

International Conference on Fast Reactors and Related Fuel Cycles: Next Generation Nuclear Systems for Sustainable Development (FR17)



Contribution ID: 523

Type: ORAL

Review of Transient Testing of Fast Reactor Fuels in the Transient REActor Test Facility (TREAT)

Tuesday, June 27, 2017 11:00 AM (20 minutes)

The restart of the Transient REActor Test (TREAT) facility provides a unique opportunity to engage the fast reactor fuels community to reinitiate in-pile experimental safety studies. Historically, the TREAT facility played a critical role in characterizing the behavior of both metal and oxide fast reactor fuels under off-normal conditions, irradiating hundreds of fuel pins to support fast reactor fuel development programs. The resulting test data has provided validation for a multitude of fuel performance and severe accident analysis computer codes. This paper will provide a review of the historical database of TREAT experiments including experiment design, instrumentation, test objectives, and salient findings. Additionally, the paper will provide an introduction to the current and future experiment plans of the U.S. transient testing program at TREAT.

Country/Int. Organization

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Session Classification: 6.10 Other issues of code development and application

Track Classification: Track 6. Test Reactors, Experiments and Modeling and Simulations