BITS Pilani
Hyderabad Campus

Department of Electrical and Electronics Engineering

High Voltage Engg. Lab

Introduction

- High voltage engineering and its application.
- Insulation medium & breakdown phenomenon.
- Generation & Measurement of High voltage generation
- Over voltage and insulation co-ordination for high voltage equipment.

Scope of the Lab

- Study the effect of electric field stresses on insulation mediums used in power systems.
- Study different phenomenon which leads to break down of insulation medium.

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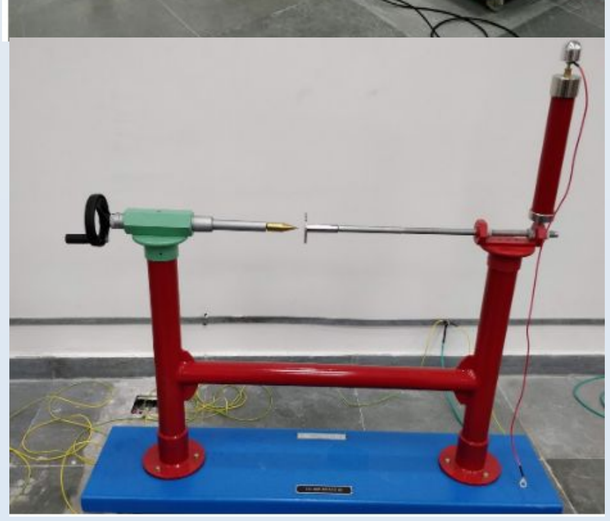
Infrastructure

- 100 kV Ac/Dc Source
- 300 kV Impulse Generator
- Sphere Gap Electrodes
- Rod Gap Electrodes
- Electrolytic Cell
- Tracking and Erosion Test Cell
- Vacuum Chamber
- Salt-fog chamber
- Artificial Rain making Equipment
- Schering Bridge

Experimental setups



List of experiments

- Generation of AC/DC High Voltage up to 100 kV
- Generation of Impulse Waveform 1.2/30 µs, 300 kV
- Generation of uniform and non-uniform electric field using sphere-gap and rod-gap apparatus
- Study the breakdown voltage in Air Medium using different electrodes
- Study the breakdown voltage in Gas medium using different electrodes
- Study the breakdown voltage in vacuum medium using different electrodes
- Study the tracking and erosion test of various insulators
- Study the equipotential electric field in liquids using electrolytic cell
- Measure the capacitance and tan-delta using Schering Bridge
- Study the artificial pollution in transmission line insulators using Salt-fog chamber

Application Areas

- Transformers
- Insulators
- Capacitors
- Cables
- Vacuum and Gas
- Dielectrics
- High Voltage Engineering
- Electromagnetics

Faculty Coordinator

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Research Scholars

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