

# NON-THERMAL ZERO LIQUID DISCHARGE BRINE MANAGEMENT



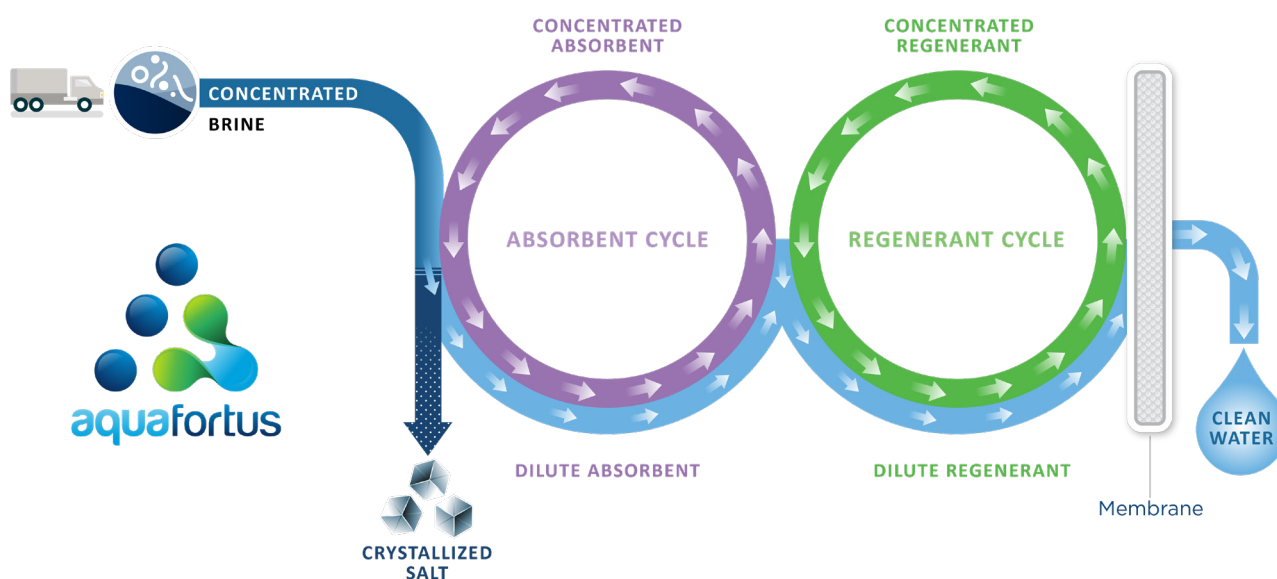
*For use in high salinity industrial wastewater applications*

## THE COMPANY

Aquafortus Technologies Limited has developed and patented a non-thermal, continuous and regenerable zero liquid discharge technology, known as the ABX™. The ABX™ crystallizes out all the salt from high salinity industrial brines and recovers up to 98% of the pure water.

## BENEFITS OF THE ABX™

- ✓ Reduce energy use by up to 90%
- ✓ Reduce wastewater brines to solids
- ✓ Reduce operational costs by up to 60%
- ✓ Continuous and regenerable process
- ✓ Can precipitate out all salts commonly found in industrial wastewaters



## HOW OUR ZERO LIQUID DISCHARGE TECHNOLOGY WORKS

Aquafortus' zero liquid discharge technology is a novel liquid-to-liquid crystallizer that promotes the formation of salt crystals via a proprietary direct contact crystallization process using Aquafortus' patented materials, the Aquafortus Absorbent and the Aquafortus Regenerant.

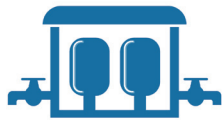
The ABX™ works by a two-stage solvent exchange process with the Aquafortus Absorbent acting as a transfer medium for water. When a wastewater brine contacts the Aquafortus Absorbent, salts from the waste water brine instantly crystallize out. The Aquafortus Regenerant regenerates the Aquafortus Absorbent for continuous reuse

in the system.

Aquafortus' zero liquid discharge technology, the ABX™ is the only known continuous and regenerable process that can wholly replace energy intensive thermal evaporation technologies in zero liquid discharge applications. The Aquafortus Absorbent can precipitate all salts commonly found in industrial wastewaters, including troublesome salts like lithium chloride and calcium chloride.

In the treatment train, the ABX™ would replace both the power hungry thermal evaporator and crystallizer.

# AQUAFORTUS' WASTEWATER TREATMENT TRAIN TO ZERO LIQUID DISCHARGE



## Reverse Osmosis / EDR

- 50% total volume reduction.
- Limited concentration potential.



## Aquafortus ABX™

- 100% reduction. Reduces wastewater to dry salt.
- Produces clean water. Recovers 98% of the water.
- Uses 80% less energy than thermal evaporators.
- Uses 90% less energy than thermal crystallizers.
- Can precipitate out all salts commonly found in industrial wastewaters.

## EVALUATION AND PROPOSAL



Aquafortus can analyze a sample of your industrial brine and produce a laboratory report and assessment. From this, Aquafortus will provide you with an objective evaluation of the suitability of our technology for your application.

## AQUAFORTUS TECHNOLOGY DEMONSTRATOR



A full systems demonstrator that is a customized design using your preferred off-the-shelf componentry that can process up to 3 tonnes per day. It is also a mobile skid-mounted unit that is small enough to be fitted onto the back of a truck.

## CONSTRUCT AND BUILD



We partner with trusted Engineering Procurement and Construction firms in your industry to deliver a full-scale plant to your specifications and provide ongoing operational support. Aquafortus will supply our high performance Absorbent and Regenerant directly to you.

## Industries that will benefit from the Aquafortus technology include:

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The Aquafortus technology is fully customizable to suit the industry you are in. It can process as little as 3 tonnes per day or as voluminous as 50,000 tonnes per day.

The Aquafortus ABX™ has treated brine with a total dissolved solids of as low as 3,900 ppm and as high as 455,000 ppm. It has treated commercial brines from industrial processes around the world.

In the treatment train, the Aquafortus ABX™ would replace both the power hungry thermal evaporator and crystallizer.

### CHEMICAL REFINERIES



### MINING AND SMELTING



### POWER (COAL-FIRED)



### OIL AND GAS



The Aquafortus ABX™ can be used in applications for:

- Zero liquid discharge
- Product concentration
- Volume reduction
- Wastewater treatment
- Resource recovery



## CONTACT US

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