



GCC Electrical
Testing Laboratory
المفتبر الفليبي لفمص المصمات الكهريانية

Cable Design and Diagnostic Testing

This interactive 3-day seminar combines theoretical background with practical experience to provide vital knowledge to understand power cable design, selection, and operation and maintenance best practices and to develop power cable reliability improvement strategies. Self-contained and fluid-filled PILC/MIND, HMWPE, PE, XLPE, TW-XLPE and EPR cable designs will be discussed. Doble encourages participants to bring their unique real-world problems for discussion.



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Education
Course Code: **EXX1**



Cable Design and Diagnostic Testing

SEPTEMBER
16 - 20
2018



PROGRAM

The Course program contains the following training outline:

Objectives

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

Understand types of AC cables used in electric power industry at medium-, high- and extra high-voltage (up to 380 kV). The training includes the different types of cables, cable materials and cable systems.

Discover how understanding aging characteristics of insulating materials can help extend asset life.

Understand how to determine the condition of electrical apparatus using field electrical tests, what tests to use for what cable types and how to interpret the results.

Learn about operational considerations for hot climates and corrosive environments.

Establish correct process for performing forensic examination of cable samples recovered from service as part of an asset management program to understand better the cable health and state of degradation.

Addressed to:

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

Duration:

3 Full Days

Location/Venue:

3 Full Days

Course Fees:

3 Full Days

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| DAY 1: | Cable Design Parameters (key components of cable system; key design parameters; types of MV, HV and EHV cables; wet and dry MV designs; sheathing options; key cable materials (insulation, semicons, jacketing); overview of materials manufacture; materials grades and differences; new developments in materials). |
| DAY 2: | Cable Accessories; Earthing & Bonding; Cables Installation Best Practices; Cable Aging Mechanisms (thermal, mechanical, electrical, electro-chemical). |
| DAY 3: | PM: Cable Detection Methods & Diagnostics (off-line, on-line); Cable Asset Management (before purchase, after installation, during operation, and inspection of recovered cable samples and forensic examinations); Cable Ratings. |

