
**Fire safety engineering — Survey of
performance-based fire safety design
practices in different countries**

*Ingénierie de la sécurité incendie — Recensement des pratiques
nationales sur la conception de la sécurité incendie fondée sur la
performance*

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Foreword

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This document was prepared by Technical Committee ISO/TC 92, *Fire safety*, Subcommittee SC 4, *Fire safety engineering*.

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Introduction

Since the 1980s, performance-based fire safety design (P-B FSD) have been increasingly popular in many countries. In recent years, the trend has been accelerated by factors such as the emergence of large-scale buildings, diversification of building uses, desire for cost-effective construction and development of new building technologies. However, building control has been traditionally carried out based on prescriptive building/fire regulations and it is unlikely that this conventional system will be changed in the future for the majority of conventional types of buildings.

Since building designs by the P-B FSD method and by prescriptive building/fire regulations are very different, the buildings designed by the P-B FSD method do not smoothly fit into the conventional building control system. Various efforts are underway to devise a new system to control P-B FSD designs but there is a long way to go. Also, it is not clear how widely and in what practical situations the P-B FSD approach is used, and what fire safety engineering (FSE) tools are used in different countries.

It is the mission of ISO/TC 92/SC 4 to promote P-B FSD, and therefore SC 4 is concerned with how it can effectively assist in the establishment of systems for P-B FSD and, more specifically, what documents SC 4 can produce to benefit the development of P-B FSD. For this purpose, it is first necessary to understand the current state and environment of P-B FSD, particularly the legal, administrative and human environment.

This document is a summary of the results of a questionnaire survey conducted as the first step to better understand the actual situation of P-B FSD in different countries.

Similar surveys have already been conducted: twice by CEN/TC 127, *Fire safety in building*, in 2001 and 2017^[2], for countries in Europe and several other countries; as well as other surveys with a similar interest^{[3][4]}. Some results of these surveys are cited in this report as notes.

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