



GCC Electrical
Testing Laboratory

المفتبر الفليبي لفحص المعدات الكهربائية

Overhead Power Line Conductor Vibration Training

Overhead conductor vibration could have a severe impact on the performance of the line if not managed well from the design stage up to the installation and maintenance. A theoretical and practical understanding of Conductor (and ground wire) Vibration and the ways to be measured and monitored as well as its effects on the Overhead line conductors and ground wires are very important for the Concerned Engineers and managers.

The Course shall focus on the different angles of the vibration problem including but not limited to the cause of vibrations (types of wind/terrain/conductor design etc), the ways to deal with, the types of dampers, the vibration measuring equipment and ways to install them, etc.



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FEBRUARY
11 - 15
2018



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Objectives

The objective of this training course is to enable the participants to understand, engineer, operate, troubleshoot and maintain vibration phenomena, vibration dampers and related equipment productively, independently, competently, effectively and safely.

This five-day course shall cover and discuss Vibration Principles, Conductor Characteristics, Wind Characteristics, Types of Conductor motions, Conductor Fatigue, Mechanical design of transmission lines, Vibration protection methods, Assessment of vibration severity, Installation of vibration recorders, etc.

Addressed to:

Overhead Lines Engineers, Field Engineers and Technicians.

Duration:

5 Full Days

Location/Venue:

GCCIA HQ, Dammam

Course Fees:

Overhead Power Line Conductor Vibration Training

PROGRAM

The Course program contains the following training outline:

DAY 1

- a. Phenomena (Aeolian, Subspan, galloping)
- b. How to control Vibration
 - Aeolian
 - Stockbridge
 - Spacer (Spacer damper clamping system)
 - Subspan (Line parameters, subspan length, spacer damper Asymmetric, pendulum)
 - Galloping (interphase spacer, pendulum, etc.)

DAY 2

Design Software (Attra, Input parameters, calculation, output & Validation)

DAY 3

How to assess performances.

- a. Quality Test – FAT- Routine.
- b. Stockbridge (Lab test, DCT, DET, Computer analysis, Field test)
- c. Spacer Damper (Lab test, Stiffness & damping, geometry, Computer analysis and Field Tests)
- d. Others (interphase, pendulum, etc)
- e. Real application issues
- f. Electrical problem fittings (good dimensioning)

DAY 4

- a. Installation Procedure (Stockbridge & Spacer damper)
- b. Defective application in line
- c. Manufacturing problems (Spacer damper, Stockbridge & Hardware)

DAY 5

More

- a. Sicame group- BU Transmission
- b. Cigre HTC activities
- c. IEC new revision

