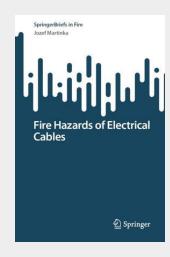
Fire Hazards of Electrical Cables

This book offers a comprehensive approach to the assessment of fire hazards of electrical cables. The first part of the book describes division of cables, main parameters of electrical cables, and fault scenarios of cables leading to fire or occupant injuries. The traditional approach to fire hazards of electrical cables assessment is also described in the first part. The second part of the book is focused on the creation and description of a new approach to fire hazard assessment of electrical cables. The new approach is based on the assessment of both ignition parameters of electrical cables and the impact of their fires on the surrounding area. The ignition parameters include critical heat flux, ignition temperature, and critical electrical current. The impact of cable fires on the surrounding area is expressed by the released heat, toxicity of combustion products (determined by the amount of released carbon oxides and oxygen consumed), and visibility (determined by the smoke extinction area). Newly created approach is practically illustrated on specific types of cables (power cables classified to B2ca and Fca reaction to fire class) in this book. The book is intended mainly for academics in the fields of both fire protection engineering and electrical engineering. Besides that, the professionals in fire safety will find valuable information concerning impact of electrical cables on the safety of occupants and structures during fire in the book. In addition, the book sheds light on the issue of fire safety of electrical cables for the professionals in both electrical and power engineering. Last but not least, the book is appropriate also for students in the fields of fire, electrical, and power engineering in bachelor, master, and Ph.D. degree.



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