

MODERNWATER

Aguacure EC

Chemical-free water and wastewater treatment

Modern Water's pioneering Electro-Coagulation (EC) system, Aguacure EC, provides a low energy, chemical free alternative to chemical coagulation. Sacrificial electrodes donate ions, typically iron or aluminium, into the water to be treated in continuous flow. EC can effectively treat process, potable and waste waters to remove heavy metals, suspended solids and salts such as phosphate.

- Optimal floc formation
- High coagulant dosing efficiency
- Reduced downstream chemical requirements
- Even electrode wear with metal utilisation to 95%
- Quick and easy electrode replacement
- Minimal fouling or passivation of electrodes
- Plant availability typically 98%
- Reduced energy consumption
- Cleaning not required
- No handling of contaminated material on service and maintenance

Traditional EC systems use the flow of current between metallic plates immersed in an effluent stream to generate in-situ flocculent ions for contaminant removal, removing suspended and dissolved contaminants from water and wastewater whilst reducing or eliminating bacteria and viruses. Aguacure's new* system eliminates loss of process efficiency due to passivation while delivering improvements in floc performance through the control of the environment in which the floc is generated.

Aguacure EC offers major environmental and financial benefits over competitor technologies. The equipment has a small footprint and low power consumption and its versatility allows use in a wide variety of wastewater applications including those with high levels of suspended solids, fats and greases.

**Patent-pending*



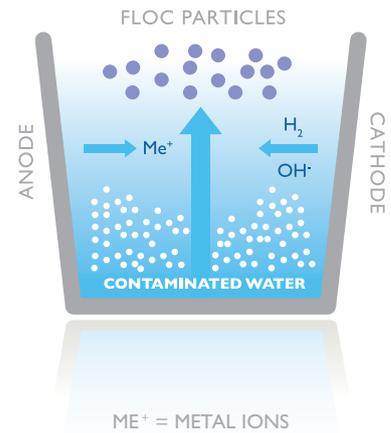
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Process explained

Separation of particulate matter, both colloidal and dissolved, from water and wastewater conventionally uses chemical coagulation. In this process chemical additives neutralise the electrostatic charges that stabilise suspensions, causing the aggregation of matter and facilitating the separation of solids.

An Electro-Coagulation (EC) system uses the flow of current between two metallic plates to generate the necessary ions (Fe or Al) for particle destabilisation and floc formation. As the ions released from the metal surfaces react with contaminants in solution, coagulation occurs. The flocculated contaminants can be settled, skimmed or filtered depending upon the application.



TYPICAL HARDWARE SPECIFICATIONS

Flowrate	1-10 m ³ /h
Power Consumption	0.02 – 0.5 kWh/m ³
Unit Footprint	0.5 m ²
Module Dimensions	250 x 265 x 900 mm
Connections	½" BSP
Electrode Pack Weight	15 kg
Metal Utilisation	95%
Electrode Material	Steel or Aluminium

Applications

- Phosphate removal
- Marine waste water
- Colour removal
- Wastewater polishing
- Metal finishing
- Vehicle washing
- Landfill leachate
- Acid mine drainage
- Aggregate recycling
- Contaminated land recovery



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