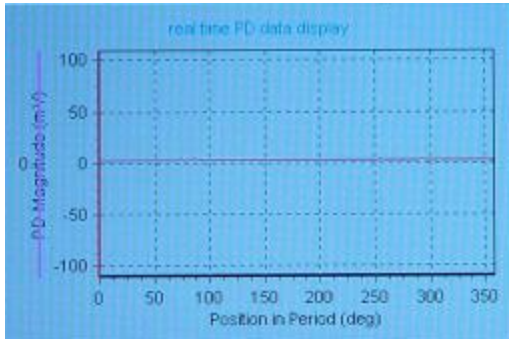
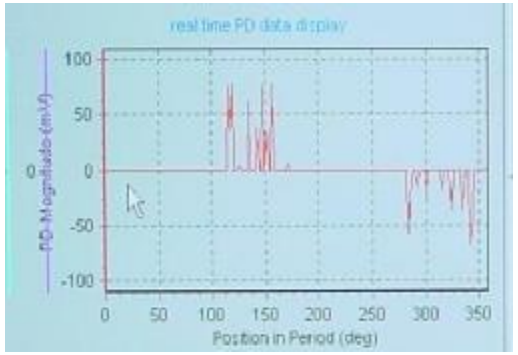
We apologize to every electrical professional for taking 252 years to prevent your failures

Benjamin Franklin discovered electricity in 1752. This year we launched an easy to use, cost effective electrical inspection technology that detects medium and high voltage equipment problems before they fail!

Failure is Not an Option!



Screenshot of good cable—no discharge



Screenshot of an impending cable failure

IQ

Insulation Quality Services

P.O. Box 2188
4563 State Street
Montclair, CA 91763
1-888-4PD-US-IQ (888-473--8747)
323-933-6218
323-933-2043 fax
www.4pd.us

IQ Services

Partial Discharge Testing

Look Into the Future

What is partial discharge?

Tracking on switchgear insulator.

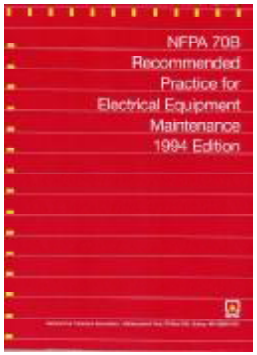
Partial discharges are small signals that are created by flaws, voids, cracks and other imperfections within medium and high voltage insulation. These signals can safely be measured while the electrical system remains in service.

Electrical equipment condition can be determined by the analysis of the partial discharge signals. This enables electrical equipment owners to gain financial control of their assets by avoiding unexpected outages, prioritizing maintenance activities and planning repairs.

Cables, splices, terminations, switchgear, transformers, rotating apparatus, instrument transformers, arrestors, insulators, bus duct and other medium and high voltage equipment condition can be evaluated using specialized partial discharge testing equipment.

Why Perform Partial Discharge Testing?

The National Electric Code recognizes that partial discharges are the first indication of insulation failure. Additionally, NFPA70B states that insulation breakdown is the number one cause of electrical failures. IEEE Gold Book statistics remarkably indicate that approximately 90% of cables, transformers and other equipment fail because of insulation breakdown. This insulation breakdown is caused by partial discharges.



With partial discharge testing, insulation degradation within equipment and cables can be identified before complete failure occurs. Thus providing an “early warning” of the impending failure. This ability to predict failure allows time for actions to be taken.

How is Partial Discharge Testing Performed?

Partial discharge testing is performed while the equipment remains in service. Trained technicians measure the partial discharge signals by placing special sensors on grounded portions of the equipment under test. The signals are recorded on custom instruments with built-in pc’s. The files are then electronically transferred to a central laboratory where detailed analysis, condition assessment and report generation is performed.

Sensor attached to cable shield.

Sensors attached to switchgear.

The information contained in the report is then used to recommend corrective actions necessary to ensure electrical reliability.

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