



50plus Electrical



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IEE 17th Edition (BS7671) first amendment

A 17th Edition 1st Amendment new (green) edition is expected to be available in July 2011 and will come into effect on 1 January 2012. The following changes are noted:

Measures against electromagnetic disturbances - new section 444

Welding machines, lifts, transformers and switching of inductive loads such as electric motors, fluorescent lighting etc are all sources of electromagnetic disturbances within an installation. Electromagnetic Interference (EMI) may disturb or damage IT systems/equipment as well as electronic components or circuits.

Any change in an electric current will cause a change in the strength of its associated electromagnetic field which in turn can induce voltages and currents in other conductors in the field.

Amendment one of BS 7671:2008 contains requirements in a new section 444 which also provides recommendations to enable the avoidance and reduction of electromagnetic disturbances.

Devices for protection against overvoltage (surge protection) - new section 534

Both lightning strikes and electrical switching can inject what are called transient overvoltages into installations. Transient voltages are usually only a few micro seconds in duration. However their peak value can reach 6 kV.

Amendment one of BS 7671:2008 has requirements in a new section, 534, for the installation of SPDs to limit transient overvoltages and divert damaging surge current away from sensitive equipment such as computers, electronic process controls etc which are now widespread in electrical installations.

Medical locations - new section 710

There are particular risks associated with medical locations. Therefore stringent measures are necessary to ensure the safety of patients likely to be subjected to the application of medical electrical equipment.

Operating or maintenance gangways - new section 729

Regulation 15 of the Electricity at work Regulations has requirements for working space, access and lighting and requires that, for the purposes of enabling injury to be prevented, adequate working space, adequate means of access and adequate lighting shall be provided at all electrical equipment on which or near which work is being done in circumstances which may give rise to danger.

Amendment one of BS 7671:2008 now has requirements in a new section 729 including width of gangways, access areas adequate for work, operational access, emergency access, and emergency evacuation etc.

Model forms for certification and reporting - Appendix 6

Periodic inspection and testing is necessary because all electrical installations deteriorate due to a number of factors such as damage, wear, tear, corrosion, excessive electrical loading, ageing and environmental influences. Legislation requires that electrical installations are maintained in a safe condition and therefore must be periodically inspected and tested.

Amendment number one introduces an electrical installation condition report that replaces the periodic inspection report.

The name of the report has been changed from 'Periodic Inspection Report' to 'Electrical Installation Condition Reports to make it more meaningful to recipients.

The classification codes to be used for each recorded observation have been made clearer and more direct, as follows:

- Code C1 - Danger present. Risk of injury. Immediate remedial action required
- Code C2 - Potentially dangerous - urgent remedial action required
- Code C3 - Improvement recommended.

The condition of an electrical installation must be reported to be unsatisfactory if any observation is classified as C1 or C2.

There is no separate code for 'requires further investigation' as it will be possible to indicate separately against each observation whether or not further investigation is required.

Also, there is no equivalent to the existing Recommendation Code 4, "Does not comply with BS 7671:2008. This does not imply that the electrical installation inspected is unsafe." Such observations are no longer considered relevant for a report on the condition of an electrical installation, the purpose of which is to record any damage, deterioration, defects, dangerous conditions and noncompliance with the requirements on the current edition of BS 7671 which may give rise to danger.(Regulation 634.2).

As in the existing Periodic Inspection Report, the new Condition Report consists of three parts, but these are all now custom- designed for condition reporting purposes:

- A generic, two-page summary recording, amongst other things, who the report has been produced for details of the installation inspected and the extent and limitations of the inspection; a summary of the condition of the installation, and the recommended remedial actions, together with the observations made that require action, together with their classification codes and whether or not each item requires further investigation
- One or more inspection schedules. There are three types:
 - An inspection schedule for a single distribution board installation for domestic and similar premises
 - An inspection schedule for the main intake and associated circuits for a multiple distribution board installation
 - An inspection schedule for each distribution board of a multiple distribution board installation

Each schedule lists the elements of a typical installation, against which the outcome of their inspection (their condition) can be recorded. Outcomes can be 'acceptable' (tick), 'unacceptable' (code C1 or C2), 'improvement recommended' (code C3), 'limitation' or 'not applicable' (to the particular installation). A further column is provided to indicate whether or not further investigation of each item is required.

- A generic test results schedule.

As in the existing Periodic Inspection Report, there are brief guidance notes for both the recipient and the person producing the condition report.

END