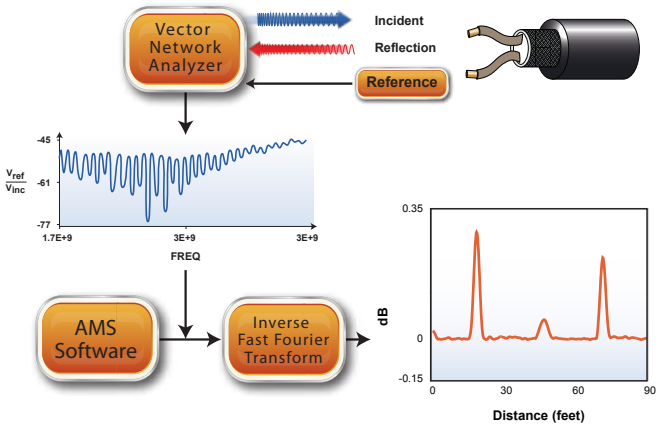
INNOVATING NUCLEAR TECHNOLOGY
ANALYSIS AND MEASUREMENT SERVICES CORPORATION

FREQUENCY DOMAIN REFLECTOMETRY (FDR)

Electrical Testing to Locate and Monitor Cable Aging

About

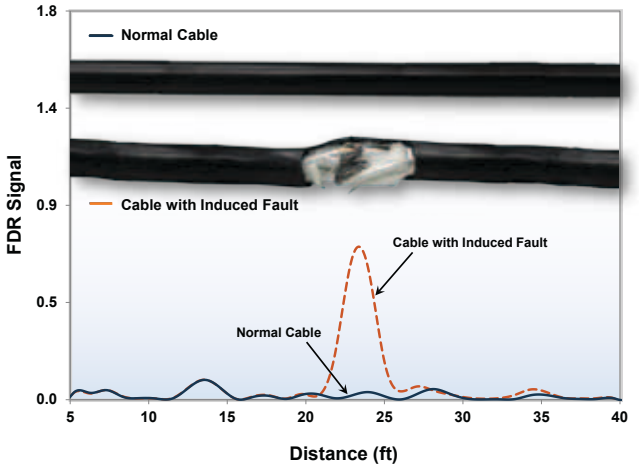
The FDR test can be applied from the instrumentation cabinet to locate, quantify, and trend accelerated aging of cable insulation.



Benefits

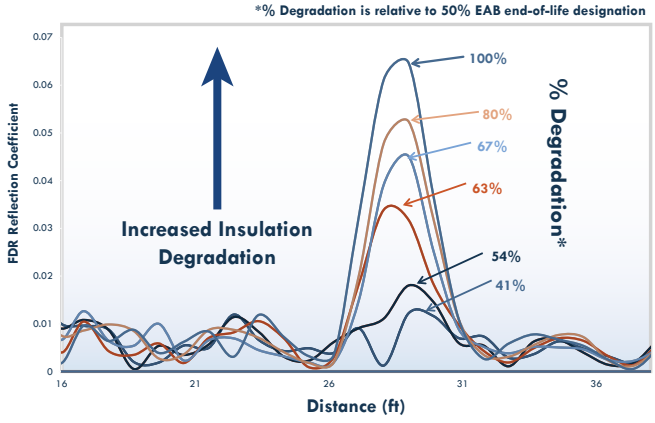
- Use as part of a cable testing suite to develop a comprehensive cable aging management program
- Survey the entire cable length from one location
- Build and maintain cable aging management database
- Monitor cable aging in:
  - harsh environments
  - inaccessible areas
  - in conduit
- Trend data for degradation monitoring
- Locate and monitor thermal hot spots
- ALARA - test cables from safe location
- Able to locate faults and aging degradation

FDR Identifies Mechanical and Thermal Damage



Locating Distance to Mechanical Damage

FDR monitoring of polymer insulation degradation trends with thermal age. In the example below, the FDR measurements of a thermal hot spot correlated to the industry standard Elagation-at-Break (EAB) test of polymer degradation.



Trending Thermal Degradation in Cable Insulation Material

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10CFR50 Appendix B Program

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