

Title (en)
METHOD FOR RECOVERING sp 10 /sp BORON OR DECONTAMINATING BORON FROM EVAPORATOR BOTTOMS FROM PRESSURIZED WATER REACTORS

Title (de)
VERFAHREN ZUR RÜCKGEWINNUNG VON 10BOR ODER DEKONTAMINATION VON BOR AUS VERDAMPFERKONZENTRATEN VON DRUCKWASSERREAKTOREN

Title (fr)
PROCEDE DE RECUPERATION DE sp 10 /sp BORE OU DE DECONTAMINATION DU BORE CONTENU DANS DES CONCENTRES D'EVAPORATION DE REACTEURS A EAU PRESSURISEE

Publication
EP 1444702 B1 20100630 (DE)

Application
EP 02803027 A 20021114

Priority
• DE 10156119 A 20011115
• EP 0212772 W 20021114

Abstract (en)
[origin: WO03043027A1] 10boron is recovered or boron is decontaminated from evaporator bottoms from nuclear power stations, in particular, pressurized water reactors by: (a) acidifying the evaporator bottoms, which primarily contain sodium borates provided as the boron compounds, with sulfuric acid to a pH value ranging from 3.5 to 5.5; (b) the resulting boric acid is crystallized out and separated out at a temperature ranging from 2 to 5 °C; (c) the remaining sodium sulfate solution is neutralized and either (i) evaporated or (ii) concentrated, and the sodium sulfate is crystallized out, whereupon; (d) the sodium sulfate is recovered. The recovered boric acid can be recycled as neutron absorbers or can be disposed of in a decontaminated form.
[origin: WO03043027A1] <sp>10</sp>boron is recovered or boron is decontaminated from evaporator bottoms from nuclear power stations, in particular, pressurized water reactors by: (a) acidifying the evaporator bottoms, which primarily contain sodium borates provided as the boron compounds, with sulfuric acid to a pH value ranging from 3.5 to 5.5; (b) the resulting boric acid is crystallized out and separated out at a temperature ranging from 2 to 5 °C; (c) the remaining sodium sulfate solution is neutralized and either (i) evaporated or (ii) concentrated, and the sodium sulfate is crystallized out, whereupon; (d) the sodium sulfate is recovered. The recovered boric acid can be recycled as neutron absorbers or can be disposed of in a decontaminated form.

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