

Title (en)
NOVEL DECONTAMINATION SYSTEM

Title (de)
NEUARTIGES DEKONTAMINATIONSSYSTEM

Title (fr)
SYSTÈME INNOVANT DE DÉCONTAMINATION

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Application
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Abstract (en)
[origin: GB2499025A] A method for the decontamination of a contaminated system, comprising the steps of selecting a decontaminating agent, applying the decontaminating agent to the system, collecting the used decontaminating agent and electrochemically treating the used decontaminating agent. The spent decontamination fluid is treated by electrolysis wherein the electrolysis cell may comprise a boron doped diamond electrode, metal oxide coated titanium electrode or platinum electrode. The decontaminating agent may comprise hydrochloric acid (HCl), nitric acid (HNO₃), sodium hydroxide (NaOH), sodium chloride (NaCl), hydrogen peroxide (H₂O₂) or a complexant such as EDTA or citric acid. The method may further include an initial characterisation step, a chemical dosing step prior to the electrochemical treatment of the used decontaminating agent to remove contaminant via precipitation, a subsequent characterisation step wherein the system is re-evaluated in order to determine whether the decontamination objectives have been successfully accomplished, and a final step of post-treatment of the effluent remaining after the electrochemical treatment. The methods of the invention may find particular application in the treatment of systems comprising radioactivity.

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