

3473. Proceedings: Specialist Meeting on Environmental Degradation of Alloy 600

Primary Water Stress Corrosion Cracking (PWSCC) remains a significant issue to the Nuclear Power Industry. On April 6-9, 1993, a meeting was held in Warrenton, Virginia to review the state-of-understanding of PWSCC. Attendees included a select group of experts from domestic and overseas organizations performing research on PWSCC. Attendees reviewed the state-of-understanding of PWSCC and established the direction of EPRI research on this issue.

Objectives of the meeting were:

- To identify and assemble a small, select group of experts
- To review the state-of-understanding of PWSCC of alloy 600
- To establish the direction of EPRI research regarding this topic

The meeting results can be summarized as follows:

- The mechanism(s) of PWSCC (at elevated temperature) was considered by most to be dominated by a "grain-boundary anodic dissolution" process.
- While hydrogen participates in the cracking process, a specific "hydrogen embrittlement" process is not believed to dominate at elevated temperature.
- A third mechanism of grain boundary "internal oxidation" was proposed, yet lacks a few critical experimental results to fully support it.

For more information see: EPRI TR-104898, Proceedings, December 1996, 1248 pages.

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