

Title (en)
PROCESS FOR REMOVING SILICA FROM WASTEWATER

Title (de)
VERFAHREN ZUM ENTFERNEN VON SILIKA AUS ABWASSER

Title (fr)
PROCEDE PERMETTANT D'EXTRAIRE LA SILICE DES EAUX USEES

Publication
EP 1042231 A4 20020717 (EN)

Application
EP 98952200 A 19981009

Priority

- US 9821337 W 19981009
- US 96557497 A 19971106

Abstract (en)
[origin: WO9924364A1] A process and system for removing silica from large volumes of wastewater is disclosed. In the process, a wastewater stream containing silica is treated with a chemical coagulant, such as an epichlorohydrin/dimethylamine polymer, to create spherical particles which agglomerate into clusters having a diameter greater than 5 microns. Treated wastewater is passed through a microfiltration membrane which physically separates the silica contaminant particle from the wastewater. Commercially available microfiltration membranes having a pore size from 0.5 micron to 5 microns may be used. The treated wastewater flow rate through the microfiltration membranes can range from 150 gallons per square foot of membrane per day ("GFD") to 600 GFD. Solids are removed from the membrane surface by periodically backflushing the microfiltration membranes and draining solids at timed intervals from the filtration vessel within which the membranes are located. The dislodged solid material within the filtration vessel is flushed into a holding tank for further processing of the solids.

IPC 1-7
B01D 61/16; **C02F 1/56**; **C02F 1/44**

IPC 8 full level
B01D 61/16 (2006.01); **B01D 65/02** (2006.01); **B01D 71/26** (2006.01); **B01D 71/36** (2006.01); **C02F 1/44** (2006.01); **C02F 1/56** (2006.01); **C02F 1/58** (2006.01)

CPC (source: EP KR)
B01D 61/147 (2013.01 - EP); **B01D 61/16** (2013.01 - EP); **C02F 1/444** (2013.01 - EP); **C02F 1/56** (2013.01 - EP KR); **C02F 1/583** (2013.01 - EP); **C02F 2103/346** (2013.01 - EP)

Citation (search report)

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- [PA] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 12 31 October 1998 (1998-10-31)
- See references of WO 9924364A1

Designated contracting state (EPC)
DE FR GB IE IT NL

DOCDB simple family (publication)
WO 9924364 A1 19990520; AU 9795498 A 19990531; EP 1042231 A1 20001011; EP 1042231 A4 20020717; JP 2001522720 A 20011120; JP 3470130 B2 20031125; KR 100385706 B1 20030527; KR 20010031846 A 20010416; TW 425376 B 20010311

DOCDB simple family (application)
US 9821337 W 19981009; AU 9795498 A 19981009; EP 98952200 A 19981009; JP 2000520384 A 19981009; KR 20007004919 A 20000504; TW 87117435 A 19981023