



**GCC Electrical
Testing Laboratory**
المفتبر الفليبي لفصص الممعداء الكهربالفة

On-line Partial Discharge Testing

This interactive 5 day seminar combines theoretical background with practical field experience to provide engineers and technicians with the vital knowledge to understand conventional and unconventional field partial discharge (PD) diagnostic techniques focusing on GIS, power transformers/reactors, capacitor banks, GIS, power cables, and cable terminations. Demand for assessing condition of HV assets when in-service has increased utilities interest in un-conventional PD detection approach taking into consideration interferences that occur in on-line field measurements.

Practical PD diagnostic field testing demonstrations could extend training for a fourth and fifth day provided they can be coordinated well in advance along with information about objects to be tested.



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Education
Course Code: **EXX1**

On-line Partial Discharge Testing



MONTH
TBD
YEAR



GCC Electrical Testing Laboratory

المختبر الفليبي لفحص المعدات الكهربائية

Objectives

Upon completion of this course, the Participant will be able to:

1. Understand PD, when they occur and what impact they can have on insulation systems.
2. Properly apply of conventional and unconventional PD diagnostic techniques.
3. Understand principles of UHF and acoustic techniques along with a range of sensors.
4. Recognize different PD test arrangements in applications for transformers, GIS, and power cables.

Addressed to:

Electrical engineers working in operations, maintenance, engineering, or other service field in which knowledge of electrical testing methods and evaluation is required part of his job responsibility.

Duration:

5 Full Days

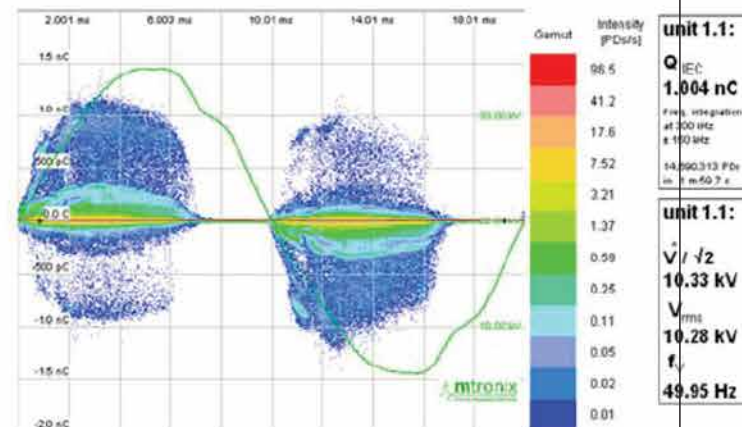
Location/Venue:

Course Fees:

PROGRAM

The Course program contains the following training outline:

| | |
|--------------|---|
| DAY 1 | Introduction to PD diagnostics (basics about PD theory; conventional PD measurements in compliance to IEC 60270; unconventional PD measurements and implementation of PD diagnostic into a company maintenance strategy). |
| DAY 2 | PD testing of Transformers (factory and field testing – different approaches; conventional electrical PD measurements; HFCT/UHF testing; acoustic PD location; interpretation of test results, case studies and examples). |
| Day 3 | PD Testing of Gas Insulated Switchgear (typical PD sources in GIS; conventional electrical PD measurements; UHF testing of GIS with preinstalled internal sensors; UHF testing of GIS with external sensors; acoustic testing of GIS; interpretation of test results, case studies and examples). |
| DAY 4 | PD Testing of Power Cables (conventional electrical PD measurements; testing of cable terminations using UHF and HFCT sensors; interpretation of test results, case studies and examples). |
| DAY 5 | PD Monitoring Systems (implementation of monitoring systems for key HV assets; interpretation of test results, case studies and examples). |



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