



# Company Profile-2018

SRI LANKA | NETHERLANDS | HONG KONG

The image features a hand pointing upwards at a blue square. The background is a light gray world map. A gray arrow points from the blue square towards the center. A stylized building icon is on the arrow. The text 'Company Profile' is in the center, with 'COMPANY' below it. The bottom has blue circles and white squares.

# Company Profile

COMPANY



# Company Introduction

PEVELCO PURIFICATION SYSTEMS

Pevelco purification systems BV, specialized in industrial water treatment, seawater desalination, electrolysis chlorine system, and sewage treatment plant, is a new high-tech enterprise professional for water treatment plant consulting, research, development, production and sales. We are pending to achieve the accreditation of quality management system standard ISO9001-2008 , environmental management system standard ISO14001-2004 and occupational health and safety management system standard OHSAS18001-2007.

We adhere to the aim of "Science and Technology as guide, Quality for survival, Credit for Development" , have developed eleven series of 90 kinds of water treatment products, some of which are selected as designated products from Sri Lanka. we have developed large-scale electrolysis system for seawater corrosion prevention for power plants and provided High Pure water machines from seawater from 2014, which had achieved high appraise from our clients with competitive price and quality. Our water treatment projects going to exporte all over the world,





Innovation leads the future

Integrity

Dedication

Pragmatic

Innovation

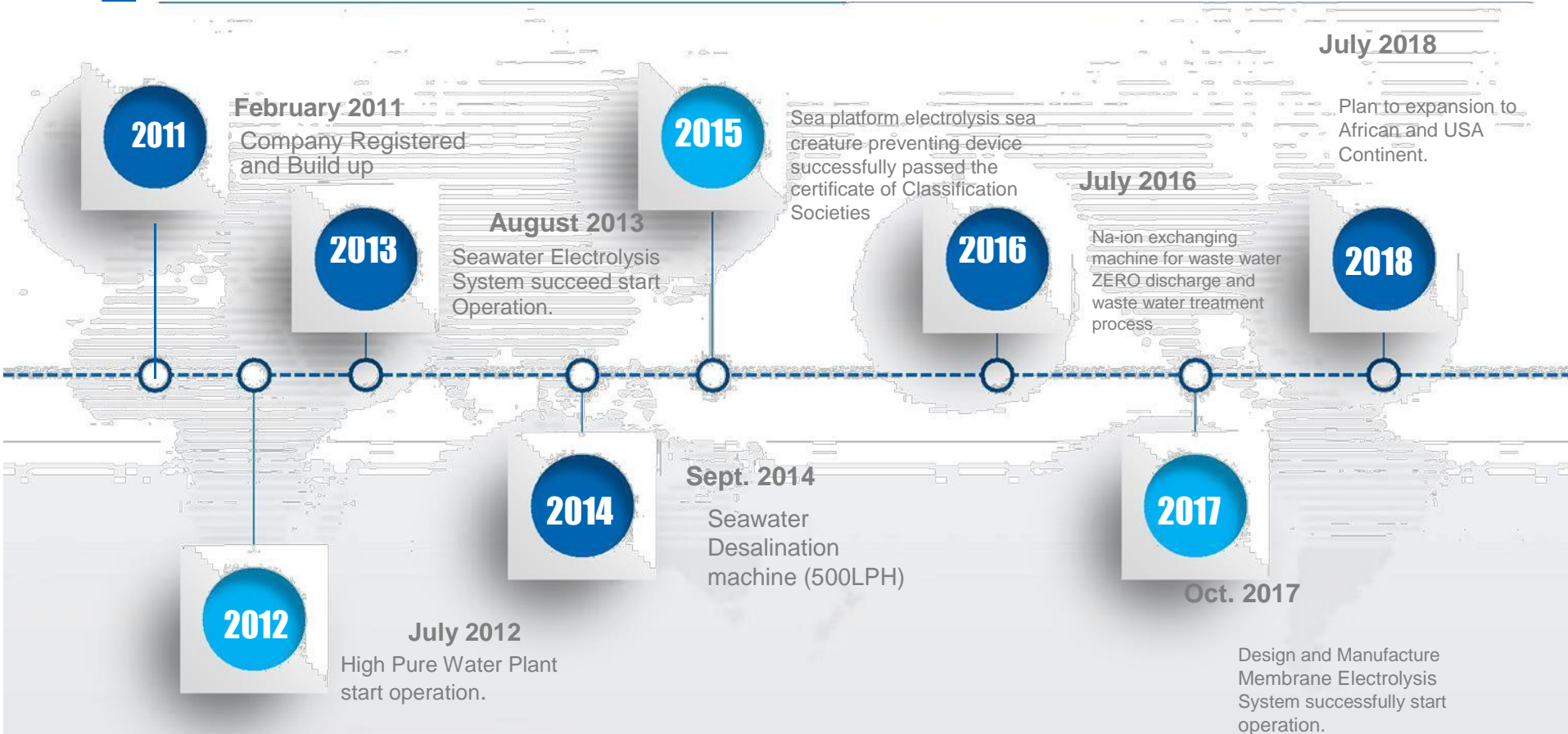
Create sustainable developing industrial value chain !



## Development History of Pewelco

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## Corporate Events of Pewelco

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**2014**

**July 2014**

ERP managing  
system start  
use for  
company  
management

**2015**

**May 2015**

Pass through  
Quality  
Managing  
System test

**2016**

**June 2016**

SolidWorks 3D  
start use in  
Technical Dept.

**2017**

**July 2012**

Automated  
Factory Concept  
approved

**2018**

**May 2015**

Successfully applied  
the Quality,  
Environment,  
Occupational Health  
Management  
System Certification

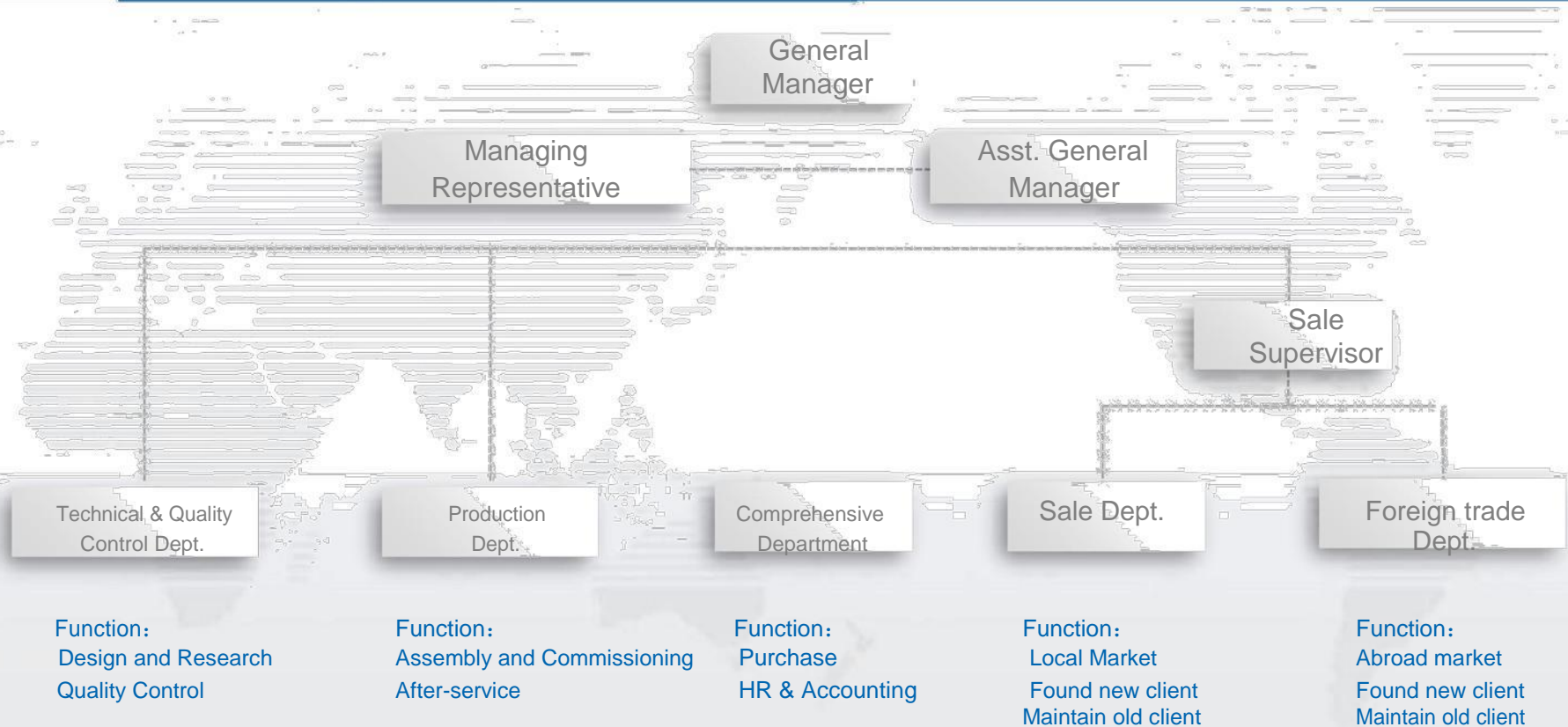




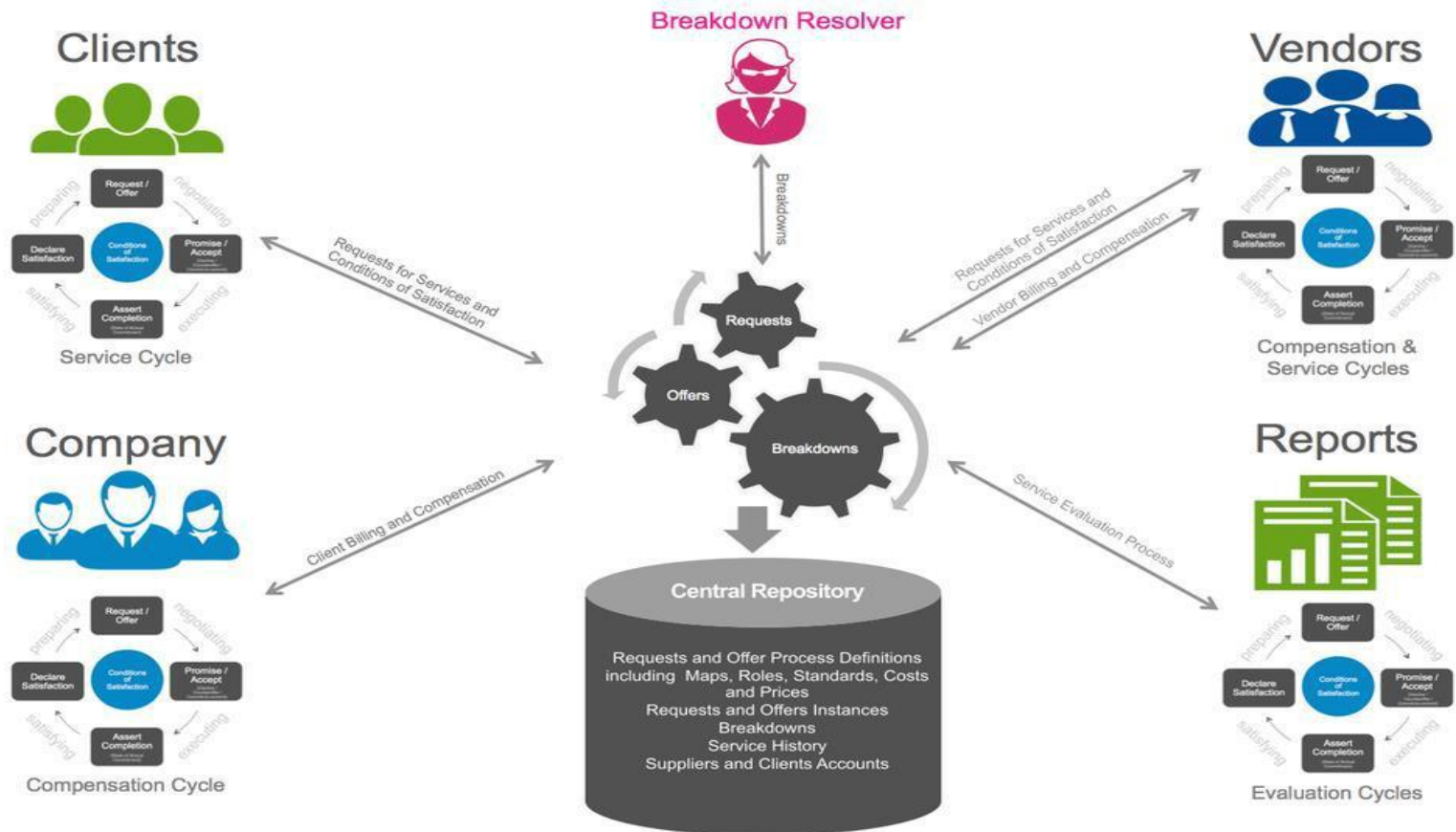
## Organizational Chart of Pewelco

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# Company Operating System of Pevelco







## Research & Development Team

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Dhanuka

Senior  
Engineer

Major:  
Electrical  
Engineer

Rangana

Senior  
Engineer

Major:  
Mechanical design and  
automation

Prabath

Processing  
Engineer

Major:  
Physical and Chemical

Li Guo

Processing  
Engineer

Major:  
Application chemical

Kamal

Processing  
Engineer

Major:  
Analyzing Chemistry

# Research & Development Team of Pevelco

Shanaka

**Mechanical  
Engineer**

Major:  
Process Equipment  
And Control project

Nimal

**Mechanical  
Engineer**

Major:  
Mechanical and  
Electrical engineering

Aruna

**Electrical  
Engineer**

Major:  
Electrical engineering and  
Automation

Gamage

**Electrical  
Engineer**

Major:  
Mechanical and  
Electrical engineering



# Company Profile

ENTERPRISE PRODUCTS

# Leading Products of Pevelco

- RO seawater
- Membrane Electrolyzer for chlorine and sodium hypochlorite making system
- Desalination Systems
- Sodium hypochlorite
- Brine electrolysis for making
- Pure/High pure Watersystem
- Sewage Water Treatment
- Electrolysis anti-fouling
- Automatic Chemical dosing facility
- Water softener
- Constant water supply facility
- Seawater Chlorination
- Filter/Clean Facility





# Membrane Seawater Desalination System

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Climate changes and the rapid development of global industry and agriculture resulted seriously lacking of fresh water , fresh water supply increasingly tense, so that some coastal cities are also seriously lack of water. The water crisis poses an unprecedented demand for desalination. Membrane Seawater desalination system is a system getting fresh water from seawater by using pressure to drive seawater flow through the semi-permeable spiral membrane into the low pressure side, the excess salt and minerals in the water is blocked on the high pressure side and is discharged with the concentrated seawater.

## Processing

Seawater → Lifting pump → Flocculant sediment tank → Raw water booster pump → Quartz sand filter → Activated carbon filter → Security filter → Precision filter → High pressure pump → Production water tank → water distribution pump

## Component:

RO membrane: DOW, Hydraunautics, GE

Vessel: ROPV or First Line, FRP material

HP pump: Danfoss super duplex steel

Energy recovery unit: Danfoss super duplex steel or ERI

Frame: carbon steel with epoxy primer paint, middle layer paint, and polyurethane surface finishing paint 250μm

Pipe: Duplex steel pipe or stainless steel pipe and high pressure rubber pipe for high pressure side, UPVC pipe for low pressure side.

Electrical: PLC of Siemens or ABB , electrical elements from Schneider.



## Membrane Seawater Desalination System)

### Performance Character:

Reverse osmosis desalination technology is mature, advanced, and with high degree of automation, can achieve the machine's automatic operation;;

Low power consumption with energy recovery unit, about 4.5kw.h per ton production water, save water source and lower operation cost. ;

Type of RO seawater desalination machine: Frame type, skid type, trailor type, container type.

### Application scope:

Marine engineering

Power

Oil, petrochemical

Processing enterprises

Public energy units

Chemical industry

Municipal and defense agencies



Project: Seawater Desalination System





## Membrane Seawater Desalination System

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Project: Trailer Type Seawater Desalination Machine 24t/d



## Membrane Seawater Desalination System

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Project: Seawater desalination machine 50t/d



Project: Seawater Desalination machine 50t/d

## Pure Water/ High Purity Water Treatment System

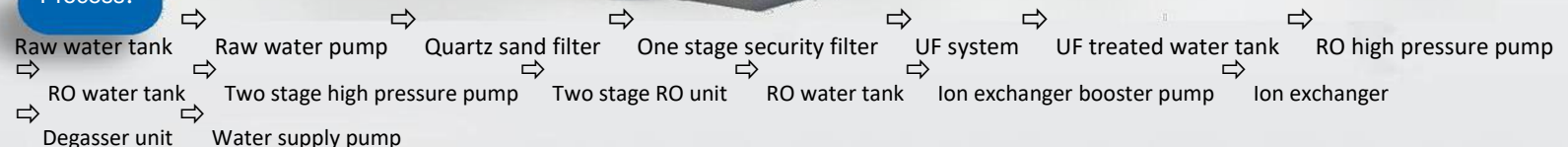
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Pure water / high purity water treatment system is a kind of device to achieve the purpose of water purifying through various water treatment processes and water quality monitoring system. As per the users' different requirements of the purity of the water, we combine and permute the pretreatment, reverse osmosis and mixed bed ion exchange (or EDI electric desalting unit) to make a set of tailored pure water treatment equipment, moreover, all the water tanks in the system are equipped with liquid level control system, and the pumps are equipped with pressure protection device, on-line water quality detection and control instrument and PLC programmable controller are applied for the whole system to make the equipment running with no labor on duty.



### Process:







## Configuration:

RO membrane: Hydranautics, Dow or GE  
Membrane Vessel: FRP or stainless steel  
material from ROPV and First line High pressure  
pump: Grundfos or CNP

Frame: carbon steel paint epoxy zinc-rich  
bottom, intermediate paint, polyurethane finish or  
stainless steel Pipeline: High-pressure pipeline  
material is stainless steel or high pressure hose, low  
pressure pipeline

material is UPVC, Electrical: PLC from Siemens or ABB,  
electrical components from Schneider

## Performance characteristics

Mature and advanced technology, high  
automation, can achieve the machine's automatic  
operation. Equipment is operating continuously,  
product water quality is stable. Reverse osmosis  
water equipment combination type can be  
achieved: bracket type, skid type, truck type,  
container type, etc.

## Application scope:

● Direct Flow High pressure Steam boiler (steam injection boiler) for Oilfield heavy oil recovery ● Brewery ● Power plant ● Pharmaceutical water ● Public works



Skid Mounted High Purity Water Treatment  
Equipment 1000t/d

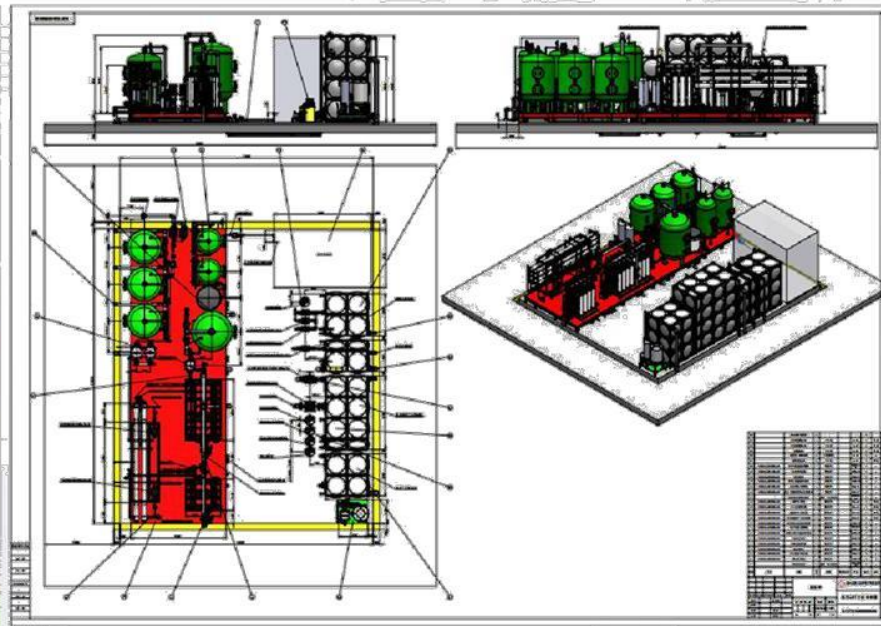


Project case: 240t/d containerized pure water system



## Pure Water/ High Purity Water Treatment System

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Project case: Skid Mounted High Purity Water Treatment  
Equipment 1200t/d

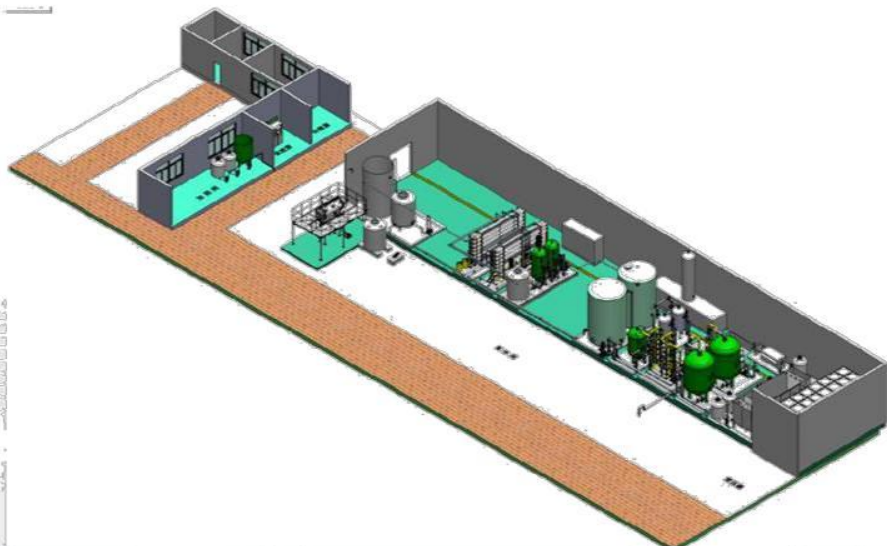
Project 3D drawing





## Sewage treatment system

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### Process Configuration:

Different waste water will need different treatment process and configuration.

Sewage treatment equipment can effectively deal with the city's domestic sewage, industrial wastewater, to avoid sewage and pollutants direct flow into the waters, which is important and significant to the improving of the ecological environment, to the enhancing of the city grade and to the promoting of the economic development. According to the different type sewage, there are three kinds of treatment methods: physical, chemical and biological

### Methods

#### Performance characteristics:

Sewage treatment works can solve the waste of water resources, improve the water environment and people's livelihood.

Special industry waste water reuse, recycle reused water, rare precious metals and so on.

#### Application scope:

##### Zero discharge of oily wastewater

Municipal sewage treatment

Rural sewage treatment

Food industry wastewater treatment

Steel wastewater reuse

Textile printing and dyeing wastewater

reuse Slaughter waste water treatment

Semiconductor production wastewater reuse



Project case: Industrial waste water treatment plant 2000t/d



## Sewage treatment system

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Project case: 5000t/d waste water treatment system





## Seawater electrolysis chlorination system

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Seawater electrolysis chlorination system take use of advanced electrolysis technology to produce on-line sodium hypochlorite solution with concentration 2000ppm by seawater electrolysis, the sodium hypochlorite solution is directly dosed to sea water through the metering pump, effectively control the growth of the sea water microorganisms, shellfish and other biological. This kind of equipment can treat and sterilize seawater under 1 million tons/hour.

### Process:

-Seawater pump -Disc filter -Electrolytic cell -Sodium hypochlorite storage tank -Metering dosing pump

### Configuration:

Composite titanium electrode: ruthenium and iridium coating with 5  
Tube plate electrolytic cell: transparent cylinder design, can immediately observe the electrode operation

Disc filter: AZUD

Frame: carbon steel paint epoxy zinc - rich bottom, intermediate paint, metal fluorocarbon topcoat, varnish 250µm

Pipeline: Taiwan Huanqi UPVC

Product storage tank: FRP

Electrical: PLC from Siemens or ABB, electrical components from Schneider

## Seawater electrolysis chlorination system

### Performance characteristics:

High efficiency of composite electrode electrolysis with small footprint;

Unit-type electrolytic cell with easy maintenance, light and compact;

Equipment with reliable performance, the electrode with corrosion resistance material, can make long-term stable operation

### Application scope:

Seawater Desalination Plant  
Nuclear power station

Sea Water

Swimming Pool

Chemical plant

Coastal thermal  
power plant LNG

Terminal



Project case: Seawater Electrolysis Chlorination System 6kg/h(Available Chlorine)



## Seawater electrolysis chlorination system

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Project case: Seawater Electrolysis Chlorination System 72kg/h (Available Chlorine)





(Membrane Brine Electrolysis Producing chlorine / sodium hypochlorite device)

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Membrane electrolysis salt water producing sodium hypochlorite device use cation exchange membrane electrolytic cell to electrolyze salt or potassium chloride solution to produce chlorine, hydrogen and high purity sodium hydroxide (caustic soda) or potassium hydroxide.

#### Configuration:

The design of unit cell is easy to install and replace, cathode is made of stainless steel frame and titanium mesh, anode titanium electrolytic tank is coated ruthenium and iridium precious metals, life is 5 years

Sodium hypochlorite output concentration of 5-12% is adjustable  
Closed production line, equipment with chlorine, hydrogen safety alarm device

Low power energy consumption and economy

Frame: carbon steel paint epoxy zinc-rich bottom, intermediate paint, polyurethane finish 250μm

Pipeline: Taiwan HuanQi UPVC, CPVC pipeline

High electrical automation, PLC from Siemens or ABB, electrical components from Schneider

## Membrane Brine Electrolysis Producing chlorine / sodium hypochlorite device

### Performance characteristics:

High efficiency of composite electrode electrolysis with small footprint;  
Unit-type electrolytic cell with easy maintenance, light and compact;  
Equipment with reliable performance, the electrode with corrosion resistance material, can make long-term stable operation

### Application scope:

Chlorine alkali industry

Seawater and brackish water desalination  
Industrial water and ultra-pure water preparation  
Enzyme, vitamins and amino acids and other drugs refined  
Electroplating waste water recycle  
Radioactive waste water



Project case: 7500g/h(Available chlorine) membrane-electrolysis producing chlorine system



## Membrane Brine Electrolysis Producing chlorine / sodium hypochlorite device

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Project case: 800kg/d Sodium Hypochlorite  
Generator



Project case: 3000L/d Sodium Hypochlorite  
Generator



## Brine electrolysis sodium hypochlorite Disinfection system

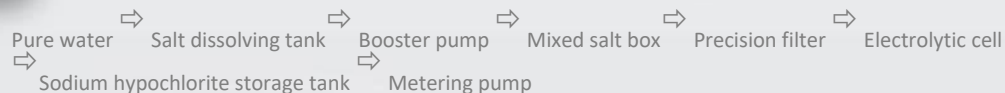
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Brine electrolysis sodium hypochlorite generating system use advanced brine electrolysis technology to produce on-site sodium hypochlorite solution instead of high risk liquid chlorine and chlorine dioxide disinfection system, this system is widely used in large and medium-sized domestic and foreign water plants, is recognized by more and more customers for its security and the advantages, the equipment can treat drinking water under 1 million tons/hour.



Process:







### Configuration:

- Composite titanium electrode: ruthenium and iridium coating with 5 years life span
- Tube plate electrolytic cell: transparent cylinder design, can immediately observe the electrode operation;
- Frame: carbon steel paint epoxy zinc-rich bottom, the middle paint, metal fluorocarbon topcoat, varnish 250µm
- Pipeline: Taiwan Huanqi UPVC
- Product Tank: FRP
- Electrical: Siemens or ABB PLC, electrical components from Schneider

### Performance characteristics:

Equipment operation can be fully automatic, safe and reliable; Avoid the use and transport of chlorine high-risk chemicals, prevent the dangerous chemicals on the environment, operators and the surrounding residents to protect the environment and human.

### Application scope:

#### Waterworks disinfection

- Municipal sewage disinfection
- Food Processing
- Oilfield reinjection water disinfection
- Hospital
- Power plant circulating cooling water sterilization





Brine electrolysis sodium hypochlorite disinfection system

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Project case: Brine Electrolysis Sodium Hypochlorite Generating Machine 1.5kg/h





## (Seawater Electrolysis Anti-fouling System/Marine Growth Preventing System)

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1、Copper - aluminum Electrolytic anti-fouling: Copper and aluminum alloy as the anode, the protective equipment system as the cathode. Electrolytic copper to produce toxic copper to kill marine organisms, while electrolytic aluminum to produce aluminum hydroxide floc attached to the pipe wall to form a protective film, effectively protect the pipe wall from corrosion.

2、Marine electrolytic cell type seawater electrolysis anti-fouling device: using titanium anode electrolysis seawater to produce chlorine and hypochlorite ions, which are directly adding to the sea water cooling system through pipeline to prevent marine biological pollution.



Application  
scope:

Vessel Platform

Fire fighting

system

Coastal

power plants

## Water softener



Automatic water softener can be divided into time control type and flow control type. Water softener use sodium cation exchange resin to remove calcium and magnesium ions in water, reduce the hardness of raw water to achieve the purpose of softening hard water, to avoid carbonate fouling in pipes, containers and boilers, greatly reduce the investment cost and ensure smooth production.



### Application scope:

- Laundry ● Bath
- Food
- Pharmaceutical
- Boiler
- Power plant
- Air conditioning
- Hotel living area ● Mine well water treatment



## Constant Pressure Water Supply Device

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Frequency control technology is a type of new mature AC motor stepless speed control technology, its unique and excellent control performance is widely used in the field of speed control, especially in the water supply field. Due to the special needs of safe production and water supply quality, the pressure of constant pressure water supply has strict requirements, so the frequency control technology has been more in-depth and widely used. Constant pressure water supply is with advanced technology, constant water pressure, easy and reliable operation, saving energy, high degree of automation.



### Application scope:

- Waterworks ●Pressurized pump station ● Residential areas ●Hotel
- Industry water ●Boiler circulating water system ●Farmland irrigation systems.



## Filter/Cleaning device

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Filter is a device that let the liquid or gas in the suspension goes through the filter element under pressure and other external force, solid particles and other substances are trapped by the filter medium, to separate the solid and other substances from liquid (or gas).

Cleaning device mainly use various chemicals by recycling, soaking, cleaning and other methods to remove dirt on the surface of the equipment, so as to achieve the purpose of cleaning. It is suitable for cleaning pipes, air conditioners and boilers.



### Application scope:

Filter is widely used for agricultural irrigation, chemical industry, petroleum, metallurgy, mining and other industries.

Cleaning device is used for boilers, central air conditioning, heat exchanger, condenser, adsorption tower, reaction tower, storage tanks, pipelines, etc..





Automatic chemical dosing system consists of solution tank, metering pumps, filters, check valves, pressure gauges, level gauge, control cabinet and other components.



#### Application scope

Thermal Power Plant Boiler Water Treatment System, Circulating Cooling System, Central Air Conditioning Circulating Water System, Raw Water Pretreatment and Wastewater Treatment System

Oil and Chemical Industry Boiler Water Treatment System, Circulating Cooling System, Chemical Additive Dosing System

Medical, electronics and other industries wastewater treatment and disinfection system  
Disinfection for Municipal water supply, swimming pool, water plants, sewage treatment, construction water and domestic water

Disinfection for Industrial circulating water and wastewater treatment

