

Title (en)

HYBRID CHEMICAL AND BIOLOGICAL PROCESS FOR DECONTAMINATING SLUDGE FROM MUNICIPAL SEWAGE

Title (de)

CHEMISCH- UND BIOLOGISCHES HYBRIDES VERFAHREN ZUR ENTGIFTUNG VON KOMMUNALABWÄSSERN

Title (fr)

PROCEDE HYBRIDE CHIMIQUE ET BIOLOGIQUE DE DECONTAMINATION DE BOUES D'EPURATION MUNICIPALES

Publication

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Application

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Abstract (en)

[origin: WO0109045A1] The invention relates to a hybrid biological and chemical method for decontaminating sludge containing heavy metals and pathogenic microorganisms, consisting of the following steps: the sludge is mixed with an acidic leaching solution in order to acidify the sludge with a pH which is low enough to solubilize the majority of the heavy metals and to destroy most of the pathogenic microorganisms but which is also high enough to minimize the solubilization of fertilizing elements; oxidation-reduction of more than +400 mv is maintained, liquid-solid separation occurs in order to obtain a solid fraction comprising decontaminated acidic sludge and a liquid fraction comprising heavy metals which are dissolved in a leaching solution; the sludge is neutralized: and neutralized decontaminated sludge is recovered, whereby the fertilizing elements contained therein, i.e. carbon, nitrogen and phosphorus, remain substantially unchanged in relation to the initially contaminated sludge.

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