

Metso

Larox PF - Trusted legacy, proven performance

Filtration of Lithium carbonate

Application

Hydrometallurgical industry: Optimizes Lithium carbonate separation, enhancing the Lithium production process.



The demand for lithium is predicted to triple over the next decade, according to forecasts. Electric-vehicle (EV) boom, fueled by the urgent need to implement solutions and technologies limiting global warming, are driving lithium-ion battery development and production.

With the growing share of renewable energy in the global energy mix, the demand for effective energy storage technologies becomes increasingly important to ensure a stable and resilient power supply.

Our solution: Larox PF - Trusted legacy, proven performance

The filter for cost effective Lithium Carbonate production

Larox PF filter optimizes final product quality by increasing washing efficiency and reducing residual moistures. Automatic pressure filters guarantee fully automatic filtration of Lithium carbonate (Li_2CO_3). This method ensures separation, with a typical capacity of 150 to 250 kgDS/m²h. Operating automatically with up to 92% availability in 24/7 operation, it boosts productivity while maintaining product quality. Larox® PF filters represent the leading method of automatic solid-liquid separation utilizing pressure filtration in low pressure range up to 16 bar.

Benefits

- Guarantees efficient Lithium carbonate separation, consistently delivering optimal results.
- Significantly lowers wash media consumption through efficient cake washing, saving 30-40% compared to conventional membrane filter presses utilizing horizontal plate alignment and rectangular cake shape.

- Allows for up to 10% lower, consistent Residual Moisture in the final product especially when comparing to vacuum filtration where similar wash ratios are utilized.

- Utilizing stainless steel filter plates widens the operation range of filters at elevated process temperatures in hydrometallurgical operations and guarantees optimal process parameters during filtration, cake washing and membrane squeezing.

- Integrated shields guarantee a safe working area as well product protection, meeting the highest safety standards.

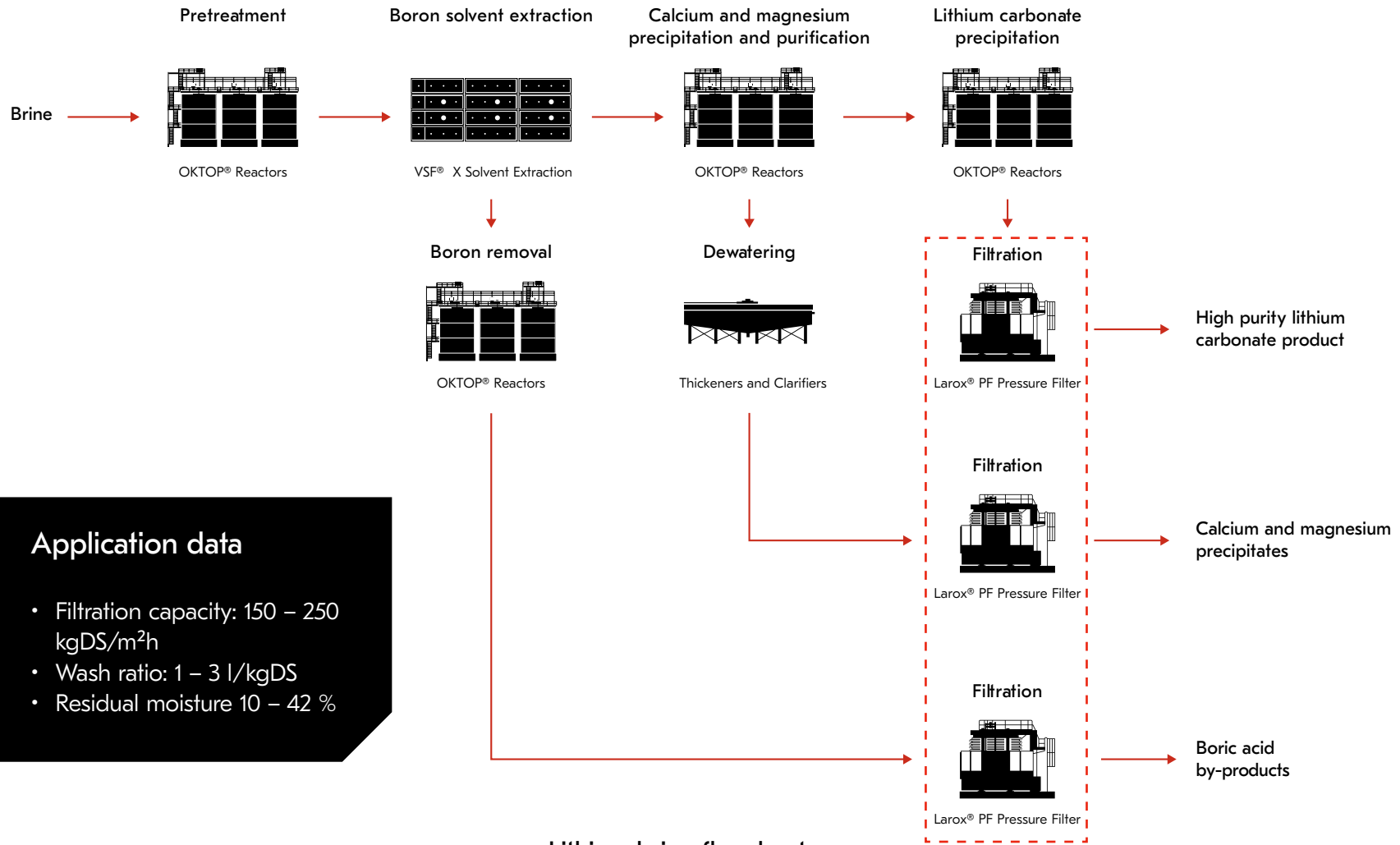
- Automatic operation insures limited attendance of operators and reduction of utilities are helping reducing operational costs.

- MOC packages for corrosive process applications available

Read more at
[metso.com/industrial-filtration](https://www.metso.com/industrial-filtration)

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Application data

- Filtration capacity: 150 – 250 kgDS/m²h
- Wash ratio: 1 – 3 l/kgDS
- Residual moisture 10 – 42 %

Lithium brine flowsheet