

COURSE OUTLINE

FUNDAMENTALS OF HIGH VOLTAGE EQUIPMENT

TRAINING OUTLINE

1. ELECTRICAL POWER SYSTEM GROUNDING FUNDAMENTALS.
 - 1.1 Purpose of Grounding.
 - 1.2 Grounding Standards.
 - 1.3 Important Issues Surrounding Grounding of Electrical Systems.
 - 1.4 Grounding System Types and Components.

2. ELECTRICAL HIGH VOLTAGE CABLE THEORY (3M).
 - 2.1 Electrical Cable Theory and components of a High Voltage Cable.
 - 2.2 Electrical Stress in Shielded and Unshielded Cables.
 - 2.3 Why do HV Cables/ Terminations and Splices Fail?

3. HIGH VOLTAGE SWITCHGEAR.
 - 3.1 Fundamentals of Switchgear and Requirements for Switchgear.
 - 3.2 Air Blast Switchgear.
 - 3.3 Oil Filled Switchgear.
 - 3.4 SF6 Switchgear.
 - 3.5 Vacuum Switchgear.
 - 3.6 Test Requirements for Switchgear.

4. HIGH VOLTAGE TRANSFORMER BASICS.
 - 4.1 Overview of Basic Transformer Theory.
 - 4.2 Types of Transformers and Transformer Cooling.
 - 4.3 Transformer Name Plate Data.
 - 4.4 Pad Mount Transformers.
 - 4.5 Electrical Ratings and Characteristics of Transformers.
 - 4.6 Test Requirements for Transformers.

5. PRACTICAL SESSION – INTRODUCTION TO HV TEST EQUIPMENT AND TESTING.