



Mark Perkins Information

Background:

- Graduated from Brigham Young University in 1975 with a master's degree in electrical engineering.
- Holder of several patents and author of many technical papers on transformer testing.
- Over 30 years of membership and leadership in the IEEE transformers committee. This includes chair of working group on low frequency high-voltage testing and chair of working group on PCS revisions of the test code, C57.12.90.
- Accomplishments included the introduction of partial discharge testing in C57.12.90 and revision and modernization of the test code in many areas.
- Recognized as one of the leading experts in transformer factory and field testing and awarded Outstanding Contributor Certificate by the IEEE Transformers Committee in 2015.
- Leader of corporate team to solve the problem of hydrogen gassing in rectangular core network and substation transformers. Was successful in solving a 20-year problem which involved design, factory processing, field installation and mitigation. Personally, awarded the ABB Circle of Excellence award, which is the highest achievement award in ABB.

Focused Areas of Expertise:

- Factory Acceptance Testing Oversight
- Test Laboratory Management
- HV and EHV Power Transformer – Specifications, Test Plans/Sequence, Factory Acceptance Testing and Test Reports
- QA/QC Testing Development and Oversight
- Field testing of transformers and interpretation of abnormal results.
- Evaluation of older or problematic assets for refurbishment or replacement.
- OEM Factory Qualification
- Field Failure Analysis
- Transformer Training

Past Relevant Working Experience:

- Transformer Test Manager and Test Engineer and Field Test Engineer for major OEM's producing both shell form and core form transformers for over 40 years.
- Responsible for equipment upgrades in partial discharge testing and impulse testing at the facility.

- Led investigations of numerous failures in large power transformers up to 800kV and 1000 MVA.
- Part of corporate investigations of partial discharge failures in 800kV shell-form transformers.
- Senior Research and Development engineer and Principal Engineer at major OEM.
 - Roles included development of transformer Engineering Solutions business, which included Life and Risk assessment, Advanced testing (Dielectric Frequency Response and Swept Frequency Response Analysis) and High Voltage field testing of large power transformers.
 - Performed assessments on over 1000 critical transformers with applications ranging from wind farm transformers to generator transformers at nuclear power stations.
 - Transformer assessments are used to determine remaining life and to develop a schedule for refurbishment or eventual replacement of critical assets.
 - On-site testing of several hundred transformers including field induced tests with partial discharge measurement, load loss and no-load loss testing, temperature tests, and diagnostic testing after serious incidents.

Key Skills

Integrity, Responsible, Technical problem solving, People oriented, Organization, Initiative, results oriented, Driven by Customer Satisfaction, Teamwork, Availability to travel

Languages

English

Certifications & Courses

- Master's Degree in Electrical Engineering
- Professional Engineer (Pennsylvania – Inactive)
- Senior IEEE member
- IEEE PES and Transformers Committee participant