

*Proceedings of the Korean Nuclear Society Spring Meeting  
Pohang, Korea, May 1999*

## **A Review of Halden Data on Gap Closure and Mechanical Behavior of UO<sub>2</sub> Fuel Rods**

K-S. Sim • H.C. Suk • D.S. Sohn

Korea Atomic Energy Research Institute  
Nuclear Fuel Design Technology Development Team  
P.O. Box 105, Yusong, Taejon, 305-600, Korea

### **Abstract**

*This paper extensively reviews representative experimental data obtained by the Halden Project for last about twenty years to investigate gap closure and pellet-cladding mechanical interaction (PCMI) in UO<sub>2</sub> fuel rods. The purpose of the present paper is to supplement the previous reviews of Halden data by reference to more recent experiments. The experiments are grouped into sections describing gap closure, PCMI, clad response to variable load conditions and clad failure by stress corrosion cracking. The new data complement the previous findings extending the conclusions to higher burnup and different operating regimes.*