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 - with comments (editorial or other)
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Fire safety — Statistical data collection — Part 2: definition of terms

Sécurité incendie — Collecte des données statistiques — Partie 2 : définition des termes

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Foreword

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ISO 17755-2 was prepared by Technical Committee ISO/TC 92, *Fire safety*.

ISO 17755 consists of the following parts, under the general title *Fire Safety – Statistical data collection*:

- *Part 1: Overview of national fire statistics practices (Future revision of ISO/TR 17755:2014);*
- *Part 2: Definition of terms (this document);*
- *Part 3: Methodology for collecting fire statistics (Future work).*

Introduction

ISO/TR 17755:2014 "*Fire safety – Overview of national fire statistics practices*" was published in April 2014.

This document will be revised in order to have more countries, to add more data elements and more detail on data elements already included. The revised document will be published as Part 1 "Fire safety – Statistical data collection – Part 1: Overview of national practices" (Revision of ISO/TR 17755:2014).

In addition, ISO/TR 17755:2014 "*Fire safety - Overview of national fire statistics practices*" has shown that experts involved in fire safety and who want to work on international and national fire statistics data bases will have to 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 find a solution to the first listed issue and to be able, in a close future, to build a common methodology for collecting fire statistics, it has been decided to clarify the definitions of some terms commonly used in fire statistical data and to collect them in a new standard (ISO 17755-2) which should be the only terminology guide for this issue.

The methodology for collecting fire statistics will be managed in a future part 3.

Fire safety — Statistical data collection — Part 2: definition of terms

1 Scope

This International Standard defines terminology relating to fire statistical data.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TR 17755:2014, *Fire safety – Overview of national fire statistics practices*

3 Terms and definitions

3.1

accelerant

a **fuel** (3.57) or oxidizer, often an ignitable liquid, intentionally used to initiate a fire or increase the rate of growth or spread of fire.

3.2

accidental fire

a 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

adult

a person whose age is between 18 years (included) and 64 years (included).

cf. **newborn** (3.74), **child** (3.19), **youth** (3.108) and **elderly** (3.29).

3.4

age of the victim

the exact age of the **victim** (3.103). If exact age is not known, give an estimate.

3.5

alarm

the call to fire services announcing a fire.

3.6

area of origin of the fire

the general localized area within the location where the fire started (e.g.: “the kitchen of the apartment”).

cf. **location of the fire** (3.67) and **point of origin of the fire** (3.76).

3.7

arson

the fact of maliciously and intentionally or recklessly, starting a fire or causing an explosion.

3.8

arsonist

a person who commits an act of **arson** (3.7).

3.9

auto-ignition

the initiation of combustion by heat but without a spark or flame.

synonym of **self-ignition** (3.85).

3.10

backdraft

a fast propagation of the combustion zone resulting from the sudden introduction of air into a confined space containing oxygen-deficient products of incomplete combustion.

3.11

building

a permanent or semi-permanent walled and roofed structure that stands alone and separate from other structures, including those under construction, or any comparable structure.

3.12

building fire

fire involving any kind of structure (e.g.: residential, commercial, public building”).

3.13

building status

- Occupied
- Vacant or unoccupied permanently
- Under construction
- Under demolition

3.14

building under construction

a building for which constructors are in occupation.

3.15

building under demolition

a building for which demolition contractors are in occupation.

3.16

casualty

a person killed or injured.

synonym of **victim** (3.103).

3.17**cause of a fire**

the predefined categorical classification of the origin of a fire.

cf. **source of the fire** (3.91), **material first ignited** (3.68), **classification of the cause of a fire** (3.21) and **circumstances of the fire** (3.20).

3.18**cause of casualty**

- Smoke inhalation (heat gases and toxic gases including oxygen depletion)
- Burn
- Physical injury
- Other

3.19**child**

a person whose age is between 28 days (included) and 9 years (included).

cf. **newborn** (3.74), **youth** (3.108), **adult** (3.3) and **elderly** (3.29).

3.20**circumstances of the fire**

all the elements (e.g. events, factors, behaviors, characteristics, coincidences) that contributed to ignition and development of a fire.

cf. **source of the fire** (3.91), **material first ignited** (3.68), **cause of a fire** (3.17) and **classification of the cause of a fire** (3.21).

3.21**classification of the cause of a fire**

this classification is composed of the following items:

- Undetermined
- Natural
 - Lightning
 - Fermenting
 - Solar effect
 - Other
- Human
 - Accidental
 - Imprudence
 - Carelessness
 - Voluntary
 - Unknown
- Material or technological

cf. **source of the fire** (3.91), **material first ignited** (3.68), **cause of a fire** (3.17) and **circumstances of the fire** (3.20).

3.22 **combustible**

capable of undergoing combustion.

3.23 **condition of casualty**

- 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
- 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

3.24 **damages**

the total loss caused by fire including **direct property damages** (3.26) and **indirect losses** (3.62) such as business interruption, loss of future production and including loss of wildlife or watershed values in wildland fires.

3.25 **deliberately fire**

fire intentionally ignited under circumstances in which the person knows that the fire should not be ignited. They are composed of arsons and suicide fires.

synonym of **incendiary fire** (3.61), **intentional fire** (3.63) and **voluntary fire** (3.105).

3.26 **direct property damages**

all damages excluding indirect losses.

cf. **damages** (3.24) and **indirect losses** (3.62).

3.27**dwelling fire**

fire which occurred in a property that is also a place of residence, excluding hotels, hostels and residential institutions.

synonym of **home fire** (3.60) and **residential fire** (3.82).

3.28**education**

the level of knowledge of a person.

3.29**elderly**

a person who is 65 or more.

cf. **newborn** (3.74), **child** (3.19), **youth** (3.108) and **adult** (3.3).

3.30**ethnicity**

synonym of **race** (3.79).

3.31**evacuation**

action which is decided to order preventively to persons to move outside safety limits, if necessary by helping them, to avoid them an evolutionary danger.

3.32**exterior propagation of a fire from balcony to balcony**

fire started at the exterior on a balcony that propagates to a balcony above. The main part of the combustible of the fire is located on balconies. In some cases, the fire can also, at the same time, propagates inside the upper floor from the exterior of the building.

cf. **exterior propagation of a fire from one level to another** (3.33) and **façade's fire** (3.35).

3.33**exterior propagation of a fire from one level to another**

fire started inside a building that propagates inside the upper floor by the exterior. The main part of the combustible of the fire is located inside the building.

cf. **exterior propagation of a fire from balcony to balcony** (3.32) and **façade's fire** (3.35).

3.34**extinguished fire**

a firefighting term involving the process of final extinguishment after the main body of the fire has been knocked down. All traces of fire must be extinguished at this time.

cf. **surrounded fire** (3.97), **under control fire** (3.99) and **knocked down fire** (3.64).

3.35

façade's fire

Fire that started inside or outside a building that mainly develops by combustion of the materials constituting the external cladding of the façade. This external cladding can be separated in external thermal insulation composite system and decoration system.

cf. **exterior propagation of a fire from balcony to balcony** (3.32) and **exterior propagation of a fire from one level to another** (3.33).

3.36

false alarm

an alarm for which no fire occurred or for which fire department response was unnecessary or due to accidental operation of fire alarm devices.

3.37

fatal fire

a fire with at least one fire fatality.

cf. **multi fatal fire** (3.72).

3.38

fatal fire casualty

a person who dies as a result of injuries sustained during a fire incident, without any limitation of time after the fire, including death from natural or accidental causes sustained while involved in the activities of fire control, attempting rescue or escaping from the dangers of the fire, including blast and defenestration, except when a death occurred in sites enjoying the right of extraterritoriality.

Fire fatalities are composed of all persons discovered or declared dead on the location of the fire, during their transportation at the hospital or after their admission at the hospital.

A person who dies by fire resulting from vehicle accidents is included in fire fatalities database if the death can be attributed to fire.

synonym of **fire fatality** (3.43), **fatal fire injury** (3.39) and **fire death** (3.42).

3.39

fatal fire injury

synonym of **fatal fire casualty** (3.38), **fire fatality** (3.43) and **fire death** (3.42).

3.40

fire

a fire that received a fire department response.

Synonym of **fire incident** (3.44).

3.41**fire casualty**

a person killed or injured as a direct effect of a fire without any limit of time following the date on which the injury was sustained.

Synonym of **fire victim** (3.53).

3.42**fire death**

synonym of **fire fatality** (3.43), **fatal fire injury** (3.39) and **fatal fire casualty** (3.38).

3.43**fire fatality**

synonym of **fatal fire injury** (3.39), **fire death** (3.42) and **fatal fire casualty** (3.38).

3.44**fire incident**

synonym of **fire** (3.40).

3.45**fire injury**

A person who is injured (but not fatally injured) as a result of a fire incident, without any limitation of time after the fire, including injured from natural or accidental causes sustained while involved in the activities of fire control, attempting rescue or escaping from the dangers of the fire, including blast and defenestration and who required first aid at the scene (provide by anyone) or more medical treatment with or without any hospital admission.

A person who is injured by fire resulting from a vehicle accident is included in fire injuries database if the injury can be attributed to fire.

cf. **minor injury** (3.70), **light injury** (3.66), **serious injury** (3.88) and **life threatening** (3.65).

3.46**fire investigation**

the process of determining the origin, cause and development of a fire.

3.47**fire investigation report**

fire report written by a fire investigator.

3.48**fire investigator**

investigator specially trained for fire investigation.

3.49

fire propagation

the movement of fire from one place to another.

Synonym of **fire spread** (3.51).

3.50

fire report

an official report of a fire incident written by fire officer in charge.

3.51

fire spread

synonym of **fire propagation** (3.49).

3.52

fire statistics

all statistics dedicated to fires.

3.53

fire victim

synonym of **fire casualty** (3.41).

3.54

first aid

urgent treatment given at the scene by anyone.

3.55

first responder

person who, in the course of its normal duty, may be first on-scene.

3.56

flash over

stage of fire transition to a state of total surface involvement in a fire of combustible materials within the enclosure.

3.57

fuel

a material that will maintain combustion under specified environmental conditions.

3.58

gender

- Male
- Female
- Unknown

3.59**height of a building**

distance between the floor of the ground floor used by firefighters engines and the floor of the highest level used by people of the building. At least, the number of floors above and below the ground level of the building.

3.60**home fire**

synonym of **dwelling fire** (3.27) and **residential fire** (3.82).

3.61**incendiary fire**

Fire intentionally ignited under circumstances in which the person knows that the fire should not be ignited. They are composed of arsons and suicide fires.

Synonym of **deliberately fire** (3.25), **intentional fire** (3.63) and **voluntary fire** (3.105).

3.62**indirect losses**

the amount of loss incurred as a result of being unable to use business property or equipment.

3.63**intentional fire**

synonym of **deliberately fire** (3.25), **incendiary fire** (3.61) and **voluntary fire** (3.105).

3.64**knocked down fire**

a fire is considered “knocked down” when fire areas are off and only some debris burn or carbonize. The termination will be completed by clearing until there is no material involved in the combustion.

cf. **surrounded fire** (3.97), **under control fire** (3.99) and **extinguished fire** (3.34).

3.65**life threatening**

an injured person who must immediately receive emergency rescue and medical treatment otherwise she will certainly and quickly die.

cf. **fire injury** (3.45), **minor injury** (3.70), **light injury** (3.66), and **serious injury** (3.88).

3.66**light injury**

a person who is 1 day to 3 days hospitalized or 1 day to 3 weeks off work.

Synonym of **moderate injury** (3.71).

cf. **fire injury** (3.45), **minor injury** (3.70), **serious injury** (3.88) and **life threatening** (3.65).

3.67

location of the fire

the general area where a fire started (e.g.: “the apartment”).

cf. **area of origin of the fire** (3.6) and **point of origin of the fire** (3.76).

3.68

material first ignited

the fuel that is first set on fire by the heat of ignition.

cf. **source of the fire** (3.91), **cause of a fire** (3.17), **classification of the cause of a fire** (3.21) and **circumstances of the fire** (3.20).

3.69

means of egress

a mean of egress is a continuous and unobstructed path available for a person valid or not to leave a building, structure or space.

3.70

minor injury

a person who is less than 1 day hospitalized or off work.

cf. **fire injury** (3.45), **light injury** (3.66), **serious injury** (3.88) and **life threatening** (3.65).

3.71

moderate injury

synonym of **light injury** (3.66).

cf. **fire injury** (3.45), **minor injury** (3.70), **light injury** (3.66), **serious injury** (3.88) and **life threatening** (3.65).

3.72

multi fatal fire

a fire with at least more than one fire fatality.

cf. **fatal fire** (3.37).

3.73

nature of casualty

- Death
- Life threatening
- Serious injury
- Light injury
- Minor injury

synonym of **severity of casualty** (3.89)

cf. **fire injury** (3.45), **minor injury** (3.70), **light injury** (3.66), **serious injury** (3.88) and **life threatening** (3.65).

3.74**newborn**

child under 28 days of age.

cf. **child** (3.19), **youth** (3.108), **adult** (3.3) and **elderly** (3.29).

3.75**origin of the fire**

synonym of **location of the fire** (3.67).

cf. **area of origin of the fire** (3.6), **location of the fire** (3.67) and **point of origin of the fire** (3.76).

3.76**point of origin of the fire**

the exact physical location within the area of origin where the fire started (e.g.: “counter along east wall of the kitchen of the apartment”).

cf. **area of origin of the fire** (3.6), and **location of the fire** (3.67).

3.77**positive statistics**

statistics relating to the non-occurrence of an adverse event (e.g. number of rescues).

cf. **statistics** (3.93).

3.78**property damages**

estimated monetary value of the damage to property and contents caused by fire and firefighting operations. They do not include land value. It can include indirect loss due to business interruption.

3.79**race**

a group of people classified together on the basis of physical characteristics that transmitted genetically or of common history, nationality or geographic location.

Synonym of **ethnicity** (3.30).

3.80**reported fire**

fire that received a fire department response, regardless of loss, without any exception. But reported fire does not include the following except when they cause fire or occur as a consequence of fire: explosion, lightning and electrical discharge.

3.81**rescue**

action which is decided to remove a person from an immediate and potentially fatal danger.

3.82
residential fire

synonym of **dwelling fire** (3.27) and **home fire** (3.60).

3.83
response time

time from the time of call to the arrival of the first fire engine.

3.84
safeguard

action which is decided to provide protection against a possible and delayed danger, damage or loss.

3.85
self-ignition

synonym of **auto-ignition** (3.9).

3.86
self-immolation

the act of killing oneself by the use of fire, often by pouring accelerant over his body and igniting it.

Synonym of **suicide fire** (3.96).

3.87
senility

the weakening of a person's mental or physical abilities due to old age.

3.88
serious injury

A person who is 4 days or more hospitalized or more than 3 weeks off work.

cf. **fire injury** (3.45), **minor injury** (3.70), **light injury** (3.66) and **life threatening** (3.65).

3.89
severity of casualty

synonym of **nature of casualty** (3.73).

3.90
social position

position of a person in a given society.

3.91
source of the fire

device, equipment, machine, action or phenomenon which products an activation energy liable to cause a combustion.

cf. **cause of a fire** (3.17), **material first ignited** (3.68), **classification of the cause of a fire** (3.21) and **circumstances of the fire** (3.20).

3.92

staircase fire

fire that starts and/or propagates through the stairway/staircase/stairwell.

3.93

statistic

a statistic is any item of numerical data, or a quantity computed as a function on a body of numerical data, or the function itself.

3.94

statistical analysis

statistical analysis is the use of mathematical methods to reduce sizeable bodies of numerical data into a small number of summary statistics from which useful conclusions may be drawn.

3.95

status of a victim

- Civilian
- Firefighter (civilian or military, volunteer or professional, on-duty or off-duty or retired).
- Other rescuer (civilian or military, volunteer or professional, on-duty or off-duty or retired).
- Unknown.

3.96

suicide fire

synonym of **self-immolation** (3.86).

3.97

surrounded fire

A fire is considered “surrounded” when nozzles are established at selected points of attack and sufficient to prevent the fire from spreading.

cf. **under control fire** (3.99), **knocked down fire** (3.64) and **extinguished fire** (3.34).

3.98

traffic accident

accident involving one or more vehicles.

3.99

under control fire

a fire is considered “under control” when it is completely surrounded by a control line and its intensity declines in this limits.

cf. **surrounded fire** (3.97), **knocked down fire** (3.64) and **extinguished fire** (3.34).

3.100

urban fire

fire involving buildings or structures in cities or towns with potential for spread to adjoining structures.

3.101

vegetation fire

Fire occurring in forests, scrublands, grasslands or rangelands.

Synonym of **wildland fire** (3.106).

3.102

vehicle fire

fire involving a vehicle.

3.103

victim

synonym of **casualty** (3.16).

3.104

victim characteristics

all information collected about victims.

3.105

voluntary fire

synonym of **incendiary fire** (3.61), **intentional fire** (3.63) and **deliberately fire** (3.25).

3.106

wildland fire

synonym of **vegetation fire** (3.101).

3.107

year of construction

exact year, and if possible exact date, of the beginning of construction of the building.

3.108

youth

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

cf. **newborn** (3.74), **child** (3.19), **adult** (3.3) and **elderly** (3.29).

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