PRODUCT DATASHEET

Leach and Filtration Train

15 t/day black mass leach and residue filtration





DETAIL – LEACH TANK

OVERVIEW

The Tech Inc. Leach and Filtration Train dissolves lithium, nickel and cobalt out of black mass in acid and separates the metal-rich solution from the solid residue. As the front end of a battery-recycling hydrometallurgy plant, it feeds leach solution to purification and solvent extraction. The train is supplied as skid-mounted modules, piped, wired and tested before shipment.

MODELS AND CONFIGURATIONS

- **TI-LX-15** – 15 t/day leach and filtration train.
- **Single-stage or two-stage leach** – reactors in series or in two stages to suit recovery targets.
- **Filter selection** – filter press or pressure filter, chosen to suit the residue.

TYPICAL DESIGN DATA

Capacity	Typically 15 t/day, or to client specification
Feed	Black mass from shredded lithium-ion batteries and cell production scrap
Leach chemistry	Acid with reductant, to the client's flowsheet
Reactor materials	Lined steel, plastics or alloy for acid service, to client specification
Residence time and temperature	To the flowsheet
Filtration	Sized to the residue load, with cake washing to recover entrained solution
Bought-in equipment	Proven pumps, filters and instruments from leading makers, integrated into a train designed and built by Tech Inc.
Control	PLC with SCADA, for batch or continuous operation

APPLICATIONS

Commercial battery recycling plants, leaching of black mass from end-of-life cells and production scrap, the front end of hydrometallurgy plants, and metal recovery from acid-soluble residues.

KEY ADVANTAGES

- **Complete front end** – feeding, leaching, residue separation and filtrate handling in one package
- **Acid-resistant construction** – materials chosen for the acids, temperatures and solids involved
- **Contained operation** – off-gas extraction keeps fumes away from operators
- **Solution recovery** – cake washing returns entrained metal solution to the process
- **Modular delivery** – skid modules reduce site installation time

Designed and built by Tech Inc. · **Part of the Davey Group since 1990**

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