

Genesis Water Technologies Flowback / Produced Water Treatment Reuse System



About Us

Genesis Water Technologies, Inc. (GWT), incorporated in 2006, is a USA based manufacturer and supplier of innovative solutions for water and wastewater treatment with specific solutions focused on the upstream oil and gas industry's wastewater treatment and water reuse needs.

GWT has its corporate office in Maitland, Florida, USA a satellite office and currently expanding manufacturing capability in Charlotte, NC and international offices in Philippines with several distribution warehouses across the USA and a world wide representation network.

To learn more about us, please visit our website at: <http://www.genesiswatertech.com> or request our companies capabilities presentation.

Specialized Market Segment

Upstream Oil & Gas Wastewater Treatment

Flowback • Produced Water • Drilling Fluids

Reuse • Irrigation • Livestock • Municipal wastewater Treatment Plants

Water Treatment Systems (Mobile and Stationary)

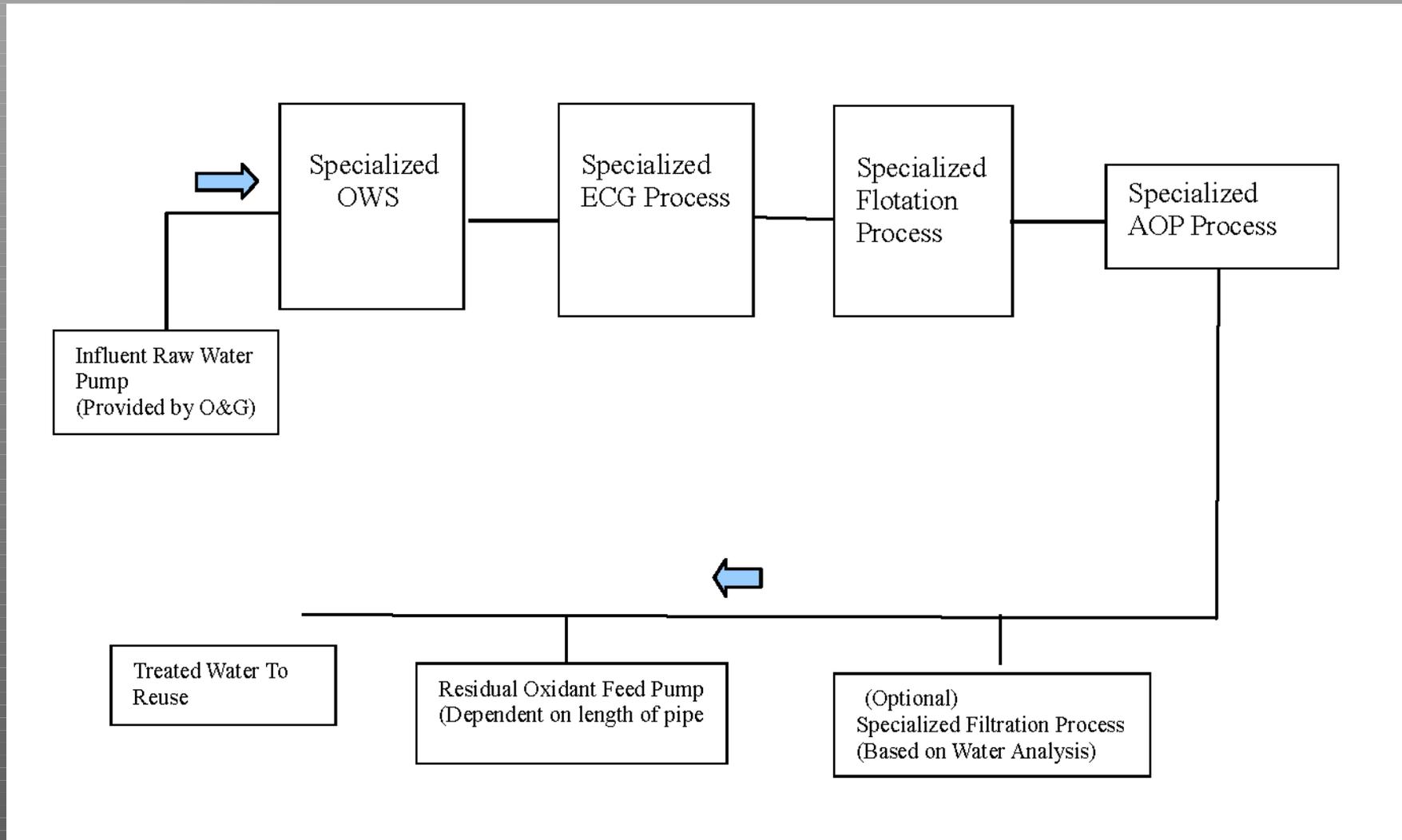


GWT™ PWRS Systems

GWT™ Series Produced Water Reuse Systems (PWRS) systems incorporate advanced treatment technology in an essentially chemical free multi-stage treatment process.

- PWRS systems were designed with flexibility in mind and incorporate optimized treatment processes to handle TSS, heavy metals, hardness minerals, organics and inorganics for water reuse in drilling operations and other potential produced water applications
- High performance system solution designed to meet the specific and unique challenges of the oil and gas industry based on experience and collaboration with clients.
- Dependable deployment for stationary or mobile applications based on flow rate with flow rates from 2,000 BBLD to 20,000 BBLD and larger.
- Typical TSS Reduction 99.9%, Heavy metals and organic compounds are oxidized and bacteria is killed prior to optional post treatment biocide residual feed dosage.

General System Diagram



System Subject To Change Based on Regional Water Profile and Customer Requirements

GWT™ Water Treatment Solutions

We design and manufacture custom built Mobile and Stationary Flow back and Produced Water Treatment Systems with flexibility in mind to meet the needs and specifications of each client.

This includes removal or reduction of:

- Bacteria
- Suspended solids
- Specific mineral scalants
- Heavy metals as well as other potential specified contaminants

Other water treatment solutions we provide include:

- Water testing and toxic gas monitoring systems
- Filtration System including UF
- Scale Prevention
- Specialized Disinfection
- Reverse Osmosis

Upstream Oil and Gas wastewater Treatment Experience

Oil & Gas Process/Wastewater Treatment Experience

- Columbia: case study presented in this presentation
- Ghana: design/build - \$12 million desalination plant
- Vietnam – design/build process water treatment plants
- Malaysia – provided disinfection systems for \$20 million oil & gas wastewater treatment plant
- Nigeria - designed mobile water treatment plants for oil/gas contaminated river water to be reused for domestic purposes

Publications and Patent Applications

2012 Water Environment Federation Technical Exhibition and Conference, New Orleans, Louisiana: “World’s largest annual water and wastewater tradeshow” (Exhibition mention for sustainable technology in water and wastewater treatment)

Major Publications:

- Industrial Water & Waste Digest: "Produced and Reused“ 09.2014
- Produced Water Project Columbia
- Environmental Expert: Published Case Study (Produced Water Project)
- Global Water Intelligence: Editorial (Produced Water Projects and Desalination Projects to support Offshore O&G clients in Ghana

US Patent Application: 62051459; & international patents pending

Oil & Gas Industry Water Challenges

We take on immense challenges that matter to our clients

- Maintaining surface and underground water quality from upstream O&G operations
 - Drilling and hydro fracturing water supply scarcity
 - Regulatory changes
 - Rising costs for freshwater supplies and transportation

Multi-Stage Treatment Process

The GWT™ PWRS treatment process is flexible and optimized to meet the needs and specifications of each client.

Base Water Treatment Systems include:

- Oil Water Separation
- Electrolytic Coagulation Process
- Flotation Process
- Oxidation Process

GWT™ PWRS Capability

- Turbidity <0.1 NTU
- Removal of solids, viruses, turbidity, heavy metals, organics, oil/greases, hydrocarbons
- Typical removal of 90% range of hardness minerals based on pH without the use of chelating agents.
- System provides a simplistic yet advanced solution for frac fluid makeup water or for use in other non potable water purposes.

Case Study

Produced water treatment system in Columbia for an internationally recognized Oil E&P company

Water Quality			
Parameter	Unit	Before Treatment	After Treatment
Iron	ma/L	97.5	< 0.1 ma/L
Manganese	ma/L	61.5	< 0.1 ma/L
Turbidity	NTU	87.3	< 0.1
Color	Pico Units	74	< 1
E. Coli	UFC/100 ml	>1000	ND

Results based on specific case study water analysis – individual results may vary

Cost

Client confirmed that GWT™ PWRS treatment cost was competitive to their overall cost to purchase, transport and dispose of the produced wastewater generated from their oil production operations in Columbia, Ghana, Malaysia.

Summary

GWT Series Produced Water Reuse Systems (PWRS) incorporates advanced treatment technology in an essentially chemical free multi-stage treatment process with lower operating and maintenance costs.

The PWRS is flexible incorporating treatment processes to handle TSS, turbidity, heavy metals, bacteria, organics and hardness minerals for water reuse in drilling operations and other potential produced water applications.

Dependable deployment for stationary or mobile applications based on flow rate with flow rates from 2,000 BBLD to 20,000 BBLD and larger for stationary applications.

Typical TSS Reduction 99.9%, Heavy metals are oxidized, organics and bacteria removed. TDS is not removed in this system configuration.

Thank You

Mr. Nick Nicholas

Technical Sales Manager

Genesis Water Technologies, Inc.

Office: +1 321 280 2742 ext 250

Fax: +1 407 792 2603

Email: nick@genesiswatertech.com

Web: <http://www.genesiswatertech.com>

