



Technical Diagnostic Services Training Institute

Partial Discharge & Corona Technology I 16 Hours

Who Should Attend?

Technicians responsible for partial discharge testing and supervisors of engineers who are responsible for the testing and maintenance of partial discharge.

Course Description:

This course is based on equipment specific testing & maintenance requirements. Students will learn basic operating principles. Various PD sensor technologies and applications as well as IEEE statistics related to percentages for insulation breakdown, of various equipment, will be discussed. Basic safety guidelines for the operation of the PD test equipment and the temporary installation of the sensors including proper PPE will be taught. The training can be performed in the field on actual energized customer-owned equipment or can optionally be performed at the testing service provider's shop using a variable AC power source to energize various electrical equipment. The student will be utilizing a **handheld PD detector** throughout the course.

Learning Objectives:

- Know how common failures in switchgear, cables, terminations, splices, transformers, bus duct, and other equipment occur
- Know typical phase related PD activity
- Recognize classical PD pattern
- Know basic safety guidelines for the operation of the PD test equipment and the temporary installation of the sensors including proper PPE
- Be able to set up the test equipment and sensors in the classroom and then be able to connect sensors to insulation samples

Prerequisites:

- Should be qualified to work on and near energized equipment

TDSTI

15825 Trinity Blvd., Ft. Worth, Texas 76155
Phone: 817/465-9494 Fax: 817/465-9573
www.technicaldiagnostic.com training@technicaldiagnostic.com

Partial Discharge & Corona Technology I Course Outline

- I. History of Partial Discharge**
- II. Introduction to Partial Discharge Science**
- III. Electrical Fields**
- IV. Sensors**
- V. Insulation Failures**
- VI. Basic PD Analysis**
- VII. Review PD Test Equipment Operation**
- VIII. Safety**
- IX. Test Set Operation (Hands-On)**
- X. Test**
- XI. Recording PD Signals in the Field**

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