



# Fire Performance of Electric Cables

## The **FIPEC** Report

– new test methods and measurement techniques –

The European Commission, DG for Research (DGXII) and European Industry have sponsored this 3 year research project. FIPEC has achieved its target, to develop sensitive methods for measuring the fire performance of electric cables (FIPEC). The methods are based on sound engineering principles rather than prescriptive tests unlike the current European national cable fire assessment techniques. The latter are not sensitive enough to differentiate between cables with reasonable fire properties and those with very good properties needed for high hazard installations or for high density telecommunication installations.

FIPEC's findings have been presented to the EC and the group of European regulators who are studying them with view to their use as the basis of European-wide regulatory tests for use in the Construction Products Directive. The test methods developed have been successfully correlated with real scale tests and compared with results from bench scale tests (cone calorimeter).

This comprehensive report gives a detailed review of the work undertaken during this 3 year project and presents the full findings, including draft standards guidance documents. This report will be available later in the summer and should be of interest to all those active in the wire and cable industries, either as a manufacturer, supplier or end-user. Order your copy now!

### Details

Hardback, 406pp, with 303 illustrations (incl 44 colour plates) and 93 tables. ISBN: 0 953 2312 5 9 Price: £100

### Contents Include:

#### Description of the FIPEC Research Programme

##### Technical Contents of the Project

*Real scale-tests*

*Toxic gas measurement*

*Full-scale tests*

*Cone Calorimeter tests*

##### Modelling and Correlation Studies

*Ranking Order Correlations*

*Numerical Correlations*

*Physical Flame spread and materials models*

*Examples of CFD Modelling of flame spread*

### Classifications based on full-scale tests

#### Standard guidance.

In addition to the main chapters the book contains

#### 13 useful Appendices:

- Review of European Cable installations
- Identification and selection of cables
- Cables used in project
- Data Management
- Real scale testing
- Full scale testing
- Modified IEC 60332-3 Protocol
- Full-scale standards guidance
- Small-scale testing
- Cone Calorimeter testing protocols
- Small-scale standards guidance
- Prediction models
- Guidance of Classification of cables



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