MILESTONE
CHLORINATION TECHNOLOGIES

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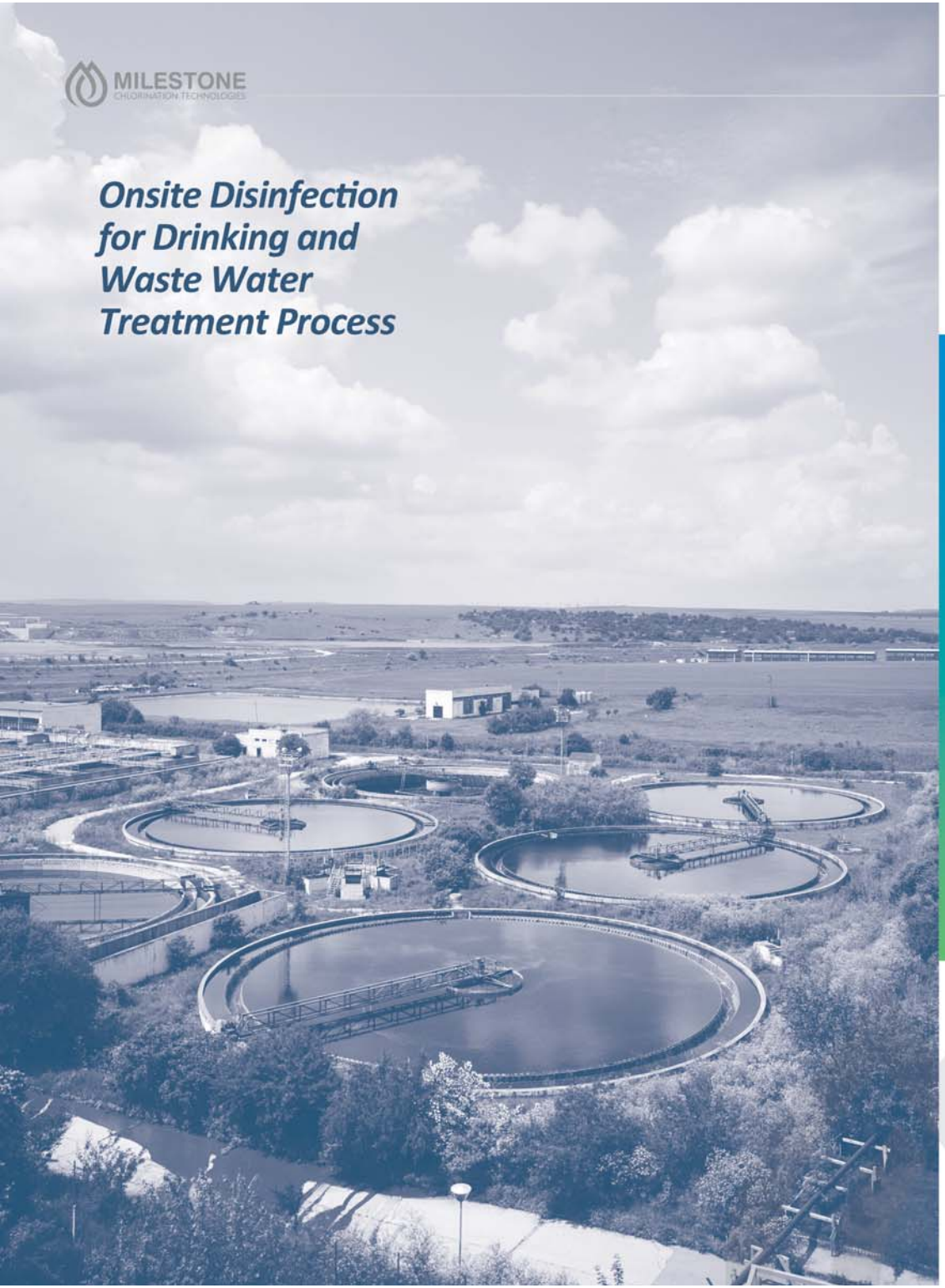
CHLORINATION TECHNOLOGIES

BRINE ELECTRO CHLORINATION SYSTEMS

STONECHLOR – B

On-site hypochlorite generation from salt for drinking water supply disinfection.

Onsite Disinfection for Drinking and Waste Water Treatment Process



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About Us

- Milestone Chlorination Technologies LLC. (MCT) is a growth company formed by group of experiences engineers and managers which specialized in the industry of chlorination, we provide specialized solutions in the chlorination field including electro chlorination, chlorine dioxide and membrane chlorination in application of anti-fouling and drinking water supply.

- MCT is a company based in China, specializing in Chlorination Titanium electrolyzer design, also electro chlorination for water treatment process design, consultant, engineering, development and manufacturing. Related services for chlorination electrolytic cell and electro chlorination system, such as electrolyzer & electro chlorination design, on-site inspection services, refurbishment, upgrade and replacement of electro chlorination cell for seawater and brine electrolysis are also parts of our specialty.

STONECHLOR – B Electro Chlorination System

StoneChlor – B series Electro Chlorination Package is designed for land based drinking water supply disinfection application that uses sodium chloride (NaCl) known as salt for disinfection or some other application may not have access to seawater for the formation of bio fouling from the various organisms.

The purpose of on-site generation sodium hypochlorite solution from salt is to economically and safety produce this powerful biocide and disinfecting agent for plant using.

Salt based electro chlorinator is generally applied for drinking water supply application, and being widely applied for the reason of its economic operating cost, as the raw material is easily to get and only electricity as well and also safe operation environment than Chlorine Gas and High strength (concentration) Sodium Hypochlorite solution.

Safest and Most Cost Effective Chlorination Methods

Process Description

Comparing dangerous operation environment caused by Chlorine Gas and High strength sodium hypochlorite solution, which may cause serious corrosion and extremely toxic environment to human body. The brine electro chlorination system packages play an effective role in optimizing operating cost, safe working environment and disinfection effect.

The fresh water goes to the system pass through the water softener within or outside the package to remove the Ca^{2+} and Mg^{2+} in the water, which can achieve less to do acid washing and longer life span.

Sodium chloride or known as salt is fed into the salt saturator, the saturator mixes the water with particle sodium chloride into saturated brine solutions.

The fresh water pump and saturated brine pump deliver the solution in certain flow rate to mix into 2.5% to 3.5% brine solution.

The diluted brine solution pass through the electrolyzer which has fed DC electrical supply from the package rectifier.

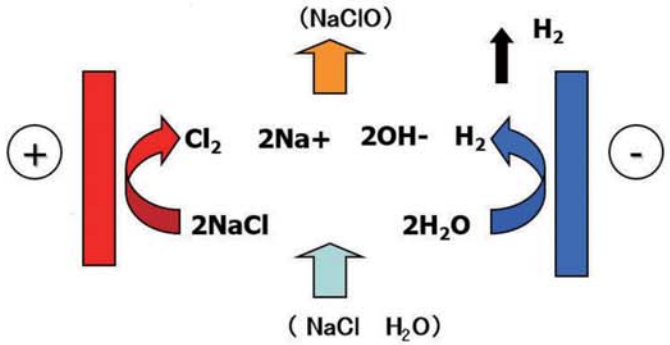
The rectifier is designed specifically for the requirements of the installed electrolyzers. It converts the AC input voltage into the required low voltage DC current and regulates this output to a selected and controlled level.

Electrolysis process takes place within the electrolyzer as per the following equation:

At the anode: $2\,Cl^- - 2\,e \rightarrow Cl_2$

At the cathode: $2\,Na^+ + 2\,H_2O + 2\,e \rightarrow 2\,NaOH + H_2$

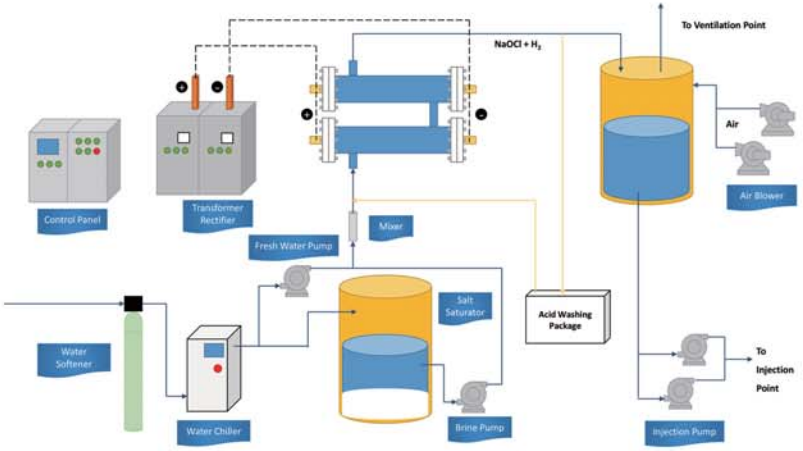
Overall: $2\,NaCl + 2\,H_2O \rightarrow 2\,NaOCl + 2\,H_2$



Through the electrolysis process the package produces the required amount of sodium hypochlorite together with the by-product, hydrogen gas.

The solution with hydrogen gas are fed into degassing tank and the air blower blow the air into the tank to dilute, the diluted hydrogen gas vent to open atmosphere.

The hydrogen free solution containing sodium hypochlorite is then dosed into the injection point through dosing pumps or gravity.



Typical StoneChlor – B Brine Electro Chlorination System

Typical StoneChlor – B Electro Chlorination System Scope of Supply

- Water Softener
- Water Chiller (Options to select)
- Salt Saturator
- Fresh Water & Saturated Brine Pump
- Electrolyzer
- Rectifier
- Local Control Panel
- Storage Tank
- Air Blower
- Injection Pump
- Acid Washing Package

Application

- Drinking Water Supply
- Pool Disinfection
- Desalination Plant
- Egg hatchery

Beneficial Client With Onsite Electro Chlorination Technology

Technical Benefit & Features

Electrolyzer OEM

Working with the China major anode and specialty coating manufacturer, we have access to the leading industry electrolyzers with over 30 years' service.

Operating Cost

By using the raw material of seawater and electricity, the electro chlorination system considered as the most cost-effective way of controlling marine growth for power plant, petrochemical plant and related industrial application.

Safety

Producing sodium hypochlorite on site reduces the requirement for using liquid chlorine solutions. The impracticality of shipping, storing and dosing large volumes of bulk hypochlorite for places have no access to sodium hypochlorite solution. Electro chlorination is the industry preferred method of bio-fouling control.

On site Production

Control of the complete technological process with a central PLC control system. Visualization of the entire process and logging of all key parameters of alarms. Any parts of the process of the system could also be adjusted by PLC.

Acid washing

By applying acid washing technology for electrode to achieve long lifespan of the electrolyzers assembly. The electrolytic cell could achieve longer life span and maintain in good condition for continuous operation.

Process automation

Control of the complete technological process with a central PLC control system. Visualization of the entire process and logging of all key parameters of alarms. Any parts of the process of the system could also be adjusted by PLC.