kWH	80	kWH	2,496,000	Rp/day
Chemicals Supplied	1,500	M^3	288	M3/day	432,000	Rp/day
NaOH						
CaO						
Polymer						
Electrode Replacement	4,800	M^3	288	M3/day	1,382,400	Rp/day
Sludge Waste Treatment	1,200,000	Ton	1.6	Ton/day	1,920,000	Rp/day
			Total Cost	**Rp.**	**6,230,400**	**/day**
				Rp.	**186,912,000**	**/month**

Cost Reduction	**66,168,000**	**Rp/Month**
% Efficiency	**26%**	

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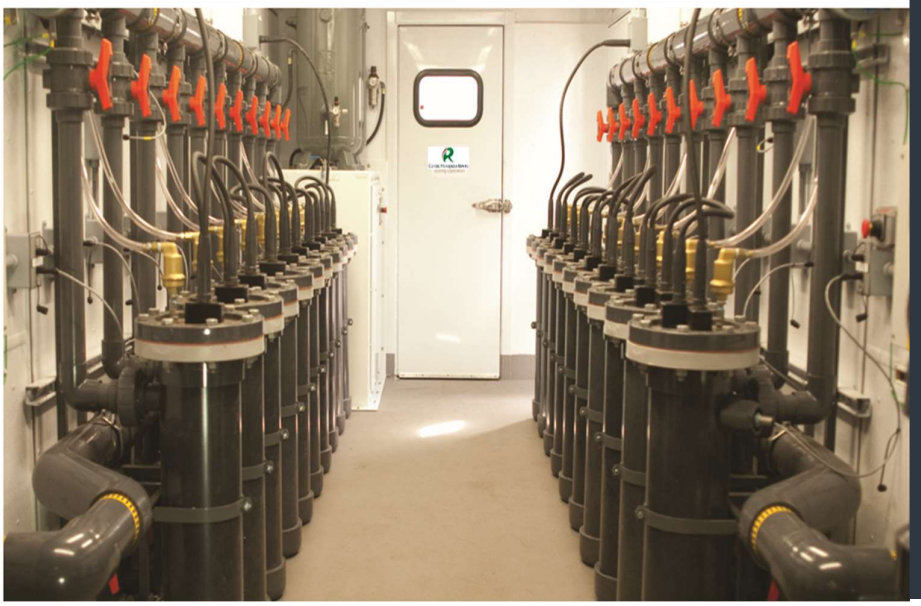

Product Information.

The CONTINUOUS SYSTEM Electrocoagulation waste water treatment process uses an electric current applied across metal plates to remove various contaminants from water. Heavy metals (ions) and colloids (organics and inorganics) are primarily held in solution by electrical charges and particle size. By applying an electrical charge to a solution of contaminated water, electrocoagulation destabilizes the charges on the various particles and generates a coagulation reaction.

FEATURES

- Fully-integrated automation & touch-screen controls.
- On-board water quality instruments with controlled discharge mechanics.
- Purpose-built for each application.

APPLICATIONS

- Hazardous waste and medical treatment.
- Wide range of industry application such as pharmacy, oil and gas, mining, hospitals, hotels, automotive, etc.

BENEFITS

- Non-selective treatment process with broad.
- Reduction in residual solids/sludge.
- No addition to TDS concentrations.
- Third-party verified safe for acute & chronic.