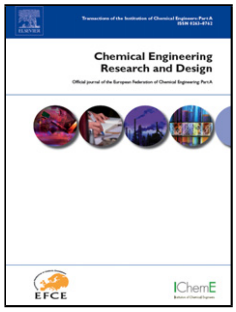

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PII: S0263-8762(18)30408-8
DOI: https://doi.org/10.1016/j.cherd.2018.08.014
Reference: CHERD 3308

To appear in:

Received date: 1-6-2018
Revised date: 29-7-2018
Accepted date: 6-8-2018

Please cite this article as: Lv, Yan, Yan, Haiyang, Yang, Baojun, Wu, Cuiming, Zhang, Xu, Wang, Xiaolin, Bipolar Membrane Electrodialysis for the Recycling of Ammonium Chloride Wastewater: Membrane Selection and Process Optimization.Chemical Engineering Research and Design https://doi.org/10.1016/j.cherd.2018.08.014

Bipolar Membrane Electrodialysis for the Recycling of Ammonium Chloride Wastewater: Membrane Selection and Process Optimization

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Highlights

- BMED process is employed to resourcelize the NH_4Cl wastewater.
- The process is of environmentally friendliness and energy-saving.
- Optimum membranes are selected by considering process performance and cost.
- Optimum operation condition can be determined by changing operating parameters.

Abstract

Here, bipolar membrane electrodialysis (BMED) with BP-A configuration is employed to convert ammonium chloride wastewater into hydrochloric acid and ammonium hydroxide to overcome the shortcomings of conventional treatment methods. First, different commercial anion exchange membranes (TWEDA2, AMV, JAM-II and CJMA-2) and bipolar membranes (BP-1,