



QBE Working with Electricity (Hardware)

Annually, the HSE receives reports concerning electrical shock and burns at work involving approximately 1000 people, of which around 30 are fatal. Non fatal accidents can result in slow healing serious burns, falls from height or strained muscles from sudden contraction during the shock. Annually, fire services attend around 5000 workplace fires caused by defective electrical equipment. Injury can result from contact with live parts, and fires/explosions where electricity is the source of ignition. Many incidents result from working with equipment thought to be dead but live, or working on live equipment without adequate training, equipment, or taking suitable precautions i.e. in accordance with a safe system of work.

MINIMUM STANDARDS

1. A written procedure of work is developed and maintained for working on electrical installations. Work is controlled by a permit system where appropriate, and includes an effective method to isolate the equipment.
2. A risk assessment is carried out, guidance followed, and controls implemented where there are risks (including fire risks) from using electrical equipment.
3. Only competent and suitably trained employees should undertake installation, repair, maintenance or testing of electrical equipment. They should be trained and deemed competent in accordance with the latest IEE wiring Regulations (16th Edition)*.
4. Electrical systems are constructed and maintained to prevent danger taking into account their strength, capability and the environment in which they are used. Conductors are suitably insulated to prevent danger. Maintenance does not present a danger in itself.
5. Earthing or other suitable means is used to prevent danger from any conductor which could potentially become charged.
6. Live working is not permitted unless (1) it is not reasonable to make the system dead (2) it is reasonable to work live, and (3) suitable precautions are taken to make working live safe.
7. Measures are taken to prevent static discharges in potentially explosive atmospheres, such as earth bonding and the selection of antistatic work clothing and footwear.

BEST PRACTISE

- Low voltage systems are selected for use where possible e.g. 110 volt centre-tapped (CTE) system. At 230 volts or higher devices such as Residual Current Devices (RCDs) and equipment such as rubber mats/boots are used.
- A system of regular planned preventative maintenance is implemented
- Contractors are required to supply a method statement / safe system of working for any electrical work. Measures are taken to ensure compliance.
- Controls are in place to prevent/restrict/warn unauthorised access to electrical systems e.g. via physical barriers and signage.
- Home workers' domestic electrical systems are checked to ensure they are adequate. Ensure all electrical equipment supplied is maintained and tested.

LEGAL REQUIREMENTS

The Electricity of Work Regulations 1989 impose an absolute duty in all relevant matters under their control. They are supported by detailed guidance and should be consulted prior to any work with electricity. The Provision and Use of Work Equipment Regulations 1992 have provisions to select and maintain work equipment ensuring adequate information and training. The Management of Health & Safety at Work Regulations 1999 contains general requirements for risk assessment. The Fire Precautions (Workplace) Regulations 1999 require risk assessment of fire hazards and reasonable supply of fire fighting, detection and escape facilities. The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) require that certain areas be risk assessed and controls implemented before any new work is carried out in them.

GUIDANCE & USEFUL INFORMATION

- HSE Website – Electricity pages and free guidance: www.hse.gov.uk/electricity/index.htm
- BS 7671 'Requirements for electrical installations. IEE Wiring Regulations. Sixteenth edition' (and associated guidance)

For further information contact RM@UK.qbe.com