

# ELECTRICIAN ABILITY [B1v B2v BC BR BS H1v H2v]

## COURSE AIM

- Operate safely on all or part of an operational installation,
- Learning regulation according to the standard NF C 18-510,
- Apply LV safety instructions related to Lockout, general interventions, off power work or in the vicinity of electrical works or installations,
- Issuance of an Ability Title pre-filled with the symbols proposed by the trainer.

## TARGET GROUP

Electrical or electromechanical staff in charge of LV and / or HV to carry out lockouts, direct work with power off, perform general operations, carry out or organize testing

## COURSE CONTENT

The delegates will get knowledge, understanding and proficiency of the following subjects:

Common themes:

- Effects of the current on the human body: electrification, electrocution, burns,
  - Works or installations: voltage ranges, limits and recognition of materials,
  - Environmental zones and their boundaries.
- Ability: principle, symbols, limits and formalization:
- Risk analysis and implementation of general prevention principles,
  - Operations Monitoring,
  - Securing a circuit: power off, voltage tester, lockout, setting out of range,
  - Collective and individual protective equipment: identification, verification, use,
  - Work equipment used (ladders, hand tools ...): risks and implementation,
  - Fires and accidents on or near electrical works and installations,
- Technical topics:
- Type, structure and operation of works and facilities (line and substation),
  - Function of the electrical equipment of the substations: control, protection, separation,
  - Induction and capacitive coupling and associated preventive measure (equipotentiality),
  - Locking and interlocking devices,
  - Collective protective equipment: identification, verification, use,
  - Personal protective equipment: identification, verification, use.
- Specific themes B1v, B2v, B2v Test (Essai):
- Characterization of work and limits: de-energized, energized with / without vicinity,
  - Lockout officer and electrical operation officer: role, instructions, information exchange.
  - Ability: symbol and limits.
  - Prevention measures to be applied during work: eliminate risk, organize, delimit, report, respect and enforce.
  - Electrical equipment in their environment: function, characteristics, identification.
  - Applicable documents during work: safety instructions, lockout certificate, lockout first stage certificate, work authorization, notice of work termination...
  - Work equipment used: risk, verification, identification, use.
  - Safety instructions for Tests (for "Test" attribute).
- Specific themes BC:
- Function of electrical equipment: isolation, protection, separation ...
  - Electrical operation officer and work officer: role, instructions, exchange of information.
  - Steps and documents applicable to lockout: one or two-stage lockout certificate, Notice of termination of work ..
- Specific themes BR BS
- Limits of Abilities BR and BS,
  - Functions of electrical equipments: disconnection, protection, control, separation,
  - Electrical operation officer: role, instructions, exchange (documents, information), Instructions respect,

- Work equipment used: risk, verification, identification, use,
- Documents applicable during an intervention: work authorization, safety instructions ...,
- Prevention measures to be applied during a general LV intervention: eliminate risk, organize, delimit, report, respect and enforce,
- Steps and documents applicable to a lockout for its own account.
- Specific High Voltage HV topics:
- Role and characteristics of neutral regimes,
- TT Earthing system schematic ,
- IT Earthing system schematic,
- TN Earthing system schematic,
- TNC -TNS Earthing system schematic,
- Examination of an HV/LV transformer station,
- Characteristics and examination of the transformer,
- Isolation and protection measures of primary and secondary circuits,
- Measurement of the resistance of the earth electrodes, of the neutral and the HV locks,
- Transformer safety checks.

### COMPETENCY

Delegates are required to pass an assessment at the session beginning of the necessary prerequisites for attending the training, a written or verbal examination of theory at the end of each module then an assessment of aptitude through practical situations and / or role-playing.

### PRE REQUISITE

Possessing technical skills in electricity is mandatory to follow this training.

### METHOD OF TRAINING

Theory conducted in a classroom including presentations and discussions based on lived experiences, followed by practical & simulation training and assessment and will include the visual teaching aids, writing materials, specific equipment for electrical ability and provision of catering.

### COURSE DURATION

Four (4) days

### RATIO OF THE TRAINING

80% Theory / 20% Practical

### VALIDITY OF CERTIFICATE

3 years

