

Abstract

This study aims to investigate, understand and explore issues related to the appropriateness of the existing fire protection solutions in historical buildings and their effectiveness in avoiding catastrophes. Therefore, recent papers, case studies, statutory documents, and guidelines are reviewed. An explanation of the rationale is provided and potential fire safety solutions for historic buildings, without conflicting with the main conservation principles, are presented. The inadequacy of applying modern codes in old buildings is also discussed in contrast with a risk-based approach, which has been proven to be more appropriate. Moreover, in an attempt to propose stronger research contributions, a closer analysis into real-life context was developed through an online questionnaire for collection of primary data, along with a practical application. The questionnaire aimed to analyze specific issues regarding the application of fire safety methods for historic buildings within the boundaries of different national legislations through the perspective of experienced professionals. The practical case study was designed to explore, compare and demonstrate the application of different approaches in a sample building. It was concluded that, to deliver appropriate solutions that respect the uniqueness of the building, it is of paramount importance to critically evaluate the conditions and hazards of each building in a case-by-case basis. Where possible fire engineers, government and conservative bodies should combine responsibilities and join efforts to engage communities, increase research contributions, gather financial resources and develop efficient management strategies to ensure that effective solutions are provided to buildings of special interest.