

## FIXED ELECTRICAL INSPECTION AND TESTING

### I am a Duty Holder: What are my responsibilities in relation to fixed wiring testing?

Under Regulation 3 (Absolute) of the Electricity at Work Regulations 1989, it is the DUTY of every employee while at work to comply with the provisions of the Regulations in so far as they relate to matters which are within their control.

### Where in the Regulations does it state I have to Inspect and Test my installation?

The electricity at Work Regulations 1989 does not specifically state that Inspection and Testing has to be undertaken. However, Regulations 4(1) and 4(2) do state that an electrical installation should be designed, installed, operated and maintained in a safe manner at all times. In other words, your electrical installation has to remain safe from the drawing board to de-commissioning, and you have to evidence this! Paragraph 69 of 4(1) and 4(2) states; Records of maintenance, including test results, preferably kept throughout the working life of an electrical system will enable the condition of equipment and the effectiveness of maintenance policies to be monitored. WITHOUT EFFECTIVE MONITORING, DUTYHOLDERS CANNOT BE CERTAIN THAT THE REQUIREMENT FOR MAINTENANCE HAS BEEN COMPLIED WITH.

**More importantly**, the following regulations are ABSOLUTE (i.e. requirement to be met regardless of cost) and compliance with them can only be achieved by **Inspection and Testing programmes** or documented routine maintenance:-

### SIX ABSOLUTE REASONS TO INSPECT AND TEST

| Regulation                                                                                                                                | Status          | Evidence                                                                    | Defence                      |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------|------------------------------|
| <b>Regulation 5</b><br>Strength & capability of Electrical Equipment                                                                      | <b>ABSOLUTE</b> | Documented Testing<br>- PFC Test                                            | <b>Regulation 29 Applies</b> |
| <b>Regulation 8</b><br>Earthing or other Suitable Precautions                                                                             | <b>ABSOLUTE</b> | Documented Inspection and Testing - EFLI and Earth Continuity Test          | <b>Regulation 29 Applies</b> |
| <b>Regulation 9</b><br>Integrity or Referenced Conductors                                                                                 | <b>ABSOLUTE</b> | Documented Inspection and Testing - EFLI and Earth Continuity Test          | <b>Regulation 29 Applies</b> |
| <b>Regulation 10</b><br>Joints and Connections to be fit for purpose                                                                      | <b>ABSOLUTE</b> | Documented Inspection                                                       | <b>Regulation 29 Applies</b> |
| <b>Regulation 11</b><br>Means of Protecting from Excess of Current                                                                        | <b>ABSOLUTE</b> | Documented Inspection and Testing - RCD Test                                | <b>Regulation 29 Applies</b> |
| <b>Regulation 12</b><br>Means of cutting off the supply and for isolation.<br><b>Identifying and Labelling the LV Distribution System</b> | <b>ABSOLUTE</b> | Documented Inspection<br><br><b>Schematic Drawings and Labelling System</b> | <b>Regulation 29 Applies</b> |



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### Duty Holder Defence: How can I comply with six ABSOLUTE Regulations under the Electricity at Work Regulations 1989?

Implement an Inspection and Testing programme which will provide a defence in criminal proceedings for the Duty Holder to demonstrate due diligence with respect to maintenance of the electrical installation and avoid committing an offence under the relevant regulations.

Considering the ABSOLUTE requirements of the Electricity at Work Regulations 1989, and many years' experience of our staff in delivering Inspection and Testing programmes in industrial, commercial, retail and domestic properties; we are in a unique position to deliver a bespoke service to suit your environment in order to satisfy the Electricity at Work Regulations 1989.

However, as a general approach, assuming you, your tenants or landlords have not constituted accurate records, we would suggest the following:-

- **Electrical Network Drawings**

Undertake Electrical Network Drawings to identify and label the detail of your LV system in order to comply with Regulation 12 (ABSOLUTE) of the Electricity at Work Regulations 1989 (methods of identifying circuits).

- **100% Inspection & Testing as far as reasonably practicable (ASFARP)**

Whilst drawing the electrical network, any dangerous defects will be highlighted immediately to the Duty Holder for corrective action. This approach will also serve to identify priority areas for testing.

- **Corrective action on dangerous electrical non-compliances**

Taking an industrial environment, a programme of testing can commence on either a one year (whole site) or three year (third of site each year) depending on your management decision making process/budgetary requirements. *The HSE would never countenance a three year programme; they would look at your situation in isolation. It has however become accepted practice.*

- **Electronic Records - TraQ-it®**

Paragraph 69 advises that test results should be kept throughout the working life of a system to evidence maintenance. Our unique web based system, TraQ-it®, allows results to be uploaded on an 'anytime' basis. Clients can interact with the website using a bespoke hierarchy of permissions, enabling a high level of Duty Holder control.

### Example

A five year programme of Inspection and Testing is best illustrated in the following table:-

| YEAR   | SITE ACTIVITY                                             |                                                      |                                                 |                                                            | RETEST                                                                                                                                                                | DEFENCE               |
|--------|-----------------------------------------------------------|------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Year 1 | Complete Network Drawings of whole site. Label Switchgear | Identify dangerous non-compliances and advise client | Commence Inspection and Testing on agreed areas | Upload Network Drawings and Records to Interactive Website | After completion of five year programme, a reduced level of testing will be undertaken and records updated throughout Year 1 - Year 5 with relevant reduction in cost | Regulation 29 Applies |
| Year 2 | Update Network Drawings as instructed                     | Identify dangerous non-compliances and advise client | Continue Inspection and Testing on agreed areas | Upload Network Drawings and Records to Interactive Website |                                                                                                                                                                       |                       |
| Year 3 | Update Network Drawings as instructed                     | Identify dangerous non-compliances and advise client | Continue Inspection and Testing on agreed areas | Upload Network Drawings and Records to Interactive Website |                                                                                                                                                                       |                       |
| Year 4 | Update Network Drawings as instructed                     | Identify dangerous non-compliances and advise client | Continue Inspection and Testing on agreed areas | Upload Network Drawings and Records to Interactive Website |                                                                                                                                                                       |                       |
| Year 5 | Update Network Drawings as instructed                     | Identify dangerous non-compliances and advise client | Complete Inspection and Testing programme       | Upload Network Drawings and Records to Interactive Website |                                                                                                                                                                       |                       |

### DUTY HOLDER PLEASE REMEMBER

*List of Regulations not exhaustive*

In any proceedings for an offence consisting of a contravention of ABSOLUTE Regulations 5, 8, 9, 10, 11 & 12 it shall be your defence to prove that YOU took all reasonable steps and exercised all due diligence to avoid commission of that offence.