

Boron Monitoring

Framatome uses Inductively Coupled Plasma Mass Spectrometry (ICPMS) technology to monitor boron balance and increase fuel performance

Challenge

Neutron reactivity is controlled through the B-10 isotope in boric acid. However, due to burn-up, the B-10 content of the mixture is depleted during the operating cycle. As a result, plants need to periodically verify the B-10 fraction of new and recycled boric acid sources to ensure adequate reactivity control.

Solution

Framatome's chemistry experts utilize Inductively Coupled Plasma Mass Spectrometry (ICPMS) technology to verify the exact percentage of isotopic B-10 in reactor coolant samples as it relates to other boron isotopes. Highly specialized analysis techniques backed by multiple quality checks deliver results you can count on.

Customer benefits

- Ensures precise balance of boron
- Enhance fuel performance
- Removes uncertainties regarding the addition of boric acid to your reactor coolant
- Safeguards against excess reactivity in reactor core



Contact:

chemistry-services@framatome.com
www.framatome.com

Your performance
is **our** everyday **commitment**

The data and information contained herein are provided solely for illustration and informational purposes and create no legal obligations by Framatome. None of the information or data is intended by Framatome to be a representation or a warranty of any kind, expressed or implied, and Framatome assumes no liability for the use of or reliance on any information or data disclosed in this document. Property of Framatome or its affiliates. © 2024 Framatome Inc. All rights reserved. PS_US_558_ENG-7-24