

ON-SITE Sodium Hypochlorite Generating Systems

The on-site sodium hypochlorite generation (Electrochlorination) systems operate by the principle of electrolyzing the brine solution (NaCl) or sea water. On-site production of sodium hypochlorite is a proven, cost-effective, reliable and safe solution and eliminates the use of the hazardous disinfection chemicals such as gaseous chlorine, commercial sodium hypochlorite etc. Continuous production of disinfection solution reduces the formation of disinfection byproducts and improves the water quality. The system's flexibility makes for a robust disinfection system and quick system installation.



RT Marine® Seawater System

The Process

The seawater or brine solution enters the electrolyzer cells where a low voltage DC current is applied to produce sodium hypochlorite on-site. Hydrogen, an inert by-product generated during the process is discharged along with the hypo into the de-gassing tank and diluted using blower/fans and safely removed and vented to atmosphere. The sodium hypochlorite is safely stored in a storage tank designed to accommodate one or more day's system output. A metering pump or centrifugal pump injects the hypochlorite solution as needed.

Electrolyzer Cell

The heart of the onsite hypochlorite system is the electrolyzer, where hypochlorite solution is generated. Electrolyzers are designed by TiTan using state-of-the-art technology, optimizing both performance and disinfectant concentration to ensure customer satisfaction. TiTan offers plate, tube, disc and mesh plate as four different mechanical configurations of electrolyzers. The application, water characteristics and customer defined schemas are the considerable facts in the selection of a cell configuration.

System Flexibility

TiTan's onsite hypochlorite systems can be incorporated into automated chlorinator packages, single cell standard unit or packages & modular based large capacity units and can be supplied as skid mount or containerized, fully integrated package or as loose components. TiTan guarantees a high level of performance for every units and ensures rapid response to emergency repairs and recoating cells, upgrading to new technology, and integrating current systems with custom built modifications.

Mixed OXIDANT GENERATORS

APPLICATIONS

Oil & Gas

Desalination

Power

Cooling water/ Process water

Marine

Petrochemical

Mining

Water Treatment
(Industrial & Domestic)

Swimming Pool



INDUSTRIAL / MUNICIPAL WATER TREATMENT

RT CHLOR® system provides on-site, on-demand production of sodium hypochlorite solution from NaCl (commonsalt) brine solution and electricity. Typical application use for water disinfection in industries, municipalities, residential colonies, schools and other water bodies.

Electrolyzer : **KLOGOGEN®**

0.3 Kg to 1000 Kg per day



SEA WATER TREATMENT SYSTEM

RT CHLOR-S® systems are designed to produce Sodium Hypochlorite from seawater & electricity onsite. Applications are for industries using seawater for their cooling system such as in cooled power plants, petrochemical industries, LNG terminals, desalination facilities, & other coastal industries.

Electrolyzer : **KLOGOGEN-S®** / *Hypo-Pac®*

1Kg to 10000 Kg per day



MARINE GROWTH PREVENTION SYSTEM

RT MARINE™, an environmentally friendly system designed to give continuous, trouble-free protection against marine bio-fouling for seawater circulation systems in fire water & process cooling system. Systems are designed insite varying levels of instrumentation & meets demanding hazardous area classification needs.

Electrolyzer : **Cloromarine®** / *Hypo-Pac®*

0.3 Kg to 1500 Kg per day



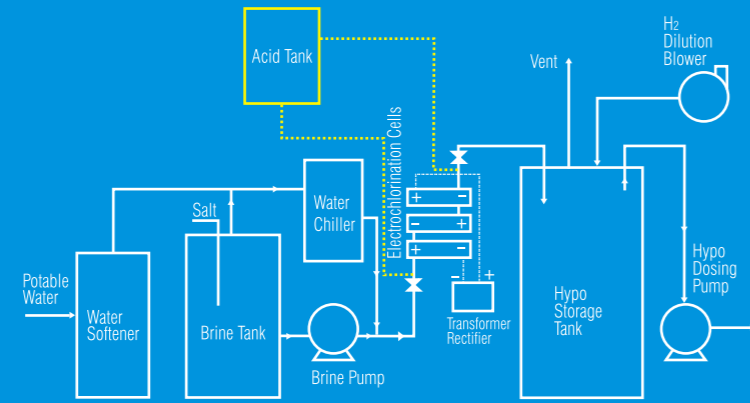
RT CHLOR® Brine System



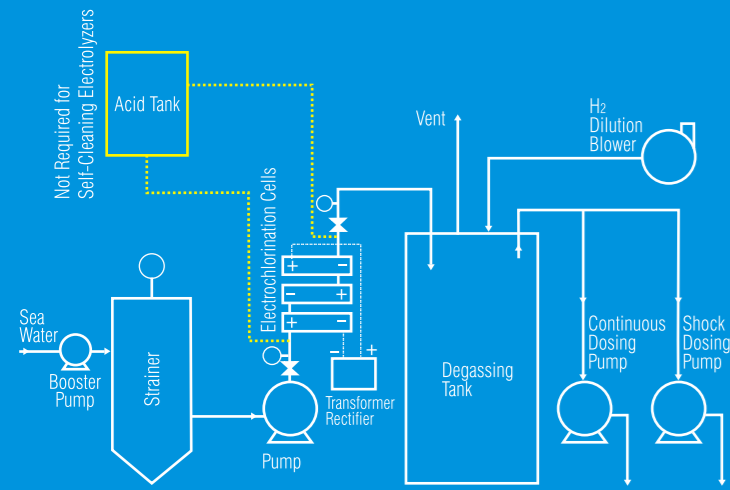
KLOGOGEN-S®
Parallel Plate Seawater Electrolyzers

RT CHLOR-S® Seawater System

Brine water SYSTEMS



Sea water SYSTEMS



Standard Components

Brine Water Systems

- Hydrogen Dilution Blower
- Hypochlorite Metering Pump
- Hypochlorite Storage Tank
- D.C Rectifier
- PLC Control Panel
- Electrolyzers
- Brine Pump
- Brine Tank
- Water Chiller
- Water Softener
- Skid Assembly

Seawater Systems

- Hydrogen Dilution Blower
- Shock Dosing Pumps
- Hypochlorite Dosing Pump
- Hypochlorite Storage Tank
- D.C Rectifier
- PLC Control Panel
- Electrolyzers
- Self Cleaning Filter
- Skid Assembly

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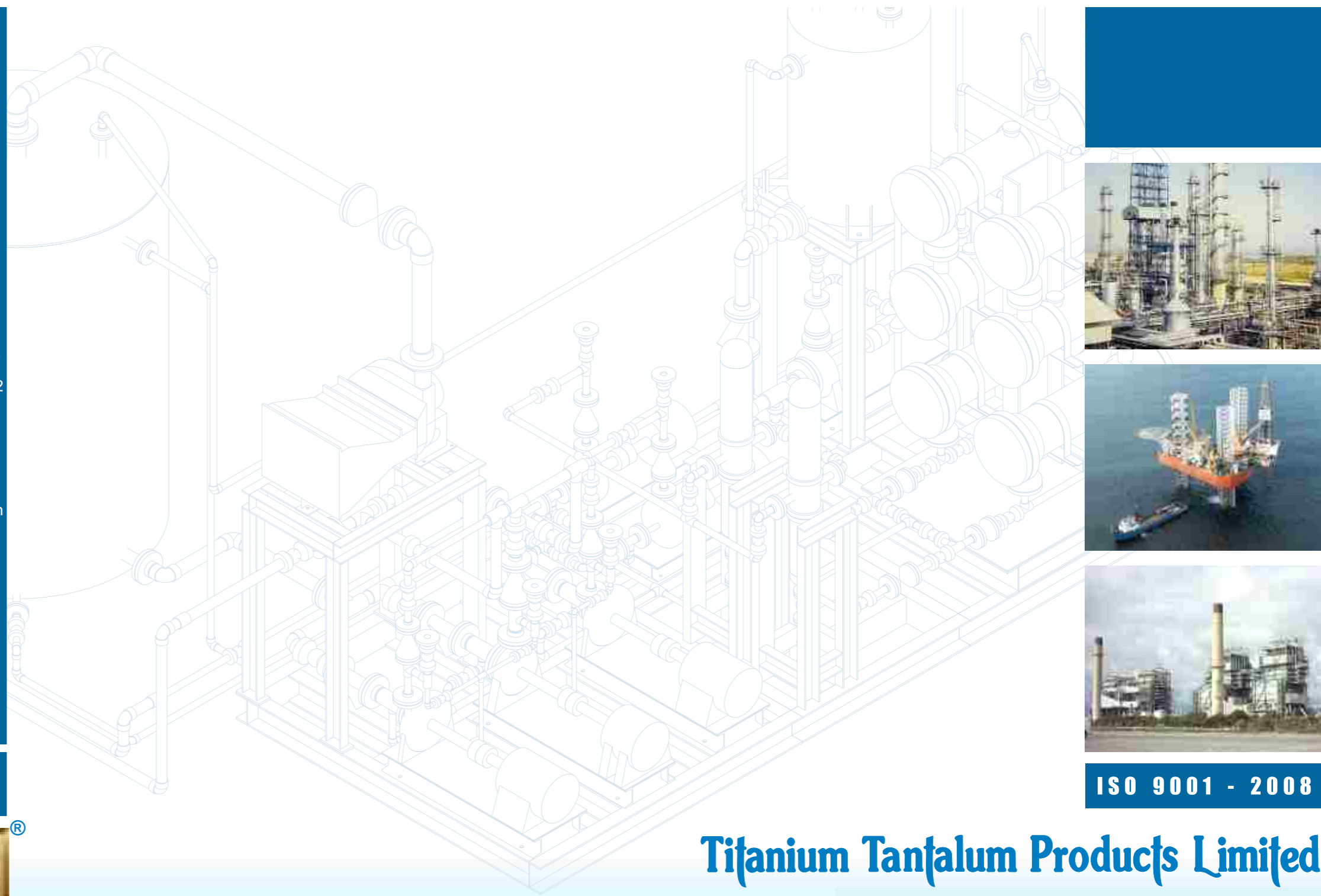
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Titanium Tantalum Products Limited

ELECTROCHLORINATION SYSTEMS

SINCE 1981



Engineering Excellence In Electrochemistry™

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