

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 A1 20001011 (EN)

Application
EP 98952200 A 19981009

Priority

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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.

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C02F 1/44; **C02F 1/56**

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