

Electrical Engineering: Advanced Course

TRAINING OBJECTIVE

At the end of the course, the trainees will have an in-depth understanding of electricity laws and techniques in order to optimize the maintenance of electrical installations.

People Concerned: electricians or people who have already followed the "background" course

PEDAGOGY

- Individual testing of knowledge at the beginning in order to adapt the training program
- Alternate exercises and presentations
- Individual testing of knowledge at the end of the course, with relevant comments by the trainer

Length of the training: 5 days

TRAINING PROGRAM

- Reminders on electrical circuits and parameters, as well as their schematic representations
- Unbalanced three-phase circuits and symmetrical components
- Three-phase transformer (coupling, phase shifting)
- Rotating electrical machines (technology and parameters, direct and alternating current)
- Synchronous machine as a generator (isolated and infinite network, active and reactive power adjustment, stability)
- Asynchronous machine as a motor
- Protection of the rotating machines
- Batteries and associated protections
- Neutrals (rules, advantages and disadvantages)
- Protection of electricity networks (faults and values of the electrical parameters, means of protection, processing of harmonic disturbances)
- Requirements made by the EHV and HV grids operators
- Maintenance policy in order to adapt to the interests of the power plant
- Maintenance optimization related to electricity safety