Procedure 03-8083-P12

Thickness Inspection

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REVISION RECORD

Revision	Date of Issue	Description of Change	Prepared by	Reviewed by	Approved by
0	01/21/04	New	Gary Armstrong	Tom Gilmore	Dave Rioux

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THICKNESS INSPECTION

1.0 Purpose:

To establish the method for verification of Material Thickness for the Prototype Vacuum Vessel Segment for the National Compact Stellarator Experiment.

2.0 Scope:

To determine the material thickness of the Prototype Vacuum Vessel Segment. This procedure is specific to the Prototype Vacuum Vessel Segment for the National Compact Stellarator Experiment only.

3.0 References:

- National Compact Stellarator Experiment (NCSX) Specification NCSX-CSPEC-121-01-01.
- Operating Manual – Ultrasonic Thickness Gauge – Model T1-25DL

4.0 Equipment:

- Ultrasonic Thickness Gauge – Model T1-25DL
- Coupling Agent

5.0 Procedure:

1. Clean area to be tested from metal filings, chips, dirt or any other foreign material.
2. Layout inspection grid on testing area as per details on Route Card.
3. Turn Thickness Gauge on.
4. Plug the probe cable into the receptacle at the top of the Gauge.
5. Place a small amount of Coupling Fluid on the surface to be measured.
6. Grasp the probe by the molded rubber grip and place it on top of the material surface. Apply moderate pressure to the top surface of the probe with your index finger of thumb to stabilize the probe and to keep the wearface seated flat against the measurement surface.
7. The Gauge will display the thickness of the material along with the Stability Indicator showing the relative stability of the reading. If fewer than (5) bars of the Stability Indicator are illuminated, the thickness reading displayed is most likely inaccurate.
8. Document findings on Form F034, Dimensional Inspection Report.
9. Repeat steps 5 – 8 as required.