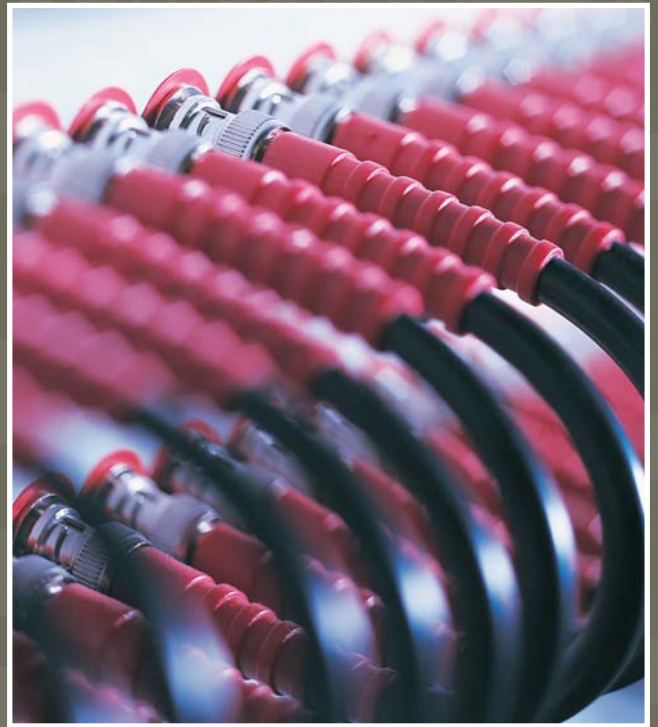


# Fixed Electrical Wiring Inspection & Testing

Checking electrical safety to protect human life and property



## Business Challenge

The Electricity at Work Regulations 1989 (EAW Regulations) came into force on 1 April 1990. The regulation requires all electrical systems to be installed and maintained to a safe standard and to ensure that all precautions are taken against the risk of death or personal injury from electricity in work activities.

The Regulations are made under The Health and Safety at Work Act 1974 (HSW Act) in Great Britain or the Health and Safety at Work (Northern Ireland) Order 1978). Employers are responsible for ensuring the safety and health of their employees, along with members of the public on site and to ensure they are not at risk from their work activities. This includes electrical safety.

### Many deaths and injuries arise from:

- Control of earthworks
- Use of poorly maintained electrical equipment
- Mains electricity supplies
- Use of unsuitable electrical equipment in explosive areas such as car paint spraying booths
- Fires started by poor electrical installations and faulty electrical appliances cause many additional deaths and injuries.

## What is Electrical Management?

Bureau Veritas cover all aspects of electrical inspection and testing assessing risk and danger within the system. A full report is produced highlighting the compliance and non-compliance of the installation with the relevant electrical regulations to ensure the continued safety of employee's and members of the public. Services offered by Bureau Veritas include:

- Installation inspection and testing
- Portable appliance inspection and testing
- Emergency lighting inspection and testing
- Thermographic surveys
- Public entertainment
- Hazardous areas
- Tracing/labeling and drawing of electrical installations
- Risk assessments of fixed electrical installations
- Electrical load analysis
- Electrical safety auditing
- New installation audits
- Earth electrode resistance
- PCBs surveys
- RF emissions from mobile phone masts
- High voltage testing and maintenance
- Power factor correction
- Harmonics analysis

## What are the key benefits ?

- Demonstration of compliance with TPED 1999/36 EC
- Safe electrical system within the workplace
- Identify defective components and programme remedial works before failure
- Minimise financial liabilities of down time and maintain business continuity
- Reduce maintenance time and costs
- Enhance life of equipment
- Negotiate lower insurance premiums with a fully tested/certified installation
- Minimal disruption to building/visitors and occupiers
- Enhanced employee perception as a proactive and caring employer

## Why choose Bureau Veritas?

### Recognition

Founded in 1828, Bureau Veritas is a worldwide leader specialising in QHSE and social responsibility services. Certified to ISO 9001 for all of its activities throughout the world, the company actively participates with professional authorities for the development of international standards and regulations.

### Network

With a network of 700 offices, and over 26,000 employees in more than 140 countries, Bureau Veritas is uniquely placed to supply its 280,000 customers worldwide. In the UK and Ireland alone Bureau Veritas has over 30 offices and laboratories employing over 1500 staff.

Over 200 Electrical Engineer Surveyors working from 10 regions means we can respond quickly to emergency situations.

### Expertise

UKAS 17020, SAFed and NICEIC accredited, Bureau Veritas is now one of the UK's leading electrical inspection companies advising private and public sector clients on electrical issues and as such is recognised by stakeholders and client representatives alike as a key player in the electrical inspection sector.

### Personalised Services

Bureau Veritas has a proven track record in adapting its services and designing bespoke solutions, setting industry standards within our field of work. Experienced Project Managers will carry out a thorough appraisal of your needs which is then balanced against operational and budgetary constraints. From this we will build a step by step guide and programme to compliance, devised to ensure all regulatory requirements are considered.



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## FAQ-Frequently asked questions

### How do I know if my electrical equipment is safe?

The best way to find out if your electrical equipment is safe is to have it inspected and tested by a person who is competent to do so. Many of the potential faults in electrical equipment can be identified with thorough inspection and testing by a competent engineer, but electrical equipment should be tested more thoroughly on a regular basis. The test should be carried out often enough that there is little chance that the equipment will become unsafe between tests. Equipment for use in harsh conditions may need very regular testing whilst equipment in clean, dry, well-controlled environments may need less regular testing.

### How do I know if my electrical installation is safe?

The best way to find out if your electrical installation is safe is to have it inspected and tested by a person who has the competence to do so, such as an Electrical Contractors Association (ECA), National Inspection Council for Electrical Installation Contracting (NICEIC), or The Electrical Contractors' Association of Scotland (SELECT) approved electrical contractor.

### How do I know if someone is competent to do electrical work?

A person can demonstrate competence to perform electrical work if he or she has successfully completed an assessed training course that has included the type of work being considered, run by an accredited training organisation, and has been able to demonstrate an ability to understand electrical theory and put this into practice.

A successfully completed electrical apprenticeship, with some post apprenticeship experience is a good way of demonstrating competence for general electrical work. More specialised work such as maintenance of high voltage switchgear or control system modification is almost certainly likely to require additional training and experience.

### How often should I get my electrical installation tested?

Electrical installations should be tested often enough that there is little chance of deterioration leading to danger. Any part of an installation that has become obviously defective between tests should be de-energised until the fault can be fixed.

You should have your electrical installation inspected and tested by a person who has the competence to do so, such as an Electrical Contractors Association (ECA), National Inspection Council for Electrical Installation Contracting (NICEIC), or The Electrical Contractors' Association of Scotland (SELECT) approved electrical contractor.

### What voltages are dangerous?

A wide range of voltages can be dangerous for different reasons. A very low voltage (such as that produced by a single torch battery) can produce a spark powerful enough to ignite an explosive atmosphere. Batteries (such as those in motor vehicles) can also overheat or explode if they are shorted.

If a person comes into contact with a voltage above about 50 volts, they can receive a range of injuries including those directly resulting from the electrical shock (stopped breathing, heart, etc), and indirect effects resulting from loss of control (such as falling from a height or coming into contact with moving machinery). The chance of being injured by an electric shock increases where it is damp or where there is a lot of metalwork.

Electrical or thermal burns can also occur from the flow of electrical current or hot surfaces.

### When is it safe to work on live electrical equipment?

It is never absolutely safe to work on live electrical equipment. There are few circumstances where it is necessary to work live, and this must only be done after it has been determined that it is unreasonable for the work to be done dead. Even if working live can be justified, many precautions are needed to make sure that the risk is reduced 'so far as is reasonably practicable'. Read HSE booklet Electricity at work – safe working practices for more details.

### Who has the responsibility to make sure everyone works safely?

It is the responsibility of everyone to make sure that work is safely undertaken. Managers have a responsibility to provide the resources, instruction and training necessary to enable their workers to work safely and so that others are not endangered by the work activity. Workers have a responsibility to make sure they keep themselves, and others safe.

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