

Electricity at Work: Practical application of the Regulations

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The Electricity at Work Regulations aim to prevent death or personal injury including electric shock, electrical burn, fires of electrical origin, electric arcing, or explosion caused by electricity.

In addition to specified 'hardware' requirements, key features include:

- Duties and competence requirements in respect of electrical systems, equipment & conductors and work on or near electrical equipment .
- Switch-off first approach to work on electrical equipment;
- Live working only permitted if specified conditions can be satisfied.

George went on to describe practical application of the Regulations from personal experience:

Case Study 1: Testing of switches using a steel test rig designed and manufactured 'in-house' . Rig not earthed and mounted on a wooden bench. Many opportunities for a 'stray' wire to touch the metal part of the rig. No specific electrical knowledge / training. No systems or procedures.

Case Study 2: Machine shop with automatic lathes and where tool breakage (several times a week) caused overload trip to operate and machine to stop. Re-setting by going inside electrical panels done by supervisor with no electrical training and no safe-systems of work. Some electrical panels have power-factor correction capacitors installed - dangerous voltages remaining after isolator has been switched off.

For solutions / actions for the above and hazard spotting pictures see presentation slides