

Supplement 2, 3 and 10 Qualifications from the Inside Surface

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Program Update

- NRC has approved implementation of Supplements 2 and 3 qualifications in coordination with Supplement 10 (Dissimilar Metal Weld)
- Required Implementation 11-22-2002
- Utilities will be allowed to continue present examination techniques until procedures and personnel are qualified
 - Relief Required for Supplement 2 and 3 examinations



Required Actions

- Review field configurations
- Develop appropriate testing criteria
- Design Samples
- Incorporate required criteria into code



Review of Field Configurations

- Work with vendors and utilities to determine configurations to be fabricated including surface conditions
 - Review of fabrication drawings
 - IVVI tapes of surfaces
- Work with vendors on determining best sample design for access with cold tools and scanners



Develop Appropriate Test Criteria

- Presently, it is planned to perform a combined ferritic, austenitic and dissimilar metal weld qualification
 - Limit the amount of samples required
 - One qualification will cover all PWR plants regardless of design (B&W, Westinghouse and CE)



Design Samples

- Samples are presently planned to be whole segments which can be submerged in water
- They will contain real world geometry (counterbore, exposed root and transitions)
- Minimum size sample needs to be determined
 - Core Flood approximately 12.0”
 - Safety Injection 4.0” - 6.0”
- Stainless Samples will include both Cast and wrought material with inconel butter
- Flaw Sizes may be concern



Incorporate Required Criteria into Code

- Code Case under development to incorporate needed criteria for this qualification
 - Will include revisions to Supplement 2, 3 and 10
 - Code Changes must address surface condition and criteria for use of qualification
- Cracking in these configurations at VC Summer, Ringhals have stimulated heightened awareness by NRC
 - Eddy Current may have to be added to examination



Fabrication Activities

- Rough Cut Machining is underway on raw material
 - Additional Raw Material being identified and prepped
- Sample Design scheduled to commence in early 2001
- Heavy Vendor participation required



NRC Actions

- NRC will assign Subject Matter Expert to review process
- Generic Letter may be issued by NRC on these examinations which cause additional actions to be performed by utilities
- NRC may require qualification of Eddy Current

Items to Consider

- Do we need to build practice samples?
- Fabrication of Supplement 2 and 3 samples were never contained in original budget for Supplement 10
- Results of Metalography work underway on VC Summer and Ringhals cracks may have an affect on design of program