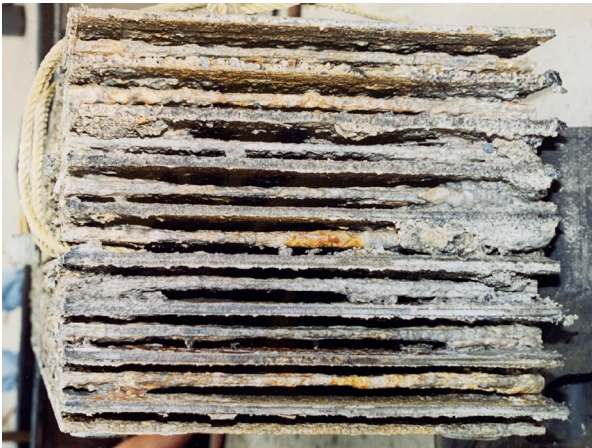


LiREC™: Recovering Lithium from Brine and from Oil & Gas Produced Water

waterStrider's LiREC process recovers dissolved lithium from dilute sources such as underground brine and oil & gas produced water, greatly increasing concentrations (by up to 50x), so third-party downstream direct lithium extraction (DLE) processes can start with a far richer and cleaner feedstock, increasing their capacity and reducing overall capital and operating costs of lithium production.

waterStrider's proprietary technology applies its patented and patent-pending electrochemical and physical/chemical technologies to remove lithium, dissolved metals, and other dissolved constituents from water such as underground brine and oil and gas produced water. waterStrider's LiREC can recover up to 99% of lithium from brine to produce a lithium concentrate in the form of a dewatered solids filter cake. This lithium concentrate is suitable for refining to a commercial product by third parties. By removing non-lithium constituents in brine and produced water and by concentrating dilute sources of lithium into a dewatered solid feedstock for direct lithium extraction (DLE), LiREC can create value from a resource that is plentiful in many parts of the world but too dilute for economic recovery.



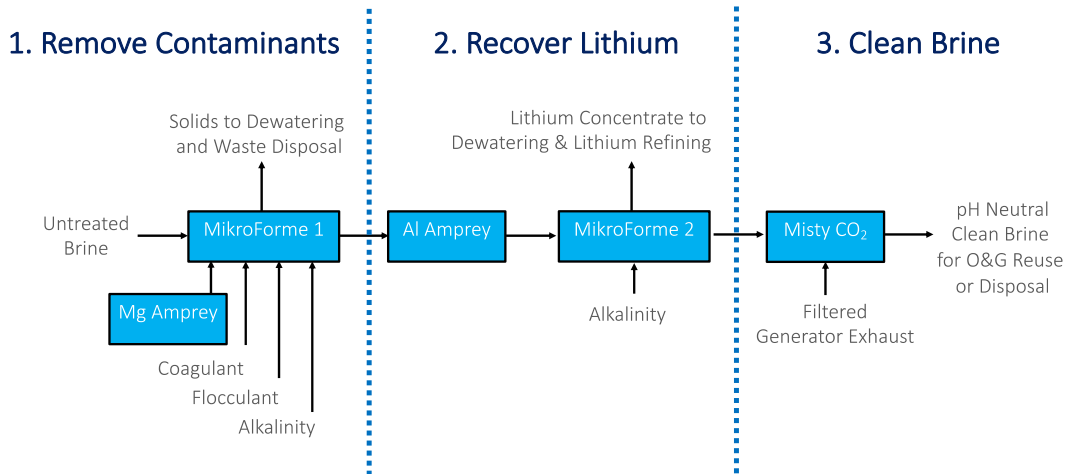
The development of LiREC builds on a problem at Vancouver Shipyards over two decades ago where the electrochemical cell in the treatment plant that cleans tug and barge bilge water and washwater was fouled with chemical scale. That scale contained inordinate concentrations of lithium! But this was before Tesla cars and lithium had only modest value. The scaling problem at the Shipyards was eventually resolved, but this observation served as a kernel of a good idea of a process that we call LiREC.

How LiREC Works

1. **Remove Contaminants:** Non-lithium constituents in underground brine or oil & gas produced water are made alkaline using Magnesium Amprey and lime, and are removed by coagulation, flocculation, and micro-bubble flotation called MikroForme™. Floated solids are dewatered for industrial waste disposal.
2. **Recover Lithium:** Alkaline clean brine is pumped through Aluminum Amprey™ – waterStrider's upflow electrochemical packed bed filled with aluminum pellets - to produce lithium meta-aluminate solids. These lithium-rich solids are flocculated and separated from clean brine by MikroForme micro-bubble flotation. Floated solids are dewatered for processing by a third party DLE to produce commercial grade lithium. The lithium solids cake contains vastly higher

concentrations of lithium, as well as aluminum, sodium, potassium, magnesium, calcium, chloride, carbonate and sulphate. Al Amprey also produces (green) hydrogen gas as a by-product.

3. **Clean Brine:** In Misty CO₂TM, alkaline clean brine is sprayed into an enclosed tank headspace that contains carbon dioxide gas exhaust from diesel or natural gas generators or incinerators to form carbonic acid and thus neutralize pH. By lowering pH using exhaust gas, Misty CO₂ carbon capture and utilization avoids purchase of external sources of acid that has inherent GHGs. pH neutralized clean brine is suitable for use by oil & gas producers or for discharge to disposal wells without causing fouling of pumps, pipes or wells.

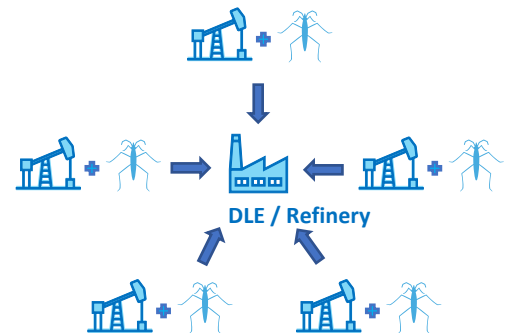


LiREC Has Two Main Functions

- Concentrates lithium at production sites to feed DLE
- Removes fouling contaminants to protect DLE

Benefits of LiREC

- Decouples lithium recovery from lithium refining
- Increases lithium processing capacity at central DLE refineries at lower capital cost
- Lowers DLE operating costs
- Not subject to weather (evaporation ponds) or exotic chemical inputs
- LiREC technologies are industrial mature, easy to scale up for commercial production



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