

# Fundamental Changes to BS7671:2008 from BS7671:2004

## Parts 1 – 4 covered am.

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### Part 1 Scope

Part 1 134.2.1 ... Inspection & Testing shall be carried out...

Part 1 135.12 ...every installation is subjected to periodic inspection & testing

### Part 2 Definitions

#### New words & phrases defined, such as:

Basic Protection (Direct Contact)

Class I , Class II, Class III Equipment

Competent Person

Fault Protection (Indirect Contact)

Houseboat

Instructed Person

Powertrack system (PT System)

PV – Photovoltaic

Skilled Person

#### New page of Symbols & Algebraic Terms

### Part 3 General Characteristics

Chapter 32 Be aware of the slight descriptive changes in Appendix 5 for A/B/C ratings

Chapter 36 Continuity of Service (New)

### Part 4 Protection for Safety

#### Chapter 41 – Much added symposium regarding RCD's

411.1

**Protective Measure: Automatic Disconnection of Supply** – (EEBAADS has been removed)

411.3.1.2

#### Protective Equipotential Bonding

Table 41.1 – Disconnection Times (New)

Tables 41.2, 41.3, 41.4 – Zs now taken at 230V so the figures are slightly less than 16<sup>th</sup> Edition\*

\*see appx 14 for new inclusion of 80% rule for Measured Zs.

#### Table 41.5 for RCD's in a TT system (New)

411.7.5 – Plugs, sockets, LSC's, DCL's and cable couplers

Typical additional Regulation to cover new technology...

412.2.1.1

New Symbols – ie:



&



used when discussing Electrical Equipment...

#### 415.1.1

#### Additional Protection: (RCDs)

See appendix 3 – page 243 for new Table covering new disconnection times

#### 416: Basic Protection (was Direct Contact)

Fig 417 now present (previously in definitions)

#### 422 – Precautions where a risk of Fire exists

New symbols present as shown below in Fig 1

Fig 1.



See Regulations 422.3.2 & 422.4.2 for use of these symbols and meanings

#### 434.5 Fault Current of a Protective Device

Table 43.1 (new) and equation  $t = \frac{k^2 S^2}{I^2}$

#### Chapter 44 – Voltage Disturbance & Electromagnetic Disturbances (New)

442.2 –  $U_f$ ,  $U_1$  and  $U_2$  new – see Figure 44.1 (New) – discussed the effect a fault on the primary side of a HV transformer may have on the secondary side, and precautions required. Very deep chapter, and need only be referred to for the exam.

Fig & Table 44.2 & Table 44.3 (new- but only used for high end design work in practice).

Parts 5, 6 & 7. & new Appendix covered PM.

*Some familiar working Appendix pointers...*

**Appendix 4** Page 254 - for Groups of different cables use the equation  $F = \frac{1}{\sqrt{n}}$

**Page 255** – new Correction Factor listed :  $C_c$

**Page 261** – Reference Methods are now letters (although Table 4A2 is numbered & for T&E cable)

**Page 267-272** Tables 4B1 to 4C5 – Ambient Temp, Grouping, Buried Cables Tables (**New layout**)

**Page 282** – Twin & Earth Current Carrying Table with  $V_d$  per Amp per Meter attached.

**Appendix 14** – discussed earlier (Earth Fault Loop Impedance) including reference to the **80% rule**.

**Appendix 15** – Rings & Radials (spot the mistakes &/or debatable diagrams....!)