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John Dallimore & Partners

**Design, Construction,
Modification, Maintenance
and Decommissioning of
Filling Stations**

Third Edition

Electrical Installations

Presented by John Dallimore

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Section 14 – Electrical Installations

- No fundamental changes
- Mainly updating of Standards etc and additional explanation, in particular in relation to measuring Earth Fault Loop Impedance
- One new clause covering charging of electric vehicles.

■ Summary of Changes

- Clause 14.5.2 New Clause advising that any charging facilities for electric cars must be located outside the hazardous areas
- Fireman's Switch (for neon signs) - now called Firefighter's Switch. Clause 14.6.6 and Fig. 14.3
- Clause 14.8.1 Revised to clarify the preference to protect each final circuit with a separate multi-pole RCD
- Clause 14.9.7 Sentence added to require suppliers of mechanical seals, foams and fillers intended to seal cable ducts to demonstrate compatibility with petroleum products and other VOCs in liquid and vapour form

■ **CLAUSE 14.10 TESTING**

- Clause 14.10.2.1 Pre-Commissioning Verification for new Sites or major refurbishment
- Paragraph c – Sentence added to explain that R_A , the aggregate resistance of the earth electrode arrangement, may have to be lower than the maximum 20 ohms, depending on the sensitivity of the main RCD
eg. if RCD tripping current is 5A, R_A has to be no more than $25/5 = 5$ ohms
- Clause 14.10.2.2 Initial Verification
Paragraph c – Note added to stress that an Earth Fault Loop Impedance test must be carried out. Results of enquiry to the energy distributor must not be used. This is repeated in paragraph e

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- **Annexes**
- **One Annex added, no changes to the others, except the following:**
- Annex 14.4
 - Clause 14.4.1 – Paragraph added to explain that the resistance of the line conductor tail connecting the test socket may be ignored under certain conditions
- New Clause 14.4.2 added to explain in detail what is being measured when an earth fault loop impedance test is carried out. Repeats warning not to use figures obtained from energy distributors
- Clause 14.4.3 was 14.4.2 – Test Procedures utilising the Test Socket Outlet – additional paragraphs added to clarify the procedures
- Annexes 14.8 and 14.9 – Certificates
Minor amendments only
- Annex 14.11 added to provide an explanation of Equipment Protection Levels

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■ The Future

- Amendment 1 to 17th Edition of Wiring Regulations due for publication this year
Amendments are extensive but should not require amendments to the Blue Book
- Model Code of Safe Practice Part 21 – Guidelines for the Control of Hazards arising from Static Electricity (IP 21) is being revised. Some of the definitions in this document will differ from those in the Blue Book
- APEA Training Courses and articles in the Bulletin will enable us to cover any issues created by these new documents