

Title (en)  
NANOFILTRATION PROCESS FOR ENHANCED BRINE RECOVERY AND SULFATE REMOVAL

Title (de)  
NANOFILTRATIONSVERFAHREN ZUR VERBESSERTEN SOLERÜCKGEWINNUNG UND SULFATBESEITIGUNG

Title (fr)  
PROCÉDÉ DE NANOFILTRATION PERMETTANT D'AMÉLIORER LA RÉCUPÉRATION DE LA SAUMURE ET L'ÉLIMINATION DES SULFATES

Publication  
**EP 2822674 A4 20151216 (EN)**

Application  
**EP 13758618 A 20130220**

Priority  
• US 201261607722 P 20120307  
• CA 2013050131 W 20130220

Abstract (en)  
[origin: WO2013131183A1] In a nanofiltration system for removing sulfate impurity from an aqueous brine stream and for recovering the brine, introducing a dilution stream upstream of the feed stream inlet of a nanofiltration module in the system dilutes the feed stream. This increases the amount of brine salt and water obtained in the permeate stream without substantially diluting the concentration of sulfate in the pass stream and hence results in enhanced recovery of brine while efficiently removing sulfate impurity. The system and process is especially suitable for recovering brine and removing sulfate impurity from a brine stream in a brine electrolysis plant. In a conventional system, the heat exchanger typically used to cool the feed stream can be omitted if the dilution stream is provided at a temperature suitably lower than that of the feed stream.

IPC 8 full level  
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C-Set (source: EP)  
**B01D 2311/04 + B01D 2311/2684**

Citation (search report)  
• [XY] EP 1586562 A1 20051019 - COUNCIL SCIENT IND RES [IN]  
• [YD] US 5858240 A 19990112 - TWARDOWSKI ZBIGNIEW [CA], et al  
• [A] CN 201144172 Y 20081105 - YAN ZHANG [CN]  
• [A] US 2011198285 A1 20110818 - WALLACE PAUL STEVEN [US]  
• [AD] US 2005269266 A1 20051208 - TWARDOWSKI ZBIGNIEW [CA], et al  
• [A] BARR A: "Sulphate removal by nanofiltration", FILTRATION AND SEPARATION, ELSEVIER ADVANCED TECHNOLOGY, OXFORD, GB, vol. 38, no. 6, 1 July 2001 (2001-07-01), pages 18 - 20, XP004298417, ISSN: 0015-1882, DOI: 10.1016/S0015-1882(01)80376-1  
• See also references of WO 2013131183A1

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