

LiF-BeF₂-ZrF₄ 용융염에서 Pyrohydrolysis 에 의한 ZrO₂ 산화물 제조
- 반응시간과 H₂O 공급속도의 영향-
Production of ZrO₂ oxide by Pyrohydrolysis in LiF-BeF₂-ZrF₄ Molten Salt
- Effect of the Reaction Time and the H₂O Feed Rate-

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요 약

LiF-BeF₂-ZrF₄(63-30-7mol%) 용융염에 수증기를 공급하여 ZrF₄ 를 600℃에서 열가수분해시켜 ZrO₂ 산화물로 전환시켰다. 이때 반응시간과 H₂O 공급속도에 따라 전환율과 결정의 모양을 확인하였다. 3 시간 동안 반응 시 전환율은 97%이었고, 반응기 내부에 온도차가 클수록 결정 입자는 수백 μ m 정도의 판상형으로 성장하였다.

Application of Magnetic Filter to Reduce
the Crud in PWR Primary Coolant System

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Abstract

In order to develop techniques for reducing personnel exposure rate through the moving alternative magnetic filter, the prediction of crud concentration and activity reduction through the COTRAN code are to be carried out. This implies a new type of magnetic filter and can be used for the separation of crud at high temperature and pressure. The rotational motion of the permanent magnet assembly surrounding the vessel produces the moving alternative magnetic field in the vessel. Then crud can be removed from the coolant by the magnetic force. This study shows that usage of magnetic filter can be reduce the concentration and activities of crud.