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Fire safety — Statistical data collection —

Part 2: Vocabulary

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

A list of all parts in the ISO 17755 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

ISO/TR 17755:2014 has shown that experts involved in fire safety who work on international and national fire statistics databases face three main issues:

1) a lack of common terminology (many terms have different definitions),

2) a lack of common methodology,

3) some weaknesses in the training and qualification of fire investigators.

In order to harmonize the existing definitions within ISO, this document is a tool for use in proposing a common methodology for collecting fire statistics. It was decided to harmonize the definitions of certain terms commonly used in fire statistical data within the framework of ISO and to collect them in this document which is the only terminology guide used for this series of International Standards. This document supplements ISO 13943 for application to fire statistics.

The methodology for collecting fire statistics will be the focus of a future part in this series.

Fire safety — Statistical data collection —

Part 2: Vocabulary

1 Scope

Data collection is of prime importance in fire safety, for several reasons: assessing the effect of any regulation, providing probability and gravity data to fire risk analysis, and the selection of scenarios for examples in fire safety engineering. Statistical data collection of fires is nevertheless collected and analysed from local or national perspectives at the time of publication of this document, making any comparison difficult. A first step identified in the need for harmonization is the issue of terminology.

This document defines terminology relating to fire statistical data, in order to supplement ISO 13943 for this specific field of application.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
accelerant
fuel (3.51) or oxidizer, often an ignitable liquid, solid or gas (LGP/NP) intentionally used to initiate a fire or increase the rate of growth or spread of fire

3.2
accidental fire
fire for which the cause does not involve an intentional human act to ignite or spread the fire into an area where the fire should not be

3.3
age group of victims
categorization by age of the *victims* (3.15) of fire

Note 1 to entry: this categorization may differ locally. This document proposes the following categories:

— Newborn (child under 28 days of age)

— Child (person whose age is between 28 days (included) and 9 years (included))

— Youth (person whose age is between 10 years (included) and 17 years (included))

— Adult (person whose age is between 18 years (included) and 64 years (included))

— Elderly (person who is aged 65 or more).

3.4
alarm
time to notification to fire service or other local service

Note 1 to entry: This definition differs from *alarm time* defined in ISO 13943:2017, 3.16 which corresponds to the time interval between ignition of a fire and activation of an alarm to notify occupants.

3.5
area of origin of the fire
general localized area within the location where the fire started

Note 1 to entry: See also, *location of the fire* (3.58) and *point of origin of the fire* (3.64).

3.6
arson
act of intentionally and maliciously starting a fire or causing an explosion

3.7
arsonist
person who commits *arson* (3.6)

3.8
auto-ignition
self-ignition
initiation of combustion by heat but without a spark or flame

3.9
backdraft
rapid flaming combustion caused by the sudden introduction of air into a confined oxygen-deficient space that contains gaseous *fuel* (3.51) or hot products of incomplete combustion

Note 1 to entry: In some cases, these conditions can result in an explosion.

3.10
building
permanent or semi-permanent walled and roofed structure that stands alone and separately from other structures, including those under construction, or any comparable structure

Note 1 to entry: See also *built environment*, ISO 13943:2017, 3.32.

Note 2 to entry: When buildings are used for automatic operations, this shall be specified.

3.11
building fire
fire involving any kind of *building* (3.10) such as residential, commercial, public building

3.12
building status
status of the *building* (3.10) in terms of occupancy or construction

EXAMPLE Occupied, vacant or permanently unoccupied, under construction, under demolition

3.13
building under construction
building (3.10) for which construction is in progress

3.14
building under demolition
building (3.10) for which demolition is in progress

3.15
casualty
victim
person killed or injured

3.16
cause of a fire
predefined categorical class of the primary cause of the fire

Note 1 to entry: See also, *source of the fire* (3.74), *material first ignited* (3.59), *classification of the primary cause of a fire* (3.20) and *circumstances of the fire* (3.19).

3.17
cause of unacceptable fire (and smoke) propagation
reason of fire (and smoke) spread

Note 1 to entry: This should be prevented by fire protection measures.

Note 2 to entry: Note to entry 1: Typical causes are, amongst other things, use of unsuitable building materials, defects in fire detection, insufficient supply of extinguishing water, and inadmissible shutdown of automatic fire extinguishing systems.

3.18
cause of casualty
phenomenon causing death of a person in a fire

EXAMPLE Smoke inhalation (heat gases and toxic gases including oxygen depletion), burn, physical injury.

3.19
circumstance of the fire
element (including events, factors, behaviours, characteristics, coincidences) that contributed to ignition and development of a fire

Note 1 to entry: See also, *source of the fire* (3.74), *material first ignited* (3.59), *cause of a fire* (3.16) and *classification of the primary cause of a fire* (3.20).

3.20
classification of the primary cause of a fire
predefined categorical classes of the primary *cause of a fire* (3.16)

Note 1 to entry: This classification is composed of the following items:

— Undetermined

— Natural, for example caused by lightning, volcanoes, etc.

— Caused by human actions

  — Unintentional

  — Intentional (*arson* [3.6], *suicide fire* [3.71])

  — Unknown intent

— Technological

  — Electrical, e.g. short-circuit, overload and overheating

  — *Fuel* (3.51) leak or gas leak

  — Thermal, e.g. heater, flame

  — Explosion, e.g. bomb

  — Spontaneous ignition

Note 2 to entry: See also *source of the fire* (3.74), *material first ignited* (3.59), *cause of a fire* (3.16) and *circumstances of the fire* (3.20).

3.21
condition of casualty
predefined categorical classes of the circumstances of casualty

EXAMPLE Asleep at time of fire; bedridden or other physical handicap; defenestration; impairment by alcohol; impairment by drugs; impairment by medication; blinded or partially sighted; deafness; mental impairment; *senility* (3.72); awake and no physical or mental impairment at the time of fire; under restraint or detention; too young to react to fire emergency; child left unattended; unclassified.

3.22
commercial and industry fire
fire on the premises of a commercial or industrial enterprise

Note 1 to entry: Note to entry 1: Commercial and industrial fires can reach, depending on operational processes and materials, a considerable extent, which can only be supressed effectively with special extinguishing agents and a long onset time of fire brigade.

3.23
damages
total loss caused by fire, including *direct property damages* (3.25) and *indirect losses* (3.54) such as business interruption, loss of future production and including loss of wildlife or watershed values in wildland fires

Note 1 to entry: Damages may be categorized as economic loss, physical loss, and environmental loss.

3.24
deliberate fire
incendiary fire
intentional fire
voluntary fire

fire intentionally ignited under circumstances in which the person knows that the fire should not be ignited

Note 1 to entry: They are composed of *arson* (3.6) and suicides by fires.

3.25
direct property damages
damages (3.23) excluding *indirect losses* (3.54)

Note 1 to entry: See also, *damages* (3.23) and *indirect losses* (3.54).

3.26
dwelling fire
home fire
residential fire
fire which occurs in a property that is also a place of residence, excluding hotels, hostels and residential institutions

3.27
ethnicity
group of people classified together on the basis of physical characteristics transmitted genetically or of common nationality or geographical or historical location

Note 1 to entry: Some countries provide fire statistical data related to ethnicity, whereas in some other countries this is prohibited for ethical reasons.

3.28
evacuation
action which is intended to move people to a safer location in order to avoid a developing hazard

Note 1 to entry: See also *escape* ISO 13943:2017, 3.99 and *evacuation behaviour* in ISO 13943:2017, 3.100.

3.29
extent of fire propagation
horizontal and vertical dimension of *fire spread* (3.46)

Note 1 to entry: If a fire can overcome a building compartment built with fire resistant walls, ceiling and fire enclosures, for example, there may be a failure of the structural protective measure or an error in fire protection planning.

3.30
extent of smoke propagation
horizontal and vertical dimension of smoke spread

Note 1 to entry: In the event of fire, smoke can particularly endanger life and health and is therefore an important indication of casualties.

3.31
exterior propagation of a fire from balcony to balcony
spread of a fire which starts at the exterior on a balcony and propagates to another balcony above

Note 1 to entry: The main part of the combustible of the fire is located on the balcony. In some cases, the fire can also, at the same time, propagate inside the upper floor from the exterior of the *building* (3.10). In some cases, the fire can propagate below.

Note 2 to entry: See also, *exterior propagation of a fire from one level to another* (3.32) and *façade fire* (3.34).

3.32
exterior propagation of a fire from one level to another
spread of a fire which starts inside a *building* (3.10) and propagates inside the upper floor by the exterior

Note 1 to entry: The main part of the combustible of the fire is located inside the building.

Note 2 to entry: See also, *exterior propagation of a fire from balcony to balcony* (3.31) and *façade fire* (3.34).

3.33
extinguished fire
fire at its final stage, after the main body has been knocked down

Note 1 to entry: All traces of fire are extinguished at this time.

Note 2 to entry: See also, *surrounded fire* (3.79), *under control fire* (3.81) and *knocked down fire* (3.55).

3.34
façade fire
fire that starts inside or outside a *building* (3.10) and mainly develops by combustion of the materials constituting the external cladding of the façade, and where applicable, facilitated by façade construction

Note 1 to entry: This external cladding can be separated in the external thermal insulation composite system and decoration system.

Note 2 to entry: See also, *exterior propagation of a fire from balcony to balcony* (3.31) and *exterior propagation of a fire from one level to another* (3.32).

3.35
false fire alarm
alarm (3.4) for which no fire occurred or for which fire department response was unnecessary