

MAINTENANCE BROCHURE
Ultrasonic Partial Discharge Testing



ULTRASONIC PARTIAL DISCHARGE TESTING

Non-intrusive discharge monitoring is a very effective predictive maintenance test for MV motors, MV generators and MV switchgear as well as other electrical distribution equipment. Traditional test methods require an outage and the associated lost uptime. Using on-line partial discharge testing, corrective actions can be planned and implemented, resulting in reduced unscheduled downtime.

Partial discharges are small electrical sparks that occur within the insulation of medium and high voltage electrical equipment. These discharges erode insulation and eventually result in insulation failure. Because partial discharge occurs randomly and unexpectedly, regular partial discharge analysis is highly recommended with any piece of high voltage equipment. The effects of the partial discharge phenomenon can be very grave and even lead to a complete breakdown.

Benefits:

- Eliminate unplanned outages and lost profit due to system downtime
- Reduce maintenance costs by extending time between planned outages
- Increase availability and operating efficiency through greater system reliability

- Improve risk management and reduce catastrophic failures
- Improve worker safety
- Partial discharge testing results can help predict future performance and reliability of critical assets, including:
 - Cables, splices, and terminations
 - Power transformers and bushings
 - Switchgear
 - Motors and generators

Failures are not limited to service aged equipment. Acceptance testing on newly installed equipment builds in reliability right from the installation. Acceptance Testing can:

- Verify original manufacturers test data and identify damaged insulation that occurred from improper installation, poor design, and/or poor workmanship during or after installation.
- Identify premature failures and capture baseline data to trend asset health over the asset's life cycle to ensure maximum return on investment.

H&MV engineering offer a range of partial discharge analysis services please contact us for further information or a quote.

