

ISO 16733-1:2015-09 (E)

Fire safety engineering - Selection of design fire scenarios and design fires - Part 1: Selection of design fire scenarios

Contents	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	2
5 Fire safety engineering applications	3
5.1 Fire safety engineering process	3
5.1.1 Establish project scope	3
5.1.2 Identify fire safety objectives	4
5.1.3 Determine functional requirements	4
5.1.4 Identify performance criteria	4
5.1.5 Hazard identification	4
5.1.6 Fire safety design plan	4
5.2 The role of design fire scenarios in fire safety design	4
5.3 The role of design fires in fire safety design	5
6 Design fire scenarios	6
6.1 Characteristics of fire scenarios	6
6.2 Identification of fire scenarios	6
6.2.1 General	6
6.2.2 Step 1 -- Identify the specific safety challenges	8
6.2.3 Step 2 -- Location of fire	9
6.2.4 Step 3 -- Type of fire	10
6.2.5 Step 4 -- Potential complicating hazards leading to other fire scenarios	11
6.2.6 Step 5 -- Systems and features impacting on fire	11
6.2.7 Step 6 -- Occupant actions impacting on fire	12
6.3 Step 7 -- Selection of design fire scenarios	12
6.3.1 General	12
6.3.2 Combining scenarios into scenario clusters	12
6.3.3 Caution on exclusion of scenarios believed to have negligible risk	12
6.3.4 Demonstrating that the scenario structure is complete	13
6.3.5 Scenario selection procedure based on level of analysis	13
6.3.6 Selection of design fire scenarios for deterministic analysis	13
6.4 Step 8 -- Modify scenario selection based on system availability and reliability	14
6.5 Step 9 -- Final selection and documentation	15
Annex A (informative) Data for development of design fire scenarios	16
Annex B (informative) Example of a set of explicit fire scenarios	18
Annex C (informative) Design fires	21
Bibliography	30