Standards required to support CE marking of cables for reaction to fire performance under the CPD

Current position

- To enable Notified Bodies to issue certification of product conformity, it is necessary to prepare European Harmonized Product Standards (ENs) and other supporting standards under Mandate of the European Commission.
- It is the job of CENELEC to develop and publish the necessary test method, classification and product standards and extended application rules to enable product certification under Mandate from the European Commission.
- Until the time of publication of the Mandated standards mentioned above, it is not possible to issue any Certification for CE Marking under the CPD for reaction to fire performance of cables.

Mandate M/443

- The Mandate for cables concerning standardisation work for harmonised standards was given to CEN/CENELEC in June 2009.
- The scope covers power, control and communication, and optical fibre cables for use in buildings and other civil engineering works *subject to regulation* (all voltages included).
- The scope covers reaction to fire, resistance to fire and dangerous substances.
- CENELEC have accepted the Mandate in principle and will submit a detailed response with a work programme by October 2009.

The supporting standards – Harmonised Product Standard

- The Harmonised product standard is the key to CE marking under the CPD but development of such a standard presents a difficult problem as there are many diverse cable types and the CPD only applies to their reaction to fire, resistance to fire and dangerous substances.
- For cables, other safety parameters are covered under the LVD.
- A proposed solution to develop an "umbrella" performance based standard that can be applied to any cable type and specifically covering aspects under the CPD is being considered.
- According to the Mandated requirements, the standard must contain:
- A scope and field of application.
- A description of the family of products and their intended use.
- The characteristics expressed in performance terms.
- A reference to the test methods to be used.
- Specific guidance on labelling.
- The classification system and levels.
- The system of attestation of conformity and actions of the Certification Body.
- An Annex ZA "Clauses of this European Standard addressing the provisions of the EU Construction Products Directive".

The supporting standards – Classification Standard

- This standard is an administrative document that links test results to a classification.
- It includes information on the tests to be carried out, the number of tests for classification, the assessment of results and the classification criteria.
- It has been agreed in principle by CEN and CENELEC that cables will be included as an amendment to the existing EN 13501-1 so that all products under the CPD are included in one document.

The supporting standards – Test method standard

- In order that the data necessary for classification can be obtained, a new test method (EN 50399) has been developed.
- The EN 50399 test method combines dynamic heat release and smoke production measurements during a flame propagation test based upon IEC 60332-3-10 apparatus.
- Some important modifications compared with the IEC 60332-3 series tests have been introduced in order to meet the European Commission requirements for classification of cables.
- The final draft standard is frozen and ready for formal vote in CENELEC.
- Over 20 laboratories have taken part in a proving round robin for the test method and repeatability and reproducibility were found to be comparable with other large scale tests such as the SBI.
- A good experience has been obtained with the test method during the CEMAC II project (more than 200 tests).
- Prysmian have facilities in a number of countries to carry out the EN 50399 test, with the lead laboratory in the UK.

The supporting standards – Rules for extended application (EXAP)

- In order to prevent a situation where every individual cable design has to be tested for classification, it is necessary to establish which cables need to be tested to gain approval for a product range.
- It has been necessary to establish rules to enable tests on defined products within a family to be extrapolated to other similar constructions within the family.
- The rules have to be definitive so that they can be equally applied by any Certification Body.
- The EXAP rules have been developed through the CEMAC II research project and will be published by CENELEC.

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