



U.S. Plant Experience with Alloy 600 Cracking and Boric Acid Corrosion of Light-Water Reactor Pressure Vessel Materials: Nureg-1823 (Paperback)

By NRC Staff: United States Nuclear Regulatory Commission

Bibliogov, United States, 2012. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.This report includes a summary of foreign and domestic Alloy 600 cracking experience, an analysis of the Alloy 600 cracking susceptibility model for vessel head penetration (VHP) nozzles, and information on corrosion of pressure boundary materials in boric acid solutions. This report combines information that the U.S. Nuclear Regulatory Commission (NRC) has collected in response to Davis-Besse Lesson Learned Task Force Recommendations 3.1.1(1) and 3.1.4(1). The survey of Alloy 600 cracking suggests that Alloy 600 and its associated welds (Alloys 182 and 82) are susceptible to crack nucleation and growth in a wide range of applications. The intent of inspection is to identify and remediate the cracking before it can challenge safety systems. VHP nozzle inspection results indicate that the effective degradation years (EDY) model is efficacious and does not suggest a need to revise the model in the short term. However, the EDY calculation is becoming less significant as a result of reactor vessel head replacement. Both the NRC and the industry have implemented boric acid corrosion test programs. Pieces of the Davis-Besse reactor vessel head have...



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-- **Ken Watsica**

Basically no words to describe. It is filled with knowledge and wisdom I am just pleased to let you know that this is actually the greatest publication i have read within my individual lifestyle and may be he best publication for at any time.

-- **Prof. Ron Gaylord II**