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## 2005 Desalinated water for a greenhouse El salvador



## *Desalinated water for a greenhouse*

### *El Salvador, 800 m3/d*

#### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly for a high brackish water reverse osmosis system for a grower in the Republic of El Salvador. The treated and desalinated water is used as process water for a horticultural application. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- Multimedia filtration
- 5 micron cartridge filtration
- Reverse osmosis system
- Post RO treatment system
- UV disinfection
- CIP station
- Automated flush
- Microprocessor controlled
- Site commissioning

#### Project duration:

February 2005 to September 2005

#### Project location:

Republic of El Salvador

#### Product quality:

TDS < 200 uS/cm

#### Project application:

Potable and horticultural water

#### Typical contract amount:

50.000 – 110.000 USD

## 2006 Water treatment at a greenhouse Ethiopia



# Water treatment at a greenhouse

Ethiopia, 1.000 m<sup>3</sup>/d

### Project Description:

We have been awarded a contract for the engineering, manufacturing and assembly for a brackish water reverse osmosis system, including chlorine dioxide and UV disinfection for a grower in the Democratic Republic of Ethiopia. The treated water is used as process water for the horticultural applications on the farm. The water treatment system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- Multimedia filtration
- 5 micron cartridge filtration
- Reverse osmosis system
- Post RO treatment system
- UV disinfection
- ClO<sub>2</sub> disinfection
- CIP station
- Automated flush
- Microprocessor controlled
- Site commissioning and installation supervision

### Project duration:

February 2006 to September 2006

### Project location:

Democratic Republic of Ethiopia

### Product quality:

TDS < 200 uS/cm

### Project application:

Potable and horticultural water

### Typical contract amount:

60.000 – 150.000 USD

## 2008 Drinkwater at oil pump station in the sahara Algeria



### *Drinkwater at oil pump station in the Sahara Algeria, 50 m<sup>3</sup>/d*

#### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly of a turnkey brackish water reverse osmosis system in the Sahara desert in Algeria. The desalinated water is used for the preparation of potable water for the personnel working on the oil pump station. The water treatment system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Screen filtration
- Titanium feed water pumps
- Multimedia filtration
- Cartridge filtration
- Reverse osmosis unit
- Chemical dosing stations
- Buffertanks
- UV disinfection circulation over buffer tank
- Recirculation pump over buffer tank
- Microprocessor controlled system
- Site commissioning

#### Project duration:

April 2008 to November 2008

#### Project location:

People's Republic of Algeria

#### Product quality:

Decarbonised water

#### Project application:

Potable water at an oil pump station

#### Typical contract amount:

20.000 – 100.000 USD



## 2008 Recirculation water disinfection on an oil rig Malaysia



### *Recirculation water disinfection on an oil rig Malaysia, 150 m<sup>3</sup>/d*

#### Project Description:

We have engineered, manufactured and assembled an ozone disinfection system in Malaysia. The ozonated water is used to disinfect recirculated potable water on an oil rig in the South China sea. The generator produces 10 g/h of ozone. The We ozone system series are equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Ozone Generator
- Oxygen concentrator from instrument air
- Venturi injection system
- Venturi booster pump system
- Ambient Ozone measurement
- Dissolved Ozone measurement
- PLC controlled system
- Site commissioning

#### Project duration:

February 2008 to July 2008

#### Project location:

Kingdom of Malaysia

#### Product quality:

O<sub>3</sub> > 1 mg/l

#### Project application:

Potable water recirculation

#### Typical contract amount:

15.000 – 50.000 USD

## 2009 Border control sea water desalination Libya



# *Border control sea water desalination*

*Libya, 2x 250 m<sup>3</sup>/d*

### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly of a containerized sea water reverse osmosis systems at the border control office (Libya and Egypt) in the State of Libya. The treated and desalinated water is used as potable water in the harsh environment of the Sahara. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air conditioning
- Multimedia filtration
- Chemical dosing stations
- Cartridge filtration
- Reverse osmosis
- Automated flush
- CIP station
- PLC controlled
- Site commissioning

### Project duration:

March 2009 to October 2009

### Project location:

State of Libya on the border with Egypt

### Product quality:

TDS > 200 < 500 uS/cm

### Project application:

Potable water

### Typical contract amount:

on request

## 2009 Bottled water company Algeria



# *Bottled water company*

*Algeria, 300 m<sup>3</sup>/d*

### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly of a turnkey decarbonisation system in a bottled water factory in the Algeria. The treated water is used for the preparation of bottled water for local population. The water treatment system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Lameller separator
- Multimedia filtration
- Granular activated carbon
- Chemical dosing stations
- Microprocessor controlled system
- Site installation
- Site commissioning

### Project duration:

February 2009 to August 2009

### Project location:

People's Republic of Algeria

### Product quality:

Decarbonised water

### Project application:

Bottled water factory

### Typical contract amount:

80.000 – 240.000 USD

## 2009 Containerized oxygen removal demin water Libya



### *Containerized oxygen removal demin water Libya, 125 m3/d*

#### Project Description:

We have engineered, manufactured and assembled a membrane degassing system in the State of Libya. The degassed water is used for oxygen removal prior to boiler feed. The We ozone system series are equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Membrane degassing station
- EX2 environment
- Pump system
- PLC controlled system
- Site commissioning

#### Project duration:

April 2009 to September 2009

#### Project location:

State of Libya

#### Product quality:

$O_2 > 1 \text{ mg/l}$

#### Project application:

Boiler feed water

#### Typical contract amount:

on request





## *Emergency potable water from brackish water Montenegro, 500 m<sup>3</sup>/d*

### Project Description:

We has engineered, manufactured and assembled a mobile containerized brackish water reverse osmosis system on sites throughout the Republic of Montenegro. The treated and desalinated water is used for emergency purposes to prepare potable water from brackish water sources up to salinity of 6.000 ppm. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air conditioning
- Chemical dosing stations
- Multimedia filtration system
- Airblower system for backwash enhancement
- 5 micron cartridge filtration
- Reverse osmosis system
- Automated flush
- CIP station
- Microprocessor controlled system
- Site commissioning

### Project duration:

June 2009 to January 2010

### Project location:

Republic of Montenegro

### Product quality:

TDS < 300 uS/cm

### Project application:

Utilities water for industrial site

### Typical contract amount:

30.000 – 70.000 USD

## 2009 Utilities water for dairy factory Libya



# *Utilities water for dairy factory*

*Libya, 750 m3/d*

### Project Description:

In collaboration with our local partner in Libya We has been awarded a contract for the engineering, manufacturing and assembly of a turnkey reverse osmosis system on a petrochemical site in the State of Libya. The treated and desalinated water is used as potable and utilities water. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- H<sub>2</sub>S removal system
- Chemical dosing stations
- Multimedia filtration for de-ironing
- Cartridge filtration
- Reverse osmosis unit
- Fully automated flush
- CIP station for RO
- PLC controlled system
- Site commissioning

### Project duration:

December 2009 to July 2010

### Project location:

State of Libya

### Product quality:

Food grade

### Project application:

Food industry

### Typical contract amount:

on request

## 2010 Cochlea disinfection Hungary



### *Cochlea disinfection*

*Hungary, 125 m3/d*

#### Project Description:

We has engineered, manufactured and assembled an ozone disinfection system in Hungary. The ozonated water is used to clean the cochlea, after which it will be filled with snails for consumption. The generator produces 6 g/h of ozone. The We ozone system series are equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Ozone Generator
- Built in compressor and oxygen concentrator
- Venturi injection system
- Venturi booster pump
- Ambient Ozone measurement
- Dissolved Ozone measurement
- PLC controlled system
- Site commissioning

#### Project duration:

April 2010 to September 2010

#### Project location:

Republic of Hungary

#### Product quality:

$O_3 > 1 \text{ mg/l}$

#### Project application:

Disinfection in food industry

#### Typical contract amount:

15.000 – 30.000 USD



## 2010 Demineralisation for a paper mill factory (1) United Kingdom



### *Demineralisation for a paper mill factory (1)* *United Kingdom, 2.500 m<sup>3</sup>/d*

#### Project Description:

We has engineered, manufactured and assembled a multimedia filtration system as a pre treatment for reverse osmosis system, lowering the TSS to below 0,1 mg/l in the Kingdom of Great Britain. The demineralised water is being used as make up water for the boiler feed system. The water demineralisation system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Multimedia filters
- Valve battery
- Feed pump station
- Air blower station
- Backwash pump station
- NaOCl dosing station
- SMBS dosing station
- Redundant PLC
- SCADA prepared
- Site commissioning

#### Project duration:

November 2010 to September 2011

#### Project location:

United Kingdom

#### Product quality:

TSS < 0,1 mg/l

#### Project application:

Feed water for demineralisation system

#### Typical contract amount:

50.000 – 250.000 USD



## 2010 Demineralisation for a paper mill factory (2) United Kingdom



### *Demineralisation for a paper mill factory (2)* *United Kingdom, 2.000 m3/d*

#### Project Description:

We has engineered, manufactured and assembled a turn-key demineralisation system, comprising double pass RO and EDI system in the Kingdom of Great Britain. The demineralised water is being used as make up water for the boiler feed system. The water demineralisation system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- Multimedia filters
- Cartridge filtration
- Reverse osmosis pass 1
- CO2 stripping tower
- Reverse osmosis pass 2
- EDI pass
- CIP station RO and EDI
- PLC controlled system
- SCADA prepared
- Installation supervision
- Site commissioning

#### Project duration:

November 2010 to September 2011

#### Project location:

United Kingdom

#### Product quality:

TDS < 0,1 uS/cm

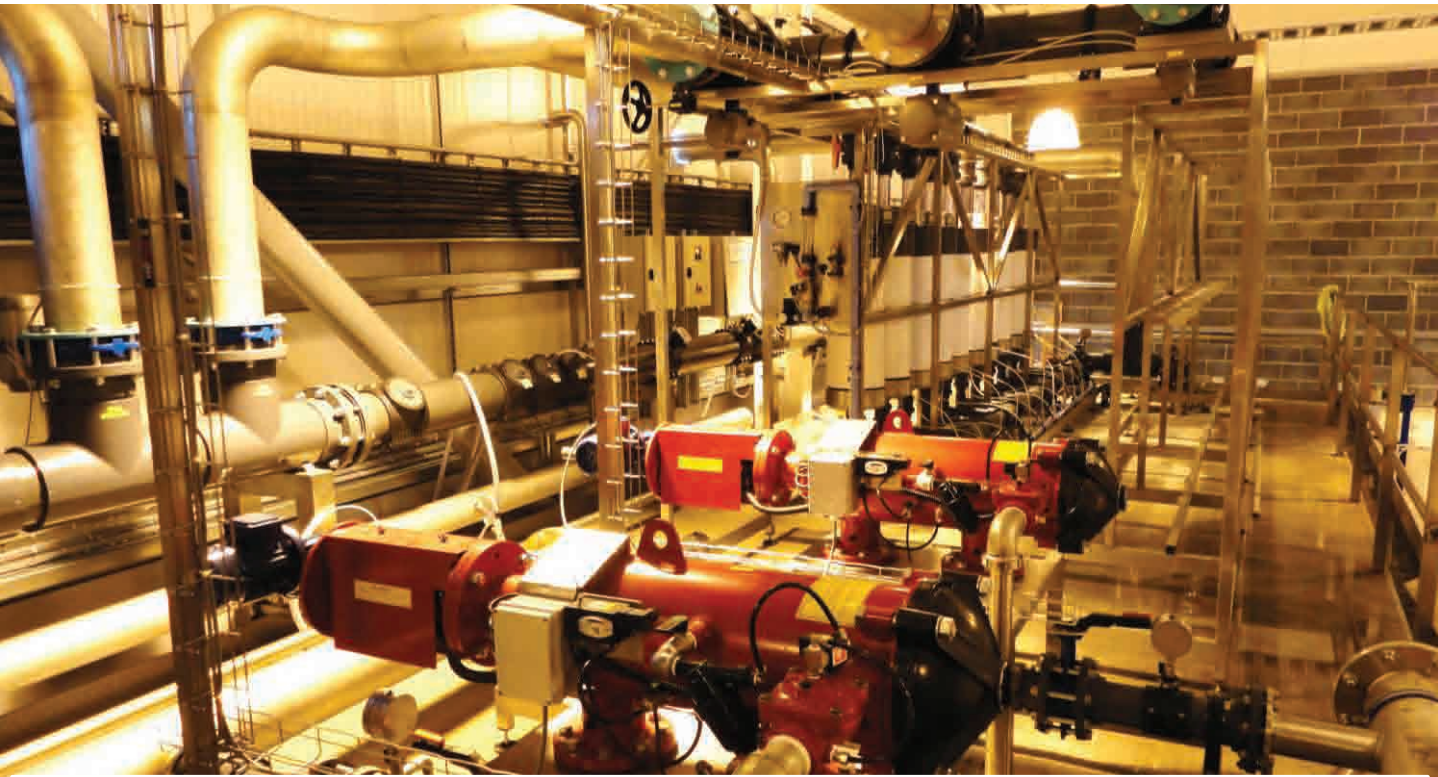
#### Project application:

Boiler feed water

#### Typical contract amount:

200.000 – 500.000 USD

## 2010 Soft drink water supply United Kingdom



## *Soft drink water supply*

*United Kingdom, 2.100 m<sup>3</sup>/d*

### Project Description:

We has engineered, manufactured and assembled a turn-key water treatment system, comprising of screen filters, ultra filtration and reverse osmosis in the United Kingdom. The demineralised water is used for the preparation of soft drinks. The water demineralisation system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Screen filters
- Granular active carbon filter
- Steam sanitation
- Ultra filtration
- Reverse osmosis
- CO<sub>2</sub> degassing tower in RO permeate
- UV disinfection system
- Chemical dosing stations
- PLC controlled system
- SCADA prepared
- Site commissioning

### Project duration:

November 2010 to September 2011

### Project location:

United Kingdom

### Product quality:

TDS < 200 uS/cm

### Project application:

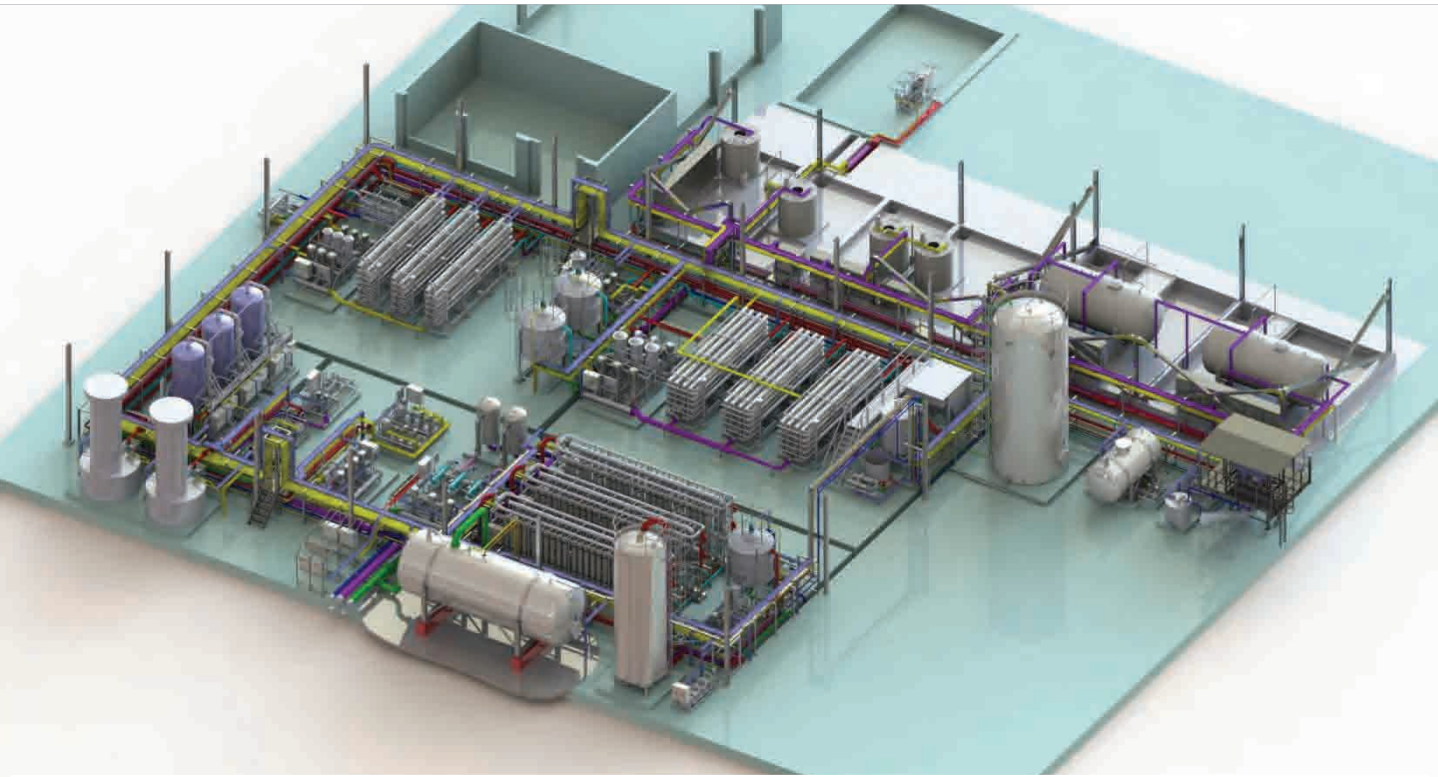
Process water for soft drink manufacturing

### Typical contract amount:

200.000 – 500.000 USD



## 2010 UPW system Siemens power plant Venezuela



## UPW system Siemens power plant Venezuela, 6.500 m<sup>3</sup>/d

### Project Description:

We has engineered, manufactured and assembled the total scope of an ultra pure water system in the Republic of Venezuela. The demineralised water is being used as make up water for the boiler feed system. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- 2x 180 m<sup>3</sup>/h CO<sub>2</sub> degassing towers
- 3x 120 m<sup>3</sup>/h self cleaning filters
- 3x 120 m<sup>3</sup>/h cartridge filters
- 3x 120 m<sup>3</sup>/h Ultrafiltration
- 3x 90 m<sup>3</sup>/h reverse osmosis pass 1
- 3x 70 m<sup>3</sup>/h reverse osmosis pass 2
- 3x 70 m<sup>3</sup>/h mixed bed Ion Exchange
- Chemical dosing stations
- Lamellar settler for wastewater treatment
- Decanter for sludge treatment
- Fully automated flush
- CIP stations
- All stainless steel (interconnecting) piping and cabling

### Project duration:

February 2010 to July 2013

### Project location:

Republic of Venezuela

### Product quality:

TDS < 0,1 uS/cm

### Project application:

Boiler Feed Water

### Typical contract amount:

3.000.000 – 5.500.000 USD

## 2011 Pure water loop disinfection Belgium



# *Pure water loop disinfection*

*Belgium, 125 m3/d*

### Project Description:

We has engineered, manufactured and assembled an ozone disinfection system in Belgium. The ozonated water is used to disinfect the pure water loop in a factory. The generator produces 10 g/h of ozone. The We ozone system series are equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Ozone Generator
- Oxygen concentrator from instrument air
- Venturi injection system
- Ambient Ozone measurement
- Dissolved Ozone measurement
- PLC controlled system
- Site commissioning

### Project duration:

July 2011 to January 2012

### Project location:

Kingdom of Belgium

### Product quality:

$O_3 > 0,5 \text{ mg/l}$

### Project application:

Pharmaceutical products

### Typical contract amount:

20.000 – 40.000 USD



## 2011 Tertiary waste water treatment Finland



# *Tertiary waste water treatment*

*Finland, 5.400 m<sup>3</sup>/d*

### Project Description:

We have engineered, manufactured and assembled a turn-key 3x 100% water treatment system in the Republic of Finland. The water is treated due to too high sulphate content in the conventional waste water treatment, the installation is used as final polishing step in order to reduce Sulphate content, the product is discharged in to the site well. The water treatment system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- 3x 110 m<sup>3</sup>/h multimedia filtration
- 3x 110 m<sup>3</sup>/h 5 micron cartridge filtration
- 3x 75 m<sup>3</sup>/h reverse osmosis system
- Fully automated flush
- CIP station for RO
- PLC controlled system
- SCADA prepared
- Site commissioning and installation supervision

### Project duration:

December 2011 to July 2013

### Project location:

Republic of Finland

### Product quality:

SO<sub>4</sub> < 200 ppm

### Project application:

Waste water recycling for the mining industry

### Typical contract amount:

500.000 – 1.500.000 USD

## 2012 Chemical dosing for water treatment system Libya



## Chemical dosing for water treatment system Libya, 1.000 m<sup>3</sup>/d

### Project Description:

In collaboration with our local partner in Libya We has been awarded a contract for the engineering, manufacturing and assembly of a turnkey reverse osmosis system on a petrochemical site in the State of Libya. The treated and desalinated water is used as potable and utilities water. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- 1x 100% degassing tower
- 2x 100% chemical dosing stations
- 4x 50% multimedia filtration
- 2x 100% cartridge filtration
- 3x 50% reverse osmosis units per system
- 2x 100% UV disinfection
- Fully automated flush
- CIP station for RO
- PLC controlled system
- Site commissioning

### Project duration:

December 2012 to July 2014

### Project location:

State of Libya

### Product quality:

WHO guidelines

### Project application:

Potable water on a petrochemical site

### Typical contract amount:

on request



## 2012 Green oil production water supply Serbia



# *Green oil production water supply*

## *Serbia, 250 m<sup>3</sup>/d*

### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly for a reverse osmosis system for a grower in the Republic of Serbia. The treated and desalinated water is used as process water for a horticultural application. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- Multimedia filtration
- 5 micron cartridge filtration
- Reverse osmosis system
- Post RO treatment system
- Automated flush
- PLC controlled system
- Site commissioning

### Project duration:

March 2012 to December 2012

### Project location:

Republic of Serbia

### Product quality:

TDS < 200  $\mu$ S/cm

### Project application:

Horticultural water

### Typical contract amount:

50.000 – 120.000 USD

## 2012 Potable water in the desert Libya



# Potable water in the desert

Libya, 3x 1.000 m<sup>3</sup>/d

### Project Description:

In collaboration with our local partner in Libya We has been awarded a contract for the engineering, manufacturing and assembly of a turnkey reverse osmosis system on a petrochemical site in the State of Libya. The treated and desalinated water is used as potable and utilities water. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- 1x 100% degassing tower
- 2x 100% chemical dosing stations
- 4x 50% multimedia filtration
- 2x 100% cartridge filtration
- 3x 50% reverse osmosis units per system
- 2x 100% UV disinfection
- Fully automated flush
- CIP station for RO
- PLC controlled system
- Site commissioning

### Project duration:

December 2012 to July 2014

### Project location:

State of Libya

### Product quality:

WHO guidelines

### Project application:

Potable water on three different petrochemical sites

### Typical contract amount:

on request



## 2012 Potable water in the desert (2) Lybia



# Potable water in the desert

Libya, 700 m<sup>3</sup>/d

### Project Description:

In collaboration with our local partner in Libya We has been awarded a contract for the engineering, manufacturing and assembly of a containerized high brackish water reverse osmosis system on a petrochemical site in the Sahara desert in the State of Libya. The treated and desalinated water is used as potable and industry water. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air conditioning
- H<sub>2</sub>S degassing tower
- Chemical dosing stations
- Multimedia filtration
- 5 micron cartridge filtration
- Reverse osmosis system
- Automated flush
- CIP station
- PLC controlled system
- Site commissioning

### Project duration:

January 2012 to September 2012

### Project location:

State of Libya

### Product quality:

TDS < 500 uS/cm

### Project application:

Potable water for petrochemical site

### Typical contract amount:

on request

## 2012 Production of glass windows Russia



# *Production of glass windows*

*Russia, 450 m<sup>3</sup>/d*

### Project Description:

In collaboration with our local partner We has engineered, manufactured and assembled a turnkey single pass reverse osmosis system with an EDI polishing step in the Russian Federation. The demineralised water is used as rinse water for the glass production process. The water demineralisation system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- 20 micron cartridge filtration
- 5 micron cartridge filtration
- Reverse osmosis pass 1
- EDI pass
- Ion exchange column
- Testomat hardness analyzer
- Fully automated flush
- CIP station for RO
- PLC controlled system
- Site commissioning

### Project duration:

February 2012 to November 2012

### Project location:

Russian Federation

### Product quality:

TDS < 0,1 uS/cm

### Project application:

Industrial water for rinsing of glass

### Typical contract amount:

100.000 – 350.000 USD

## 2012 Turnkey potable water in the desert Libya



## *Turnkey potable water in the desert*

*Libya, 1.000 m<sup>3</sup>/d*

### Project Description:

In collaboration with our local partner in Libya We has been awarded a contract for the engineering, manufacturing and assembly of a turnkey reverse osmosis system on a petrochemical site in the State of Libya. The treated and desalinated water is used as potable and utilities water. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- 1x 100% degassing tower
- 2x 100% chemical dosing stations
- 4x 50% multimedia filtration
- 2x 100% cartridge filtration
- 3x 50% reverse osmosis units per system
- 2x 100% UV disinfection
- Fully automated flush
- CIP station for RO
- PLC controlled system
- Site commissioning

### Project duration:

December 2012 to July 2014

### Project location:

State of Libya

### Product quality:

WHO guidelines

### Project application:

Potable water on a petrochemical site

### Typical contract amount:

on request



## 2012 Utilities water in the desert Mauritania



### *Utilities water in the desert*

*Mauritania, 40 m<sup>3</sup>/d*

#### Project Description:

We has engineered, manufactured and assembled a containerized brackish water reverse osmosis system on an industrial site in the Sahara desert in the Islamic Republic of Mauritania. The treated and desalinated water is used as utilities water for the industrial site. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air conditioning
- Chemical dosing stations
- Granular activated carbon filtration
- 20 micron cartridge filtration
- 5 micron cartridge filtration
- Reverse osmosis system
- Product water tank
- Automated flush
- Microprocessor controlled system
- Site commissioning

#### Project duration:

April 2012 to November 2012

#### Project location:

Islamic Republic of Mauritania

#### Product quality:

TDS < 300 uS/cm

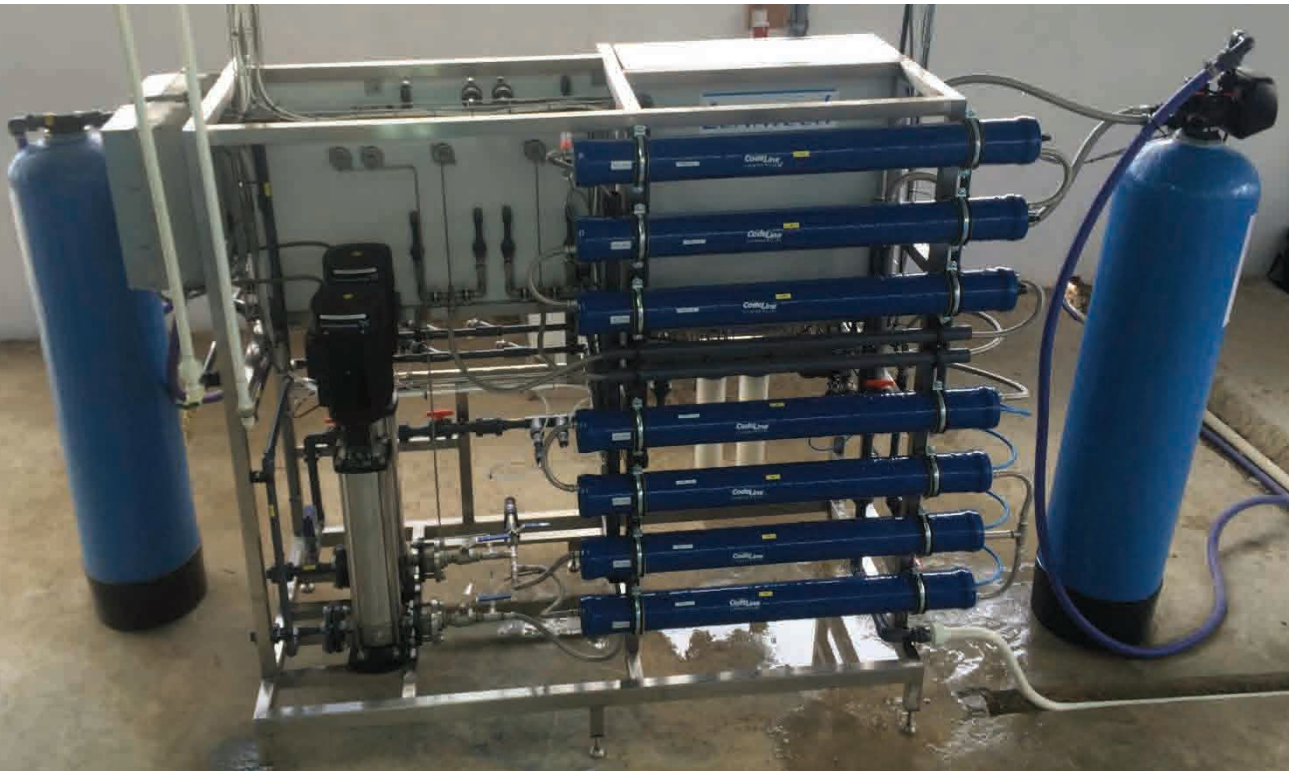
#### Project application:

Utilities water for industrial site

#### Typical contract amount:

30.000 – 70.000 USD

## 2013 Battery production facility Algeria



## Battery production facility

Algeria, 25 m<sup>3</sup>/d

### Project Description:

We has engineered, manufactured and assembled a turnkey double pass reverse osmosis system with an ion exchange polishing step in Algeria. The demineralised water is used for the process of battery fabrication. The water demineralisation system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- 20 micron cartridge filtration
- 5 micron cartridge filtration
- Reverse osmosis pass 1
- Reverse osmosis pass 2
- Ion exchange mixed bed column
- Fully automated flush
- CIP station
- Microprocessor controlled system
- Site commissioning
- Maintenance contract awarded afterwards

### Project duration:

December 2013 to May 2014

### Project location:

People's Republic of Algeria

### Product quality:

TDS < 5 uS/cm

### Project application:

Process industry water for fabrication of batteries

### Typical contract amount:

50.000 – 200.000 USD

## 2013 Softeners for shell Netherlands The Netherlands



# *Softeners for Shell Netherlands*

## *The Netherlands, 1.000 m<sup>3</sup>/d*

### Project Description:

We have been awarded a contract for the engineering, manufacturing and assembly for 2x 100% duplex water softening system for the Shell headquarters in The Hague city in the Netherlands. The softened water is used for the cooling towers in the building. The water softening system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- 2x 42.0 m<sup>3</sup>/h duplex softening system
- 2x hardness monitor
- Micro processor controlled
- Site installation
- Site commissioning

### Project duration:

September 2013 to February 2014

### Project location:

The Kingdom of the Netherlands

### Product quality:

CaCO<sub>3</sub> >17,8 < 53,4 ppm

### Project application:

Industrial

### Typical contract amount:

20.000 – 60.000 USD



## 2014 Brackish well water reverse osmosis Algeria



# *Brackish well water reverse osmosis*

## *Algeria, 600 m<sup>3</sup>/d*

### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly of a containerized turnkey high brackish water reverse osmosis system in Algeria. The treated water is used for the processing of plaster. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air conditioning
- Chemical dosing stations
- Multimedia filtration
- 20 micron cartridge filtration
- 5 micron cartridge filtration
- UV disinfection in RO feed
- 1x 20 m<sup>3</sup>/h reverse osmosis unit
- 1x 5 m<sup>3</sup>/h reverse osmosis unit
- Automated flush station
- CIP station
- PLC controlled system
- Site commissioning

### Project duration:

March 2014 to October 2014

### Project location:

People's Democratic Republic of Algeria

### Product quality:

TDS < 700 µS/cm

### Project application:

Process industry water for processing of plaster

### Typical contract amount:

100.000 – 300.000 USD

## 2014 Containerized sea water reverse osmosis Libya



# *Containerized sea water reverse osmosis*

## *Libya, 300 m<sup>3</sup>/d*

### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly of a containerized sea water reverse osmosis systems in a harbor city the State of Libya. The treated and desalinated water is used as potable and utilities water for a hospital. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air conditioning
- Multimedia filtration
- Chemical dosing stations
- 5 micron cartridge filtration
- Reverse osmosis system
- Post RO treatment
- Automated flush
- CIP station
- PLC controlled
- Site commissioning

### Project duration:

February 2014 to August 2014

### Project location:

State of Libya

### Product quality:

WHO guidelines

### Project application:

Potable water for local hospital

### Typical contract amount:

on request



## 2014 Greenhouse water desalination Ethiopia



# Greenhouse water desalination

Ethiopia, 1.500 m<sup>3</sup>/d

### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly for reverse osmosis systems for a grower in the Democratic Republic of Ethiopia. The treated and desalinated water is used as process water for a horticultural application. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- Multimedia filtration
- 5 micron cartridge filtration
- Reverse osmosis system
- Post RO treatment system
- Automated flush
- Microprocessor controlled
- Site commissioning and installation supervision

### Project duration:

February 2014 to September 2014

### Project location:

Democratic Republic of Ethiopia

### Product quality:

TDS < 200 uS/cm

### Project application:

Potable and horticultural water

### Typical contract amount:

80.000 – 170.000 USD



## 2014 Laboratory water supply The Netherlands



### *Laboratory water supply* *Netherlands, 4,0 m<sup>3</sup>/d*

#### Project Description:

We have engineered, manufactured and assembled a water supply system including reverse osmosis make up water station for a research and development branch of a research company. The water is used to research different oils and other fluids for the fluid medium viscosity. The water supply system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Reverse osmosis 100 lph make up station
- Pressurized buffer tanks
- Recirculation tank with blowdown valve
- UV disinfection system w/ dedicated circulation pump
- Recirculation pumps
- Microprocessor controlled
- Site commissioning

#### Project duration:

May 2014 to September 2014

#### Project location:

The Kingdom of the Netherlands

#### Product quality:

TDS < 300 uS/cm

#### Project application:

Research and development

#### Typical contract amount:

10.000 – 40.000 USD

## 2014 Make up water for power station Bahrain



## *Make up water for power station*

### *Bahrain, 1.200 m<sup>3</sup>/d*

#### Project Description:

In collaboration with our local partner We has engineered, manufactured and assembled a turnkey double pass reverse osmosis system with an EDI polishing step in the Kingdom of Bahrain. The demineralised water is being used as make up water for the boiler feed system. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- 2x 100% chemical dosing stations
- 2x 100% 20 micron cartridge filtration
- 2x 100% 5 micron cartridge filtration
- Reverse osmosis pass 1
- Reverse osmosis pass 2
- EDI pass
- Fully automated flush
- CIP station for RO
- CIP station for EDI
- Form 4 motor control center
- Automatic online LSI measurement
- Automatic online SDI measurement

#### Project duration:

December 2014 to November 2015

#### Project location:

Kingdom of Bahrain

#### Product quality:

TDS < 0,1 uS/cm

#### Project application:

Boiler Feed Water

#### Typical contract amount:

350.000 – 750.000 USD



# *Softeners for industrial application*

## *The Netherlands, 100 m<sup>3</sup>/d*

### Project Description:

We have engineered, manufactured and assembled a turnkey skid mounted water softening system with twin set up softener columns and hardness monitor. The treated water is used in the factory for several industrial purposes. The water softening system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Softener vessels
- Automatic control valve
- Brine solution tank
- Hardness monitor
- Microprocessor controlled
- Site installation and commissioning

### Project duration:

March 2014 to July 2014

### Project location:

The Kingdom of the Netherlands

### Product quality:

$\text{CaCO}_3 < 17,8 \text{ ppm}$

### Project application:

Softening of process water

### Typical contract amount:

10.000 – 25.000 USD



## 2014 Validation of flow patterns The Netherlands



# *Validation of flow patterns*

## *The Netherlands, 15 m<sup>3</sup>/d*

### Project Description:

Together with a research and development center We has engineered, manufactured and assembled a water supply system for a research center in the Netherlands. The water supply system is used as to validate the models of flow patterns in relation to air, water and oil. The water supply system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Buffer tanks
- Pressurizing system
- Pumps
- PID flow control
- Separation tank
- Microprocessor controller
- Safety spill bin
- Air/water/ oil mixing system

### Project duration:

April 2014 to September 2014

### Project location:

The Kingdom of the Netherlands

### Product quality:

Not applicable

### Project application:

Research and Development

### Typical contract amount:

25.000 – 75.000 USD

## 2014 Watermakers on ships The Netherlands



### *Watermakers on ships* *The Netherlands, 25 m3/d*

#### Project Description:

We has engineered, manufactured and assembled a turnkey seawater reverse osmosis system on board of several ships for a Dutch shipping company. The desalinated water is used for potable and utilities water on board of the ships. The reverse osmosis system as installed at this particular location is an on site assembled unit by We mechanics, We can also supply this equipment skid mounted. The **LennRO** system series are equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Multimedia filtration
- Chemical dosing stations
- Cartridge filtration
- Reverse osmosis
- Fully automated flush
- Microprocessor controller
- Site installation
- Site commissioning

#### Project duration:

April 2014 to August 2014

#### Project location:

International

#### Product quality:

TDS < 500 uS/cm

#### Project application:

Potable and utilities water

#### Typical contract amount:

15.000 – 35.000 USD

## 2015 Chloride reduction through reverse osmosis Vietnam



### *Chloride reduction through reverse osmosis Vietnam, 500 m<sup>3</sup>/d*

#### Project Description:

We has engineered, manufactured and assembled a water desalination system for a medium brackish water source in order to reduce the chloride content of the raw water intake. The system is installed in the Socialist Republic of Vietnam. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing station
- Cartridge filtration
- Reverse osmosis membranes
- Fully automated flush station
- Fully automated CIP station
- PLC controlled system
- Site commissioning

#### Project duration:

January 2015 to June 2015

#### Project location:

Socialist Republic of Vietnam

#### Product quality:

TDS < 300 mg/l

#### Project application:

Potable water production

#### Typical contract amount:

60.000 – 100.000 USD



## 2015 Concrete factory process water Tunisia



# Concrete factory process water

Tunisia, 1.200 m<sup>3</sup>/d

### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly of a turnkey water treatment systems in the Republic of Tunisia. The treated and desalinated water is used as utilities water for the production of concrete on the site. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- 2x100% Multimedia filtration system
- 2x100% 20 micron cartridge filtration system
- 2x100% 5 micron cartridge filtration system
- 2x100% Reverse osmosis system
- On site installed membrane normalisation software
- Automated flush
- PLC controlled system
- Site commissioning

### Project duration:

February 2015 to October 2015

### Project location:

Republic of Tunisia

### Product quality:

TDS < 500 uS/cm

### Project application:

Process water for concrete factory

### Typical contract amount:

100.000 – 300.000 USD

## 2015 Industrial cooling tower The Netherlands



# Industrial cooling tower

*The Netherlands, 2.000 m<sup>3</sup>/d*

### Project Description:

We has engineered, manufactured and assembled a SPX Marley cooling tower on a petrochemical industrial site in the Netherlands. The cooling tower is used to cool water coming from one of the chemical processes on site. The cooling tower system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- Cooling tower
- PLC controlled
- Site installation
- Site commissioning

### Project duration:

January 2015 to September 2015

### Project location:

The Kingdom of the Netherlands

### Product quality:

dT = 15K, from 45°C to 30°C

### Project application:

Cooling of process water

### Typical contract amount:

75.000 – 175.000 USD

## 2015 IX heavy metal removal from 35 MgCl<sub>2</sub> Russia



### *IX heavy metal removal from 35% MgCl<sub>2</sub> Russia, 900 m<sup>3</sup>/d*

#### Project Description:

We have been awarded a contract for the engineering, manufacturing and assembly for a heavy metal removal ion exchange system, mainly iron should be removed. The system is installed in the Russian Federation. The treated 35% Magnesium Chloride solution is used for the production of chemicals. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- Cartridge filtration
- Anionic ion exchange resin column
- Cationic ion exchange resin column
- Chemical regeneration systems
- Automated flush
- PLC controlled
- Site commissioning

#### Project duration:

February 2015 to November 2015

#### Project location:

Russian Federation

#### Product quality:

Fe < 4 · 10<sup>-5</sup> M%

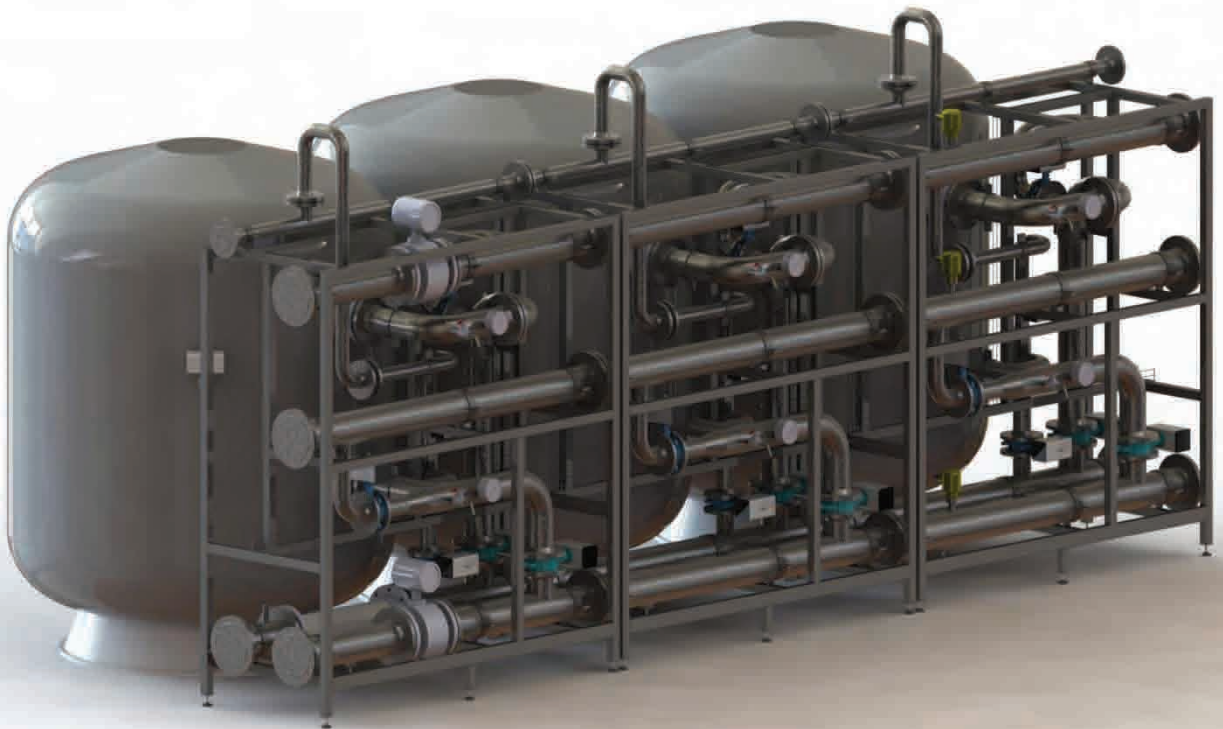
#### Project application:

Production of chemicals

#### Typical contract amount:

200.000 – 500.000 USD





# Multimedia de-ironing filtration

## The Netherlands, 1.500 m<sup>3</sup>/d

### Project Description:

We has engineered, manufactured and assembled a turnkey multimedia de-ironing filtration system with three parallel set up filters and common air injection through a static mixer for optimum de-ironing. The treated water is used in the factory for several industrial purposes. The water filtration system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Multimedia filters
- Valve battery
- Air blower station
- Static mixer with air injection
- PLC controlled
- SCADA prepared
- Site installation and commissioning

### Project duration:

January 2015 to September 2016

### Project location:

The Kingdom of the Netherlands

### Product quality:

Fe < 0,05 mg/l; Mn < 0,1 mg/l

### Project application:

De-ironing of process water

### Typical contract amount:

150.000 – 300.000 USD

## 2015 Solar powered reverse osmosis Qatar



## Solar powered reverse osmosis

### *Qatar, 100 m<sup>3</sup>/d*

#### Project Description:

In collaboration with one of our partners in Europe We has engineered, manufactured and assembled a solar powered water desalination system for a medium brackish water source in the Kingdom of Qatar. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air conditioning
- Chemical dosing station
- Cartridge filtration
- Reverse osmosis membranes
- Fully automated flush station
- Fully automated CIP station
- Solar panels
- Battery pack for solar panels
- Product water tank
- Site commissioning

#### Project duration:

February 2015 to May 2015

#### Project location:

Kingdom of Qatar

#### Product quality:

TDS < 200 uS/cm

#### Project application:

Potable water production

#### Typical contract amount:

150.000 – 450.000 USD

## 2016 Demineralisation with ion exchange technology The Netherlands



### *Demineralisation with ion exchange technology The Netherlands, 900 m<sup>3</sup>/d*

#### Project Description:

We has been awarded a contract for the engineering, manufacturing and assembly for an ion exchange system. The factory is located in the Netherlands. The demineralised water is used for the washing of aviation windows. The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Chemical dosing stations
- 5 micron cartridge filtration system
- Anionic ion exchange resin column
- Cationic ion exchange resin column
- Chemical regeneration systems
- Buffer tank
- Recirculation pump system
- Microprocessor controlled system
- Site installation
- Site commissioning

#### Project duration:

February 2016 to June 2016

#### Project location:

The Kingdom of the Netherlands

#### Product quality:

TDS < 1 uS/cm

#### Project application:

Process Industry

#### Typical contract amount:

15.000 – 40.000 USD



## 2016 Domestic desalination system Greece, Corfu



# *Domestic desalination system*

## *Greece, Corfu, 25 m<sup>3</sup>/d*

### Project Description:

We has engineered, manufactured and assembled a turnkey reverse osmosis system on the island of Corfu in Greece. The desalinated water is used for domestic purposes. The reverse osmosis system as installed at this particular location is one of We 's standard models. The **LennRO** system series are equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Multimedia filtration
- Chemical dosing stations
- Cartridge filtration
- Reverse osmosis
- Fully automated flush
- Microprocessor controller
- Site commissioning

### Project duration:

April 2016 to July 2016

### Project location:

Hellenic Republic

### Product quality:

TDS < 300 uS/cm

### Project application:

Domestic use

### Typical contract amount:

8.000 – 20.000 USD

## 2016 UV disinfection at the finca Nicaragua



### *UV disinfection at the finca* *Nicaragua, 500 m<sup>3</sup>/d*

#### Project Description:

We have engineered, installed and commissioned an UV disinfection system for a horticultural finca in the Republic of Nicaragua. The treated water is used as irrigation water for the plants, disinfecting viruses and bacteria which are harmful to the plants. The UV disinfection system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- UV disinfection system
- PLC controlled
- Site commissioning

#### Project duration:

February 2016 to May 2016

#### Project location:

Republic of Nicaragua

#### Product quality:

Dose > 250 mJ/cm<sup>2</sup> average - T10 of 30%

#### Project application:

Horticultural disinfection

#### Typical contract amount:

10.000 – 35.000 USD

## 2016-Softener-for-boiler-feed-water-Saudi-Arabia



### *Softener for boiler feed water* *Saudi Arabia, 5.400 m3/d*

#### Project Description:

We have engineered, manufactured and assembled a turnkey skid mounted water softening system with 6.500 liter resin softener column and ultra low hardness monitor (200 ppb). The treated water is used for boiler feed water purpose. The water softening system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Softener vessel (rubber lined coating inside)
- Structural skids
- Structural baseframe
- Coating according to client requirements
- Automatic control valve battery with SS304 piping
- HMI panel
- Asco Numatics G3 valve manifold
- Main PLC panel - Allen Bradley ControlLogix system
- Brine solution tank and brine measuring tank
- Venturi brine system
- Hardness monitor
- Site installation and commissioning

#### Project duration:

December 2015 to November 2016

#### Project location:

The Kingdom of Saudi Arabia

#### Product quality:

$\text{CaCO}_3 < 200 \text{ ppb}$

#### Project application:

Softening of process water

#### Typical contract amount:

500.000 – 1.000.000 USD



## 2017-Concentrated-juice-solution-treatment-Poland



# Concentrated Juice Solution Treatment

Poland, 250 m<sup>3</sup>/d

### Project Description:

We has engineered, manufactured and assembled a turnkey skid mounted concentrated juice solution treatment system with 2x atmospheric pressurised cationic and anionic ion exchange columns and regeneration system. The treated solution discharged specific waste elements in order to optimize the residual juice solution. The system has been installed as an R&D venture. The concentrated juice solution system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Custom tailored ion exchange vessels (GRP)
- Foodgrade coated materials.
- Foodgrade instrumentation
- PP process pumps
- Frequency driven process pumps
- Chemical dosing stations
- Acid regeneration system
- Caustic regeneration system
- PLC controlled system
- Site installation and commissioning

### Project duration:

September 2016 to August 2017

### Project location:

Republic of Poland

### Product quality:

Specific Ions below threshold value

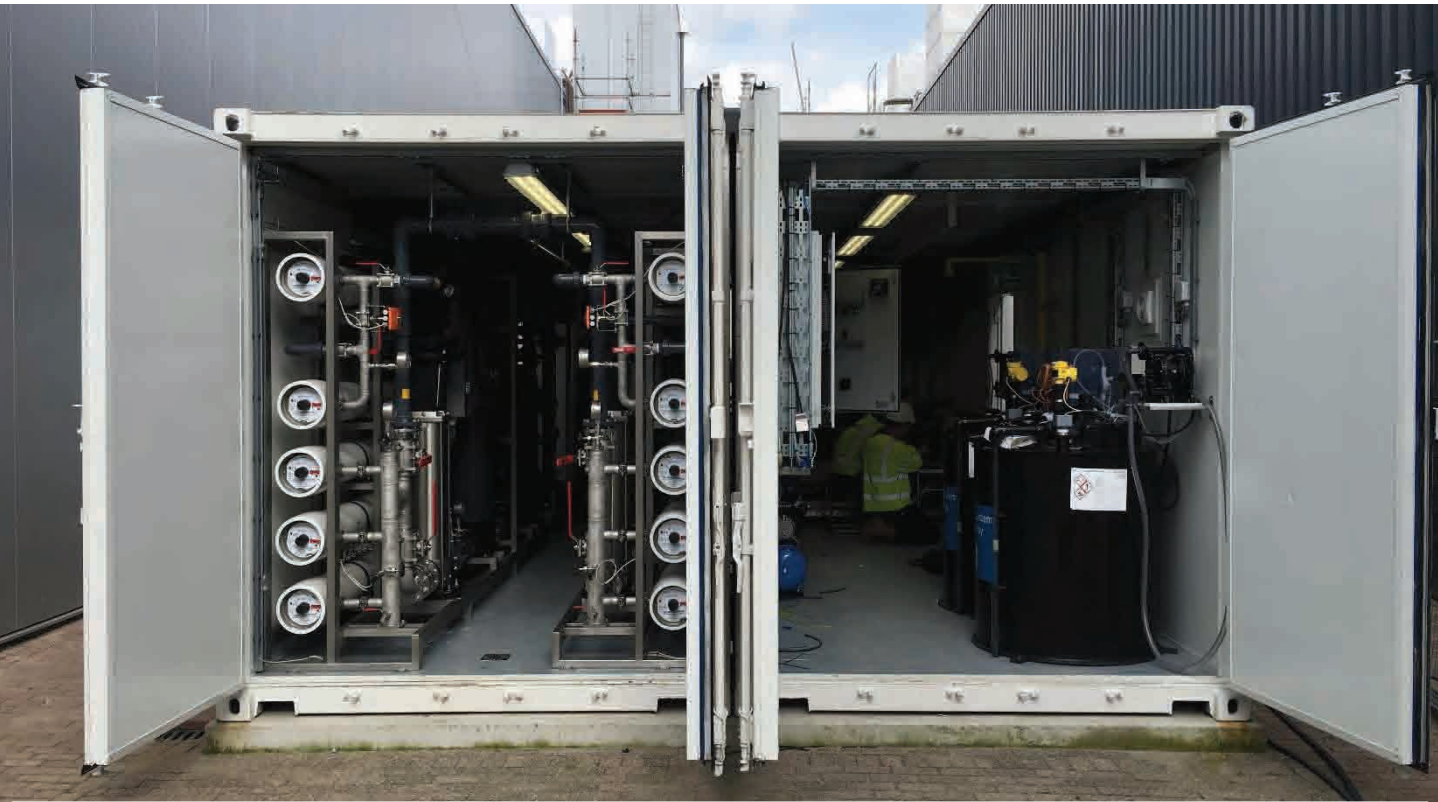
### Project application:

Concentrated Juice Solution (R&D)

### Typical contract amount:

300.000 – 700.000 USD

## 2017-Cooling-water-datacenter-Neterlands



### *Cooling water supply for a datacenter* *The Netherlands, 68 m3/h*

#### Project Description:

We has engineered, manufactured and assembled a turn-key water treatment system for cooling water supply for a datacenter. Having purified water as make-up water will allow a reduction of water consumption by 20% in the cooling units, and consequently waste water (blow-down) minimization.

Purified water availability is of extreme importance of the end-user. Therefore 2x50% redundancy is prepared regarding the reverse osmosis unit. The product distribution pump sets are 3x50% with independent power supply to each pump, in order to guarantee cooling water to prevent any downtime in the datacenter.

Complete system is containerized, minimizing site works, compact, plug-and-play solution.

#### Scope of Work:

- Engineering, manufacturing and assembly
- Feed pumps
- Cartridge filtration
- Reverse osmosis unit
- Recirculation pump over buffer tank, with bacteria control
- Chemical treatment
- Distribution pump system, independent power supply
- Siemens PLC
- Containerization
- Site commissioning
- Remote monitoring

#### Project duration:

February 2017 to September 2017

#### Project location:

Amsterdam, the Netherlands

#### Product quality:

100 ppm TDS, disinfected and conditioned

#### Project application:

Cooling water supply for Evaporative cooling unit

#### Typical contract amount:

## 2017-Potable-water-in-a-remote-village-Mauritania



## Potable water in a remote village

Mauritania, 50 m<sup>3</sup>/d

### Project Description:

We has engineered, manufactured and assembled two turnkey containerized sea water reverse osmosis systems in order to prepare potable water for a remote village on the coast of Mauritania. The system is solar panel driven, including diesel generator back up. The village is cut-off from cities by stretches of Sahara desert. The sea is equipped with high end quality instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Solar driven sea water RO
- Super Duplex piston pump
- Duplex piping
- Frequency driven high pressure pump
- Chemical dosing stations
- Microprocessor controlled system
- Site installation and commissioning

### Project duration:

October 2016 to August 2017

### Project location:

Islamic Republic of Mauritania

### Product quality:

TDS < 400 ppm

### Project application:

Potable Water from Sea Water

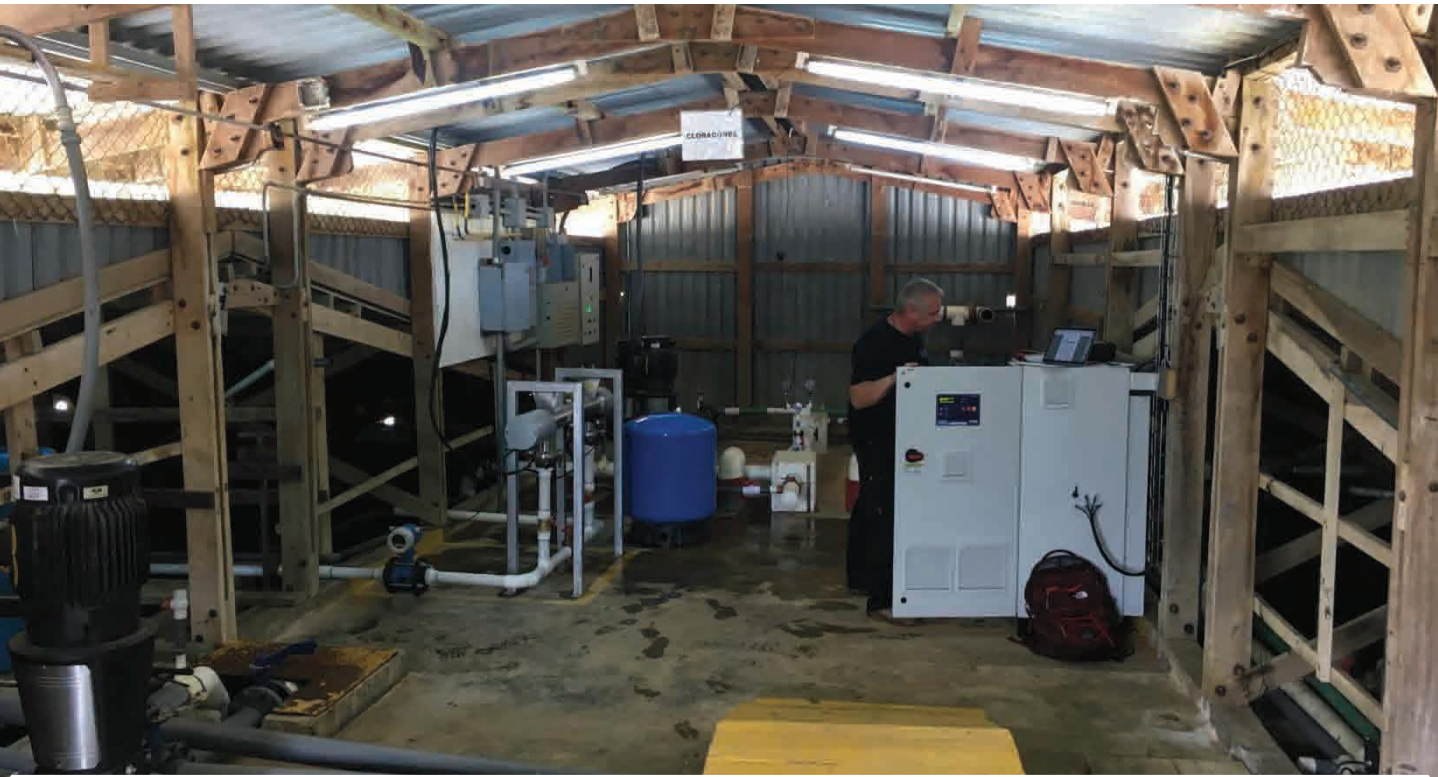
### Typical contract amount:

60.000 – 150.000 USD

(ex solar panels/diesel generator power supply)



## 2017-UV-disinfection-at-a-flower-farm-Costa-Rica



# *UV disinfection at a flower farm*

*Republic of Costa Rica, 3x 500 m<sup>3</sup>/d*

### Project Description:

We have engineered, installed and commissioned three UV disinfection systems for a flower farm in the Republic of Costa Rica. The treated water is used as irrigation water for the flowers, disinfecting viruses and bacteria which are harmful to the flowers. The UV disinfection system is equipped with top brand instrumentation and equipment. The system is completely from European origin and is delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- UV disinfection system
- PLC controlled
- Site commissioning

### Project duration:

February 2017 to October 2017

### Project location:

Republic of Costa Rica

### Product quality:

Dose > 250 mJ/cm<sup>2</sup> average - T10 of 40-60%

### Project application:

Horticultural disinfection

### Typical contract amount:

30.000 – 65.000 USD

## 2017-UV-disinfection-at-a-seed-grower-Colombia



### *UV disinfection at a seed grower*

*Republic of Colombia, 750 m<sup>3</sup>/d*

#### Project Description:

We have engineered, installed and commissioned three UV disinfection systems for a flower farm in the Republic of Colombia. The treated water is used as irrigation water for the seeds, disinfecting viruses and bacteria which are harmful to the seeds. The UV disinfection system is equipped with top brand instrumentation and equipment. The system is completely from European origin and is delivered with a certificate of origin.

#### Scope of Work:

- Engineering, manufacturing and assembly
- UV disinfection system
- PLC controlled
- Site commissioning

#### Project duration:

December 2016 to October 2017

#### Project location:

Republic of Colombia

#### Product quality:

Dose > 250 mJ/cm<sup>2</sup> average - T10 of 85%

#### Project application:

Horticultural disinfection

#### Typical contract amount:

15.000 – 40.000 USD





# Cooling tower make-up water

*The Netherlands, 2900 m<sup>3</sup>/day*

## Project Description:

We has engineered, installed and commissioned a high recovery CCRO system, to produce high purified water as make-up water. This allows a reduction of water consumption by 20% in the cooling units, and consequently waste water (blow-down) minimization. Purified water availability is of extreme importance of the end-user. First, chemical injection is done, to fit the CCRO feed recommendations and minimize fouling and scaling in the cooling tower. Then, 2 independent CCRO produce 120 m<sup>3</sup>/h of permeate at 93% recovery, also resulting in a reduction of brine production. The system is equipped with top-brand equipment to allow a full control on chemical uses and CCRO settings.

## Scope of Work:

- Engineering, manufacturing and assembly
- Feed and distribution pumps
- Closed-Circuit Reverse Osmosis (CCRO) unit
- Chemical dosing stations
- Siemens PLC
- Skid mounted system
- Top brand instrumentation
- Top brand equipment
- Containerization
- Site commissioning
- Remote monitoring
- Service and maintenance

## Project duration:

May 2018 to July 2019

## Project location:

The Netherlands

## Product quality:

Conductivity < 100 uS/cm

## Project application:

Cooling tower make-up Water

## Typical Return on Investments:

< 3 months



## 2018-Cooling-Tower-Blow-Down-Re-Use-Switzerland



## Cooling Tower Blow Down Re-Use

Switzerland, 300 m<sup>3</sup>/day

### Project Description:

We have engineered, installed and commissioned a turnkey pilot system pertaining MMF, followed by UF, GAC and IX softening, as a last step the water is demineralized with use of a high recovery CCRO system (93%) for cooling tower make-up water in Switzerland. The treated water is used as make-up water for the cooling tower in order to maintain conductivity < 850 uS/cm. In this way a lot of tap water can be saved as make-up water. The complete system is equipped with top brand instrumentation, advanced automation and equipment. The system is completely from European origin and is delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air-conditioning
- Multimedia filtration
- Ultrafiltration (hollow fiber)
- Granular Activated Carbon (100% Redundancy)
- IX softener
- Close Circuit Reverse Osmosis
- Chemical cleaning station
- Siemens PLC
- Site installation and commissioning

### Project duration:

February 2018 to December 2018

### Project location:

Switzerland

### Product quality:

Conductivity < 30 uS/cm

### Project application:

Cooling Tower Blow Down Re-Use

### Typical contract amount:

350.000 – 600.000 USD

# 2018-Power station expansion and potable water provision Bahrain



## Power Station Expansion and Potable Water Provision Bahrain, 3.600 m<sup>3</sup>/d + 2.400 m<sup>3</sup>/d

### Project Description:

In collaboration with our local partner We has engineered, manufactured and assembled a turnkey double pass reverse osmosis system with an EDI polishing step in the Kingdom of Bahrain. The demineralised water is being used as make up water for the boiler feed system. Additionally a complete The water desalination system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Reverse osmosis pass 1
- Reverse osmosis pass 2
- EDI pass
- High brackish well water pump station
- Degasser tower system
- Potable water remineralization system
- Fully automated flush
- 3x CIP station RO and EDI
- Form 4B motor control center
- 2x 100% multi media filtration
- 2x 100% chemical dosing stations
- 2x 100% 5 micron cartridge filtration
- Automatic online LSI/SDI/Silica/TOC measurement
- Redundant PLC w/ SCADA preparation

### Project duration:

December 2016 to July 2018

### Project location:

Kingdom of Bahrain

### Product quality:

TDS < 0,1 uS/cm / TDS > 200 < 400 uS/cm

### Project application:

Boiler Feed Water / Potable Water

### Typical contract amount:

2.000.000 – 3.000.000 USD



## 2018-Softener-for-boiler-feed-water-Saudi-Arabia



# Softener for boiler feed water

Saudi Arabia, 5.400 m<sup>3</sup>/d

### Project Description:

We have engineered, manufactured and assembled a turnkey skid mounted water softening system with 6.500 liter resin softener column and ultra low hardness monitor (200 ppb). The treated water is used for boiler feed water purpose. The water softening system is equipped with top brand instrumentation and equipment. The system is completely from European origin and will be delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Softener vessel (rubber lined coating inside)
- Structural skids
- Structural baseframe
- Coating according to client requirements
- Automatic control valve battery with SS304 piping
- HMI panel
- Asco Numatics G3 valve manifold
- Main PLC panel - Allen Bradley ControlLogix system
- Brine solution tank and brine measuring tank
- Venturi brine system
- Hardness monitor
- Site installation and commissioning

### Project duration:

December 2015 to September 2018

### Project location:

The Kingdom of Saudi Arabia

### Product quality:

CaCO<sub>3</sub> < 200 ppb

### Project application:

Softening of process water

### Typical contract amount:

500.000 – 1.200.000 USD



## 2018-UV-disinfection-at-a-horticultural-farm-Nicaragua



# *UV disinfection at a horticultural farm*

*Republic of Nicaragua, 1.000 m<sup>3</sup>/d*

### Project Description:

We have engineered, installed and commissioned two parallel set up UV disinfection systems for a horticultural application in the Republic of Nicaragua. The treated water is used as irrigation water for the plants, disinfecting viruses and bacteria which are harmful to the plants. The UV disinfection system is equipped with top brand instrumentation and equipment. The system is completely from European origin and is delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Skid mounted system
- 2x parallel UV disinfection system
- Chemical dosing induced wiping cycle
- PLC controlled
- Site commissioning

### Project duration:

November 2017 to May 2018

### Project location:

Republic of Nicaragua

### Product quality:

Dose > 250 mJ/cm<sup>2</sup> average - T10 of 30%

### Project application:

Horticultural disinfection

### Typical contract amount:

20.000 – 70.000 USD

## 2019-Desalination-for-Resort-Bahrain



# *Desalination for Resort*

## *Kingdom of Bahrain, 550 m<sup>3</sup>/day*

### Project Description:

We has engineered, installed and commissioned a turnkey desalination system, including multimedia filtration, particle filtration, conventional reverse osmosis and post UV treatment. The treated water is used for a multitude of utilities in the luxurious resorts complex. The complete system is equipped with top brand instrumentation, advanced automation and equipment. The system is completely from European origin and is delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air-conditioning
- Multimedia filtration
- Reverse osmosis unit
- UV Disinfection unit
- Chemical dosing stations
- CIP/rinsing station
- Siemens PLC
- Site commissioning
- Service and maintenance

### Project duration:

July 2018 to February 2019

### Project location:

Kingdom of Bahrain

### Product quality:

Conductivity < 300 uS/cm

### Project application:

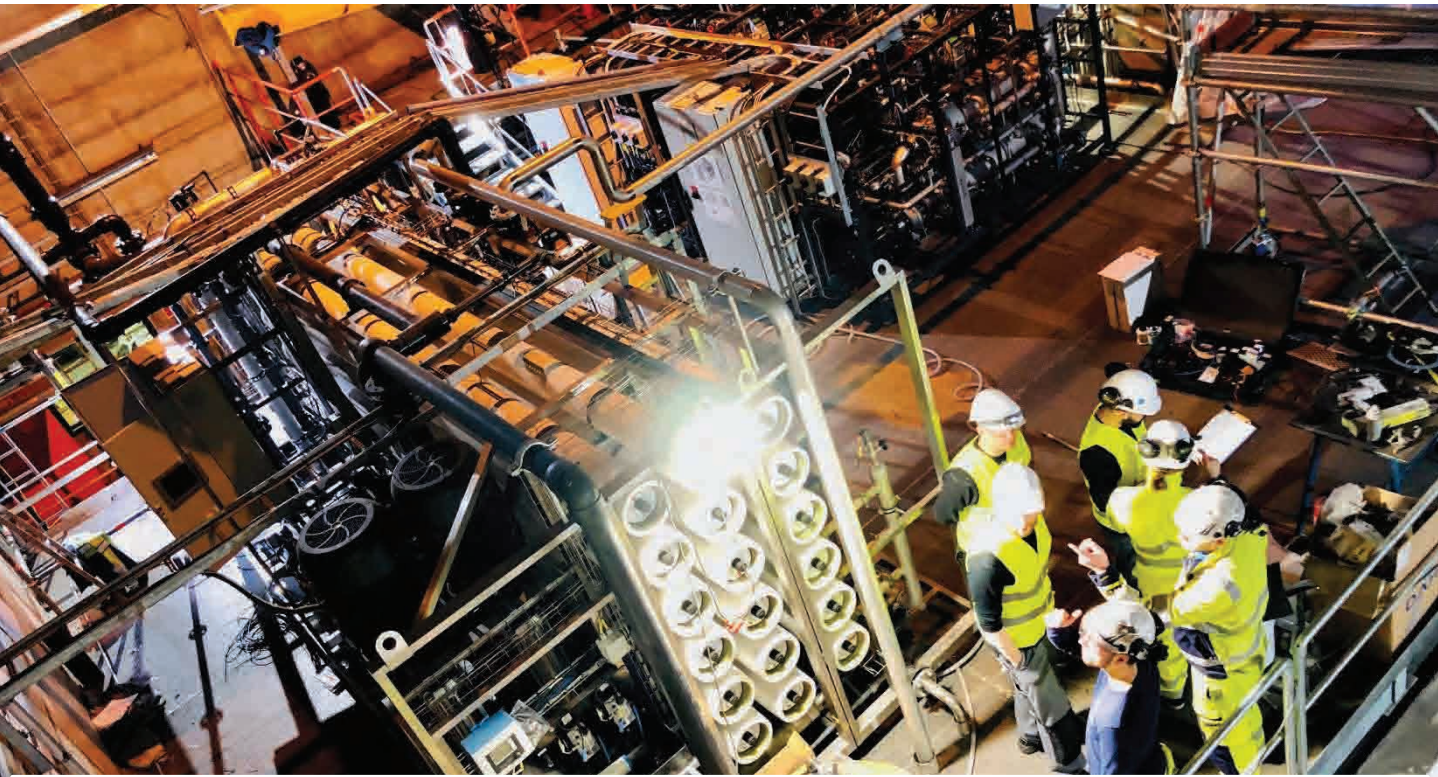
Utilities Water for Resort

### Typical contract amount:

80.000 – 150.000 USD



## 2019-Flue-Gas-Desulfurization-Treatment-Finland



# Flue Gas Desulfurization Treatment

## Finland, Flow 42 m<sup>3</sup>/hour

### Project Description:

We has engineered, installed and commissioned a double pass RO system, first pass is a high recovery CCRO system (93%) followed by a conventional RO system (95%) for a boiler feed water application in Finland. The treated water is used as make-up water for the boiler line, demineralizing the water of scaling potential. The complete system is equipped with top brand instrumentation, advanced automation and equipment. The system is completely from European origin and is delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- High Recovery double pass RO
- Skid mounted system
- Top brand instrumentation
- Top brand equipment
- Chemical dosing stations
- PLC controlled
- Site commissioning

### Project duration:

February 2018 to March 2019

### Project location:

Finland

### Product quality:

Conductivity < 100 uS/cm

### Project application:

Boiler Feed Water

### Typical contract amount:

250.000 – 450.000 USD



## 2019-Seawater-Desalination-for-Golf-Course-Curacao



# Seawater Desalination Golf Course

Curaçao, 1.200 m<sup>3</sup>/day

### Project Description:

We has engineered, installed and commissioned a turnkey containerized seawater desalination system from intake pumps up to remineralization of the product water. The treated water is used as irrigation water for the golf course on a luxurious resorts complex. The investment on the sea water desalination system from We has a return of investment of <1 year, due to scarcity and high procurement cost of fresh water. The complete system is equipped with top brand instrumentation, advanced automation and equipment. The system is completely from European origin and is delivered with a certificate of origin.

### Scope of Work:

- Engineering, manufacturing and assembly
- Containerized system with air-conditioning
- 2x 50% Multimedia filtration
- 2x 50% Reverse osmosis unit
- 2x 50% Pressure Exchanger for 40% energy reduction
- Chemical cleaning and rinsing station
- Distribution and intake pump system
- Siemens PLC
- Site commissioning
- Remote monitoring
- Service and maintenance

### Project duration:

January 2018 to March 2019

### Project location:

Curaçao

### Product quality:

Conductivity < 500 uS/cm

### Project application:

Golf Course Irrigation

### Typical contract amount:

300.000 – 700.000 USD

Company Name	Product
IST MARINE	End Suction Pump
AD Boksit Milic	Explosion Proof Submersible Sewage Pump Multistage Pump ,Valves
Darimex Trading company	Diaphragm Pump
First Farmers Holding Corporation	End Suction Pump
GENERAL TECH	Fire Pump Set
Industrial Supply & Support bvba	Split Case Pump And Inline Pump
SOFASIA	Submersible Deep Well Pump
Spandex Marketing Corporation	Split Case Pump ,Control Panel,Vertical Sump Pump
Zvezda Ltd.	End Suction Pump
NWT INTERNATIONAL	Fire Pump
A. EPS.EGYPT	Inline Pump , Submersible Sewage Pump,Pressure Tank
A.KARROUMI	Vacuum Pump
ABIR FASHIONS	Submersible Borehole Pump
Accensi Pty Ltd.	Diaphragm Pump
ACME ENGINEERING LTD	Fire Pump Set
ACROS Eng.	Fire Pump
ACTOR SPORTING LTD.	Fire Pump Package
ADVOC	Oil Pump, Vertical Multistage Pump, Vacuum Pump
Agroscape Development	Booster set
Air International - Thermal Systems	Centrifugal Pump
AKHALI MTVARE LTD	Horizontal Multistage Pump
Al Ahmadiyah Contracting	Transfer & booster sets
Al Erwi Trading Est.	Submersible Sewage Pump
Al Ramahi A/C & Sanitary	Submersible Pump
Al Shafar Transport & Contracting Co.	Submersible pump sets
AL-HARETH.COM	Split Case Pump
ALTER GROUP	End Suction Pump ,Screw Pump,Vacuum Pump,Diaphragm Pump
altheocs trading	Vertical Turbine Pump ,Fire Pump,Vacuum Pump
AMAR HKET CO.,LTD.	End Suction Pump
American Monolith Ltd	Diesel Engine Drive Fire Pump
Apraxair	Boiler Feed Pump,Split Case Pump
asle tryland	Vacuum Pump
Avion Trade Ltd.	Centrifugal Pump ,Multistage Pump
AYACUCHO GAS S.A.	Fire Pump, Control Panel
Aziz & Company Ltd.	End Suction Pump Split Casing Pump
AZIZ&MPANY LTD	Vacuum Pump
AzovTransTerminal	Slurry Pump
BCI	Submersible Sewage Pump
Bengal International Agencies	Diesel Fire Pump And Fire Pump Package
Brodtech BV	Centrifugal Pump
BUDGET CORPORATION SDN.BHD	Inline Pump ,Multistage Pump ,Submersible Pump
BUILDING DEPOT	Submersible Sewage Pump,Vertical Multistage Pump , Pressure Tank
Calderon Alberto Jorge	Semi-Submersible Pump
Carillion	End Suction Pump And Inline Pump
CASILLAS Y CIA. GRUPO INDUSTRIAL, S en N.C.	Fire Pump And
Castallia	Fire Pump
Chinnavit Instrument Co.,Ltd.	Split Case Pump
Chirag Group	Transfer, booster, submersible
CJSC “New technologies and Equipment	Centrifugal Pump ,Multistage Pump
COAST SEA HOLDINGS HK	
Complete Net Sdn.Bhd	Inline Pump
Cord Engineering Pte. Ltd.	End Suction Pump And Split Case Pump
CRYOTHAİ.co.ltd	Diesel Fire Pump
Crystal Petrotech & Engg. Services	Gear Pump
CTL.INTERLUBE CO.,LTD	Submersible Sewage Pump Vacuum Pump
CV.Citra Karya	Multistage Pump,End Suction Pump
CV.GM.tech	Diaphragm Pump
CV.sekawan eka technic	End Suction Pump
DALN EGORSK	Diaphragm Pump
DG INFRATECH PTE. LTD.	Cooling Water Pump
DG INFRATECH PTE. LTD.	Diesel Engine Drive Cooling Water Pump
DOWELTECH LTD	Vertical Turbine Pump
Drake & Scull	Booster & submersible sets
Drake & Scull	Cooling tower makeup pump
Dura Metal	Pte Ltd
Eagle Creek Ranch	Submersible Deep Well Pump
Eagle EM	Transfer set, Booster set
Eagle Flo Pumps, Inc.	Submersible Sewage Pump
EMACO Engineering&Technology	Fire Pump Package
EMCOGAS	Fire Pump,Jockey Pump,Control Panel
ENERGY EQUIPMENT SERVICE JOINT STOCK COMPANY	End Suction And Split Case Pump
Eng Lee Shipping Company	Split Casing Pump, Gear Pump ,Fire Pump
Engineer’s O ce	Booster & transfer sets
Engineer's Office	Booster Set
Envi Engineering Services Co., Ltd.	submersible sewage pump
Erpa S.A.	Vertical Turbine Pump
ESCO	Diaphragm Pump
Fast Building Contracting	Irrigation Booster set
Fire Equipment center	Fire Pump Set
Fluidspeed Co.,Ltd .	Multistage pump
FLY DRAGON	Split Case Pump
FNC	Transfer set
Fuel Technology	Fire Pump,Jockey Pump,Control Panel
Galtee Wood Products	centrifugal pump
GENERAL INVEST SRL	fire pump
GLOBAL ATTIRE LIMITED	Fire Pump Package
GOLDTEX GARMENTS LTD.	Fire Pump Package
Granida Factory	Vertical Turbine Pump
I.S.T. Marine Service Group B.V.	End Suction Pump, Multistage Pump
Igums International Nig.Ltd	Centrifugal Oil Pump
INGEMARK SERVICIOS AGRUPADOS, S.L.	Diesel Fire Pump End Suction Pump ,Split Casing Pump
International EM	Submersible pump set,
International Sourcing Limited	Split Case Pump
IRAM TUNISIE	Split Case Pump, Horizontal Centrifugal Pump, Submersible Sewage Pump
Itelco Pty Ltd	Vacuum Pump

Jasaf	Booster sets
Jeet Building Contracting	Booster, transfer & submersible sets
JO.BARATA-SAM	Vertical Turbine Pump
JSC Industrial Technologies	Multistage Pump ,Chemical Pump
Khansaheb	Booster, Transfer, Sewage
LEASING DE CREDITO S.A.	Sewage Pump And Diaphragm Pump
LLC “Kentavr-Energo”	Split Casing Pump
LLC Elektropul	Multistage Pump
Luck ship builders ltd	Screw Pump
Machinery & Replacement Parts S.r.l.	Inline Centrifugal Pump
Massa	Vacuum Pump
MB MARKETING	Slurry Pump
MGDC	End Suction Pump
Micheil Chkhatarshvili	Split Case Pump
MULIA	Split Case Pump
Multiplast Corporation	Vacuum Pump
MYB trading Est.	Fire Pump Set
NATIONAL PAINTS FACTORIES CO. LTD.	Fire Pump Set
Nature Spas Limited	Inline Pump
NAVALES SAC	Fire Pump
NTK Industrial	End Suction Chemical Pump
NZN GARMENTS LIMITED	Fire Pump
OJSC Dalenergotechkomplekt	Diaphragm Pump
OMAR ALI BABATEIN & BROS CO	Fire Pump Set
Ost-West Trading Ltd	Centrifugal Pump Submersible Pump ,Diaphragm Pump, Split Casing Pump , Screw Pump
P.S.C. Starch Products PCL.	lhf Centrifugal Pump
Pabellon de Arteaga,Ags,Mexico	Submersible Sewage Pump ,End Suction Pump,Self-Priming Sewage Pump
PARAS TRADING COMPANY	Centrifugal Pump
Pluto EM Co.	
PN COMPOSITE LTD	Diesel Fire Pump
POMPE ZANNI	Split Case Pump
Praxair	End Suction Pump Split Case Pump
PRIME PUMPS	Split Casing Pump
Providence Doytch LLP	Fire Pump
PSM, Ltd	Vacuum Pump
PT JAYA MANDIRI SUKSE	Horizontal Multistage Pump
PT OMETRACO ARYA SAMANTA	Split Casing Pump ,Diesel Engine Drive Fire Pump,Submersible Pump,
PT. Cira International	Submersible Sewage Pump
PT. GROOVEINDO LESTARI	Vertical Multistage Pump
PT. Teknik Sakti Abadi	Split Case Pump
PT. Tiara Sakti	Vertical Multistage Pump
PT.USHADA	Fire Pump, Jockey Pump, Control Panel
Pump Solutions Inc.	Diaphragm Pump
Pureandco	multistage pump submersible borehole pump
QC STYROPACKAGING CORP.	Vacuum Pump ,Fire Pump ,Vertical Turbine Fire Pump , Control Panel ,Submersible Pump
Radiant Technical Works	Booster, Circulation & Submersible sets
Regal Services	Centrifugal Pump
RESTAURANTE VISTA ALEGRE	Submersible Pump
RETECSA	Diaphragm Pump
Ring Energy Corporation	Diesel Fire Pump
ROYAL ENERGY CO LTD	Centrifugal Pump
S. Avdalovic	Submersible Sewage Pump
SANG VIET EQUIPMENT CO. LTD.,	Diesel Fire Pump And Inline Pump
SANJUAN PROYECTOS	Multistage Pump
SANSUY S.A. INDUSTRIA DE PLASTICOS	Screw Pump,Submersible Pump, End Suction Pump
SCARLET KNITWEAR LTD	Diesel Fire Pump
SDK Spolka z o.o.	Vertical Multistage Pump
Sea Servic Shipping company Ltd	Gear Pump ,Centrifugal Pump
sewage pump	
SHAWON ELECTRICAL ENGINEERING	Submersible Sewage Pump
Shlangenz OOO	Diaphragm Pump
Siam Motor and Pump Ltd.	Multistage Pump
SOLDIERComm Kft.	Split Case Pump, Inline Pump,Sewage Pump
SQ Celsius Ltd	End Suction Pump
Ste SODIKAB	Inline Pumps      Seaworld Investments
Steelman Electromechanical Company	Booster, submersible
Strand Em	Booster sets
Stroyprofil	Diaphragm Pump
Sunrise Tokyo	Inline Pump
SYNEGRY INDUSTRY DEL PERU S.A.C.	Submersible Sewage Pump
T. Rung Rueng Co.,Ltd.	Submersible Deep Well Pump
Techno Apogee	Fire Pump Package
Tendaji Trading	Diesel Fire Pump
TEXEUROP BD LTD	Vacuum Pump
THE AIRCONS	End Suction Pump And Vertical Multistage Pump
TR Mechanic Marshal Co., Ltd	Slurry pump
Trans Inter-Con Co., Ltd.	Oil Pump
TRANSMAX ENGINEERING INDUSTRIES.	Diaphragm Pump
TRIDA LLC	Dosing Pump,Gear Pump,Inline Pump
UNIFOX COMMERCIAL	Vertical Turbine Pump ,Fire Pump
Universal Process Equipment	Sewage Pump
URC-Sonedco	Split Casing Pump,Boiler Feed Water Pump,Slurry Pump
Vantage Resources Limited	Centrifugal Pump
VEN RAY CONSTRUCTION	Vertical Turbine Pump,Valves, Fire Pump,Control Panel
VEST JET AS	Inline Centrifugal Pump
Veya Investments Limited	Centrifugal Pump
WAM S.p.A.	Submersible Sewage Pump
Water Field Asia Co.,Ltd.	Submersible Sewage Pump Split Casing Pump
Weir Minerals RFW LLC	Diaphragm Pump
WENZUR DO BRAZIL LTDA.	Diaphragm Pump
Win Specialist and Beyong ,Inc.	Vertical Turbine Pump
ZACHRY, S. A.	Fire Pump Sets
Zamfara State Water board Co.,Ltd	Split Case Pump