Generators & Effect of Sudden Loading

TE321

Course Overview:

A generator set is a key piece of the power system, and proper operation and maintenance are essential to long-term system reliability that ensures availability and uptime. While power systems vary in operation, application and load profile depending on the purpose and complexity, all power systems are designed with common goals: providing reliable power and maximizing system efficiency

Course Objective:

-Know the effect of sudden loading and how it affects stability of power systems
-Learn about generator's design function
-Review the codes and standards for inspection, testing and maintenance
-Focus on the key components inherent in this system
-Discuss typical problems and solutions
-How to deal with out-of-phase synchronized generators

Course Outline:

-Generation units
-Unit commitment
-Importance & constraints of modeling
-Power Generation Units
-Characteristics
-Stem units
-Unit constraints
-Economic Dispatch of Thermal Units
-Network losses consideration
-Economic dispatch
-Steady state operation
-Power system equations
-Load flow calculations
-DC load flow
-Stability and Electromechanical Oscillations
-Transient stability
-Dynamic stability
-Effect of sudden loading
-Effect of large induction motors
-Case studies
-Earthing and Bonding

Who Should Attend:

This training course is intended forutilities, design engineers, dispatching operators, & all involved in power generation & control.

Training Language:

Eng

Training Methodology:

-Presentation & Slides
-Audio Visual Aids
-Interactive Discussion
-Participatory Exercise
-Action Learning
-Class Activities
-Case Studies
-Workshops
-Simulation