

MEETING NOTES FROM THE PDI INFORMATIONAL MEETING ON INSIDE SURFACE EXAMINATIONS

January 10, 2001
EPRI NDE Center
Charlotte, NC

This meeting was held to exchange information regarding the design of PDI qualification specimens for the inside surface examination of DSM welds. Industry vendors were invited to voice their opinions regarding the specimen design and configuration as well as the nature of the flaws to be included in the samples. Key discussion items are included below. A general specimen cross-section and a list of attendees is attached.

Introduction

- DSMW program current implementation by 22NOV02.
- One test for all plant types (CE, B&W, West., etc.) and will include Austentic and Ferritic clad specimens.
- Code case is under development.
- Use of Eddy Current during qualification and or examination
- Need for practice samples?
- Need for outside surface flaws
- Request for vendor/utility cooperation/collaboration

Proposed Test Set Design

- | <u>Diameter</u> | <u>Material</u> | <u>Thickness</u> | |
|-----------------|-----------------|------------------|----------------|
| 4" | SS/Inc | 1-1.25" | OD Radius 2.9" |
| 11" ID | SS/Inc | 1.4" | |
| 29-33" ID | SS/Inc | 2.5-3.2" | |
| >24" | CS | 3.125" | |
- Flaw locations based on industry failure data and EPRI's DSMW R&D samples. All flaws shall be ID connected.
- Flaw types primarily in-situ flaws; alternative mechanisms may be used for in certain situations.
- Flaw morphology will replicate, to the extent practical, those flaws in the field; fabrication techniques will be a limitation.
- Samples shall be 360 full sections.

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The purpose of this meeting is to allow inspection vendors that perform inside surface examinations to share information and provide input into the design of PDI demonstration samples which are to be fabricated this year. PDI feels that it is imperative that the vendors that will be required to qualify be involved in order to develop a cost effective and technically justifiable program.

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|------|---------------------------------------------------------------------------------------------------------------|
| 0800 | Introduction |
| 0815 | Review of present Appendix VIII requirements |
| 0845 | Review of proposed Test Set Design (Ranges of Demonstration) |
| 0915 | Physical Inspection of Available Sample Material |
| 0945 | Break |
| 1000 | Sample Design with regards to mounting and scanning of samples |
| 1100 | Typical configurations present in field and surface conditions present in field |
| 1200 | Lunch |
| 1300 | Review of present techniques applied during examination and planned changes in lieu of recent industry events |
| 1400 | Flaw types and locations based on field experience (Ringhals, V.C. Summer) |
| 1500 | Break |
| 1515 | Industry response to current events (MRP support, NRC reaction) |

1600 Open discussion and planning for next meeting

1700 Adjourn

I encourage all of you to bring as much information as possible to the meeting (Drawings, Video Tapes, profiles .etc)

- Samples shall be scanned in horizontal or vertical positions and may be partially or fully submerged.
- Access for scanners – ID and end mounts will be provided.
- Basic qualification will consist of at least 2 SS large bore (PWR inlet and outlet) samples and 1 CS large bore piping with 11” and 4” samples included as a supplemental add-on qualification if requested.
- Large bore SS samples will be divided among wrought and cast pipe connections.
- EPRI DSMW R&D samples may be used as ‘open’ technique development samples.

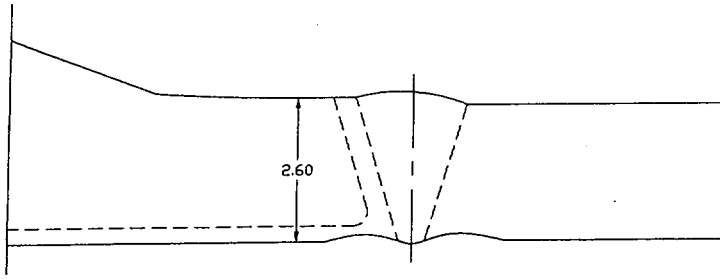
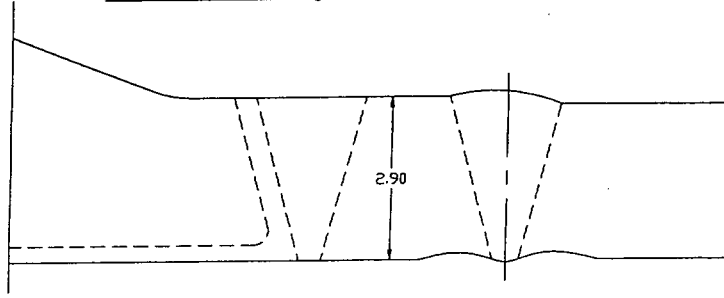
Specimen Geometry

- Attached illustration indicates basic large bore and 4” X-sec profiles.
- Vendors will supply drawings and field experience data to establish a representative qualification set:
- Not all configurations will not be covered.
- Ferritic samples shall be clad and will essentially be flush on the ID (no counterbore).
- Practice samples in each size will be fabricated. One sample in each size will have ID geometry instances and one may not.

Misc

- Use of existing Westinghouse Owners Group (WOG) samples considered; they have not been scanned from the ID and may prove useful for open/practice samples.
- Concern for the application and/or feasibility of using samples for UT and ECT. ECT use will require a significant effort to develop technique.
- Next meeting at next PDI meeting (end of February) possibly; may need to meet later.
- Will provide vendors with drawings and basic qualification approach in a couple of months.

Inside Exam PWR Large Diameter Tentative Configurations



Inside Exam 4" Diameter SI Noz Tentative Configurations

