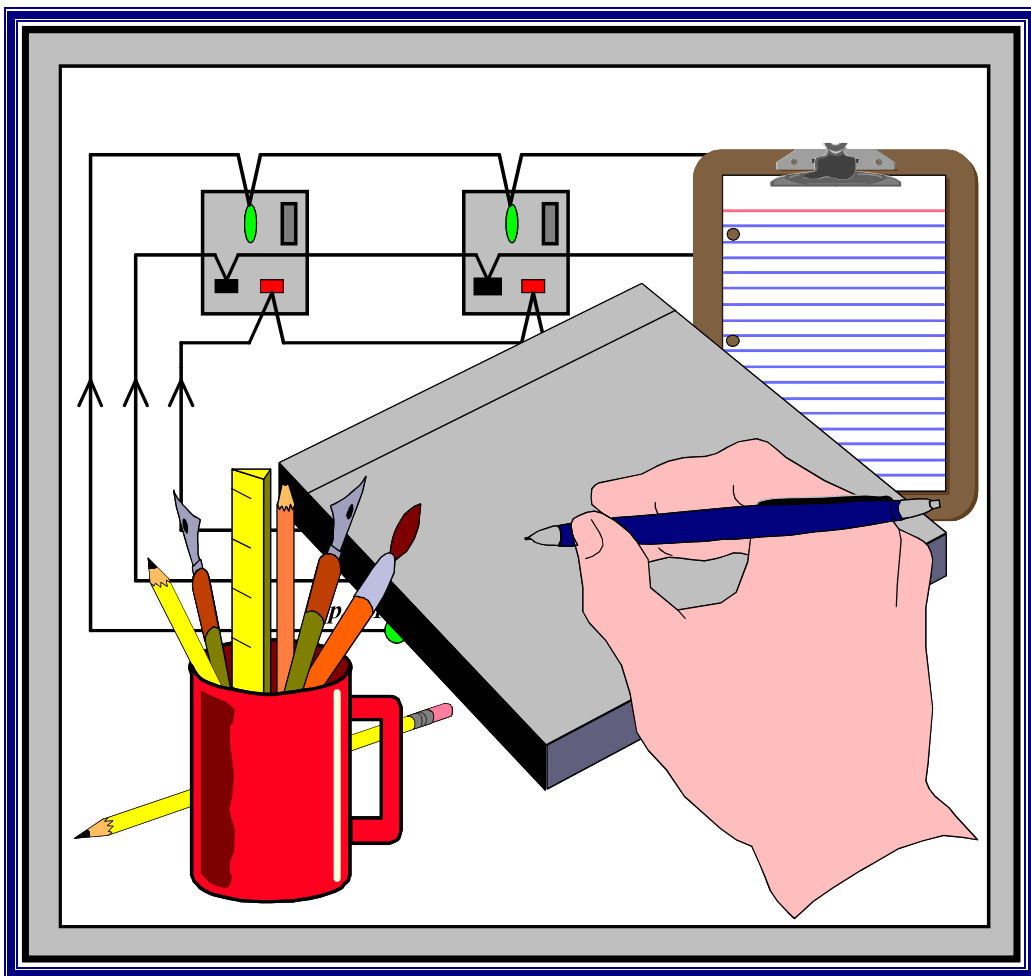


**THE INSPECTION AND TESTING OF  
ELECTRICAL INSTALLATIONS  
BS7671 CHAPTER 62 -  
PERIODIC INSPECTION AND TESTING**

**ELECTRICAL INSTALLATION CONDITION REPORT**



***TECHNICAL SUPPORT AND TRAINING***

# **BS7671 CHAPTER 62 - PERIODIC INSPECTION AND TESTING**

## **ELECTRICAL INSTALLATION CONDITION REPORT**

**BS7671 Regulation 621.1** requires that "...periodic inspection and testing of every electrical installation shall be carried out in accordance with Regulations 621.2 to 5 in order to determine, so far as is reasonably practicable, whether the installation is in a satisfactory condition for continued service."

After taking into account the availability of records and the use, condition and nature of the installation he must decide upon the scope of the periodic inspection and test and upon completion advise the client on any remedial work required.

**The test engineer must be competent, (BS7671 Regulation 621.5)** in addition to the previous requirements for new installations, he must have the ability to compare and interpret the test results with any previous results provided and satisfy himself that they are within the requirements of BS 7671.

The requirements for a periodic inspection and test of an electrical installation are that the inspection comprising close scrutiny shall be carried out without dismantling or with partial dismantling as required together with the appropriate tests as specified in BS 7671.

With the **Electricity at Work Regulations** requiring that all electrical installations be maintained in such a manner that danger will not arise then periodic inspection and testing is essential.

### **Reasons for Periodic Inspection and Testing.**

- i) To satisfy the Electricity at Work Regulations.
- ii) To satisfy the requirements of licensing authorities.  
Petrol stations and cinema's etc.
- iii) Change of ownership.
- iv) Building Society mortgage applications.
- v) Where there is a suspicion that the installation may be damaged.
- vi) Where there has been a change of use and/ or a significant increase in the electrical loading of the installation.

### **Records of maintenance must be kept.**

To satisfy the requirements of the **Electricity at Work Regulations**, all places of work should have documentation confirming that the installation has been maintained to a level so as to prevent danger (so far as is reasonable practicable).

A current Periodic Inspection and Test Report usually satisfies these requirements.

# **BS7671 CHAPTER 62 - PERIODIC INSPECTION AND TESTING**

## **ELECTRICAL INSTALLATION CONDITION REPORT**

**BS7671 Regulation 621.1** requires that the inspection shall be carried out in such a manner that will ensure as far as is reasonably practicable that

- "....(i) safety of persons and livestock against the effects of electric shock and burns**
- (ii) protection against damage to property by fire and heat arising from an installation defect**
- (iii) confirmation that the installation is not damaged or deteriorated so as to impair safety**
- (iv) the identification of installation defects and departures from the requirements of these Regulations that may give rise to danger."**

Whilst carrying out the inspection and test it is the engineer's responsibility to ensure that no danger arises and that equipment and property are not damaged irrespective of the condition of the installation.

**BS7671 Regulation 621.2** With regards to the frequency of the periodic inspection and testing four factors must be taken into account.

- 1) the type of installation, its
- 2) use and operation, the
- 3) frequency and quality of maintenance, and the
- 4) external influences to which it has been subjected.

Periodic inspection and testing need not be carried out provided that it can be ensured that the installation has been under effective supervision and that continuous monitoring and maintenance of the installation has been carried out.

**BS7671 Regulation 631.2** Upon completion an **Electrical Installation Condition Report**, with an inspection schedule plus and a test result schedule must be given to the person ordering the work.

It must be ensured that any damage, deterioration, defects, dangerous conditions and non-compliances which may give rise to danger are identified and recorded.

# BS7671 CHAPTER 62 - PERIODIC INSPECTION AND TESTING

## ELECTRICAL INSTALLATION CONDITION REPORT

### The Wear and Tear List

With the passing of time the general condition of an electrical installation usually deteriorates. This could be due to a number of factors:-

- i) **wear and tear** - The general condition of equipment such as motor starters, switches, contactors etc. which are in continuous use could deteriorate due to wear and tear. Replacement might be required.
- ii) **damage** - Where damage is likely to occur or equipment is likely to be abused then additional mechanical protection should be provided. If this is not carried out then damage to the installed equipment can occur. Replacement with suitable equipment or additional mechanical protection must be provided.
- iii) **Corrosion**
- iv) **excessive overloading**
- v) **ageing, and**
- vi) **suitability to the environmental conditions to which it is subjected.** Checks on any external influences that may have been introduced since the previous inspection and test was carried out. Introduction of acid baths giving off toxic and corrosive fumes will affect the installed equipment.
- vii) **suitability of the installed equipment for the use to which it is intended.** The working environment of the installation may have changed over the years. Equipment which may have been previously suitable for the environment and working conditions may now not be.

**The form which is general use and available from the IET as a PDF file entitled 'FORMS for 2008 inc Amd No 3:2015' must not be used for fire alarm, emergency lighting and petrol station installations.**

**These installations have their own inspection and testing certificates.**