

Accepted Manuscript

Title: Intensification of the chlor-alkali process by using a spinning disc membrane electrolyzer

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PII: S0263-8762(17)30555-5
DOI: <https://doi.org/10.1016/j.cherd.2017.10.001>
Reference: CHERD 2841

To appear in:

Received date: 29-5-2017
Revised date: 14-8-2017
Accepted date: 2-10-2017

Please cite this article as: Granados Mendoza, P., Moshtarihah, S., Langenhan, A.S., de Groot, M.T., Keurentjes, J.T.F., Schouten, J.C., van der Schaaf, J., Intensification of the chlor-alkali process by using a spinning disc membrane electrolyzer. *Chemical Engineering Research and Design* <https://doi.org/10.1016/j.cherd.2017.10.001>

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Intensification of the chlor-alkali process by using a spinning disc membrane electrolyzer

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Highlights

- Intensification of chlor-alkali process at high current densities up to 20 kA/m² is achieved.
- This achievement is shown for two configurations of the SDMER.
- Approximately three times higher production in SDMER was reached compared to the PP cell

Abstract

A zero-gap spinning disc membrane electrochemical reactor (SDMER) is presented for the intensification of the chlor-alkali process at high current densities up to 20 kA/m². Two configurations of the SDMER, namely rotor-stator (RS) and thin-film (TF), are investigated and compared with a conventional parallel plate (PP) cell. The cell voltage as a function of current density is virtually identical for both SDMER configurations, and lower when compared to PP cell.

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