Safety, Operation, and Maintenance of High Voltage Switching

Ensuring safe operation and maintenance of High Voltage switching.

Introduction

The significance and applicability of switching in high voltage power systems for operation and maintenance will be covered in this training course on high voltage switching safety, operations, and maintenance. Technicians and engineers will acquaint themselves with pertinent safety protocols and practices utilized in its execution. There will be presentations on general safety advice, real-world Management System examples, and the value of having procedures in place for both operation and maintenance.

To help students comprehend the dangers involved in operating switchgear, a brief overview of the technical features of switching devices and their maintenance needs is provided in the course. The degree of detail provided in this training course will correspond to the aspects of contemporary asset management maintenance approaches.

The seminar will provide safe switching practices along with instances of events that resulted from misbehaviour or equipment failure. After internal actions and in compliance with the law, investigation protocols for such instances will be examined.

This instruction session will emphasize:

- Guidelines for standards and best practices
- General recommendations for safe work
- Safe switchgear operation and switching
- The significance of earthing
- Management of site safety
- Methods of investigation
- Aspects of legislation

Objectives

Upon completion of this training program, you will be able to:

- Become aware of the risks involved with switching
- Appropriately choose and operate the equipment
- Supervisors and managers will be trained on safety procedures.
- Discover how to evaluate safe work procedures.
- Talk about the protocols used by network operators.
- Using examples, discuss and comprehend a set of distribution safety regulations.

Training Methodology

In-depth instruction on the topics included in the training course outline will be provided to participants, and the instructor will use a range of tried-and-true adult learning teaching and facilitation strategies. Interactive power point sessions with slides and videos are part of the training course approach. The participants will actively participate in the case study analysis process, helping to choose the best mitigation action.

Organizational impacts

The engineers and managers attending this training session will have a better understanding of the safe switching processes and procedures in HV power systems, which will help to improve both the overall performance of the system and its safe operation and maintenance.

- Employee understanding of the value of safety switching to lower the frequency of occurrences
- Start establishing or going over safe practices.
- Emphasizing to all employees their legal obligations
- Recognizing the significance and needs of staff training
- Consciousness of the results, events, and inquiries

Personal Imapct

Learning from and imparting their experiences during this training session would help the participants in:

- Knowledge of safety and safety protocols on a personal level
- Recognizing the significance of following through on processes and their implications
- The value of implementing a record-keeping system
- Recognize site safety procedures.
- Gain knowledge of switching operations for upkeep.
- Making the decision to work live or dead
- Recognize the need for a legal inquiry after occurrences

Who should attend?

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Course Outline

Day 1

Manual, automated, and on protection operation switching in power systems Guidelines and Code of Practice

- General recommendations for safe work
- Electricity at Work: Safe Working Practices (HSG85), a handbook published by the Health and Safety Executive (HSE),
- What risks exist?
- Appropriate equipment selection and usage
- Steps to take as managers or supervisors
- Evaluating safe work procedures
- Systems of Management

- Rules and guidelines pertaining to the equipment's installation, commissioning, operation, maintenance, and removal
- A suitable record-keeping method
- Determination of duties and necessary training
- Monitoring the efficacy of protocols

Day 2

The technical features of switchgear

- Safe switchgear operation and switching
- Possible issues with switchgear
- Ignorance
- Changes
- Reliance on a manual operating system
- Insufficient upkeep
- Earthing
- Technical prerequisites
- Standards for safety
- Management of Site Safety
- Secure Seclusion
- Work permits for electrical work

Day 3

Changing the procedure to do maintenance

- Making the decision to work live or dead
- Common behaviours of both living and deceased workers
- Deadly work in progress
- Functioning in real time
- Problems with Operations
- Level of fault and ratings
- Impact of additional massive spinning machinery and on-site generating
- Safety measures to lower the chance of swg malfunction and harm
- Changing to allow secure operation
- Device segregation
- Extra caution

Day 4

Protocols used by network operators

- Distribution Safety Rule Set (Model)
- An electrical permit-to-work typical example
- Documents
- Diagrams of networks
- Register of assets
- Upkeep documentation
- Upkeep of the oil CBs
- The risks and hazards that come with using a CB
- Examination
- Monitoring of Conditions
- Dependability-focused upkeep
- Replacement and refurbishment
- Upkeep of the SF6 CBs

Day 5

Investigation protocols for incidents

- Completing the Legislative component
- Select qualified personnel
- Adopt a policy
- Perform a risk analysis.
- Staff training
- The function of a regulator