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.