### THE OVERSIGHT OF FIRE PREVENTION IN AN ENTERPRISE

Marian KOPCZEWSKI\*, Marek TOBOLSKI\*\*

University of Security in Poznań, Poland \*e-mail: marian.kopczewski@gmail.com \*\*e-mail: marektobolski@tlen.pl

Abstract: An efficiently working fire protection system in an enterprise, a work place or an institution guarantees the proper execution of fire protection duties. Its proper organisation is of key importance. The conditions of the proper organisation of the fire protection system in a given organisational unit are above all the universality in the scope of using applicable provisions, knowledge of applicable provisions, appropriately exercised supervision of usage of applicable provisions, orders and established rules of conduct. The aim of this paper is to specify the most important duties of owners, users or managers in providing protection against fire or other local risks. This results from the fact that given the variety of operating enterprises, the character of their activity, kind of production and used technology, size, fire risk, etc. it is not possible to determine a standard model of a fire protection system for a particular work place.

Key words: fire protection, fire safety, preventive measures, fire.

# 1 The duties of an owner, administrator or user of a building

Fire breaks out, above all, in places where the fire protection system is not well organised and where fundamental norms of the usage of the building and the area around it are not obeyed. If fire protection is to be effective, it is necessary to specify fire risk, provisions of fire protection and rules of conduct in case of fire for each building individually.

The most important legal act regulating issues related to fire protection is the Fire Protection Law<sup>1</sup> which says that fire protection consists of carrying out undertakings aiming to protect life, health, property and the environment against fire, natural disasters or other local risks.

The owner, administrator or user of a building, complex or area is obliged in particular to:

- obey technical-building, installation and technological fire requirements, equipping the building and the area around it with fire-fighting devices and fire extinguishers in accordance determined in the directive of the Ministry of the Interior,
- in a way guaranteeing their efficient and reliable functioning,
- maintain and repair fire-fighting equipment and devices, as well as fire extinguishers in a way that guarantees their efficient and reliable functioning,
- <sup>1</sup> *The Fire Protection Law of 24 August 1991* (Journal of Regulations No 81, heading 351, with amendments)

- provide security to people staying in the building and in the area around it as well as a possibility of evacuation in case of fire,
- prepare the building and the area around it for a rescue operation,
- make the users of the building acquainted with fire safety regulations,
- determine norms of conduct in case of fire<sup>2</sup>.

Owners and administrators are also obliged to:

- know fire safety regulations concerning the building and ensure that employees, lessees and users obey them,
- know the norms of conduct in case of fire, manners of raising the alarm and carrying out evacuation,
- make use of meetings with employees (or users of the building) in discussing issues of fire safety,
- make use of remarks and proposals related to the protection of the building against fire,
- maintain escape routes in a good condition and provide access to building,
- provide professional supervision of fire dangerous jobs,
- influence in an appropriate way those maintenance workers whose negligence may result in fire hazard,
- control carrying out of orders and train employees in fire protection<sup>3</sup>.

Due to the fact that the knowledge of fire protection is extensive, activities, duties and supervision of fire protec-

<sup>&</sup>lt;sup>2</sup> Ibid.

<sup>&</sup>lt;sup>3</sup> K. Fiszer, A. Hetmann, D., Markiewicz, *A safe building*, Forum, Warsaw 2006, p. 56.

Category	Decree of the Minister of Infrastructure of 12 April 2002 (concerns a building or its parts constituting separate fire zones)	
Occupancy-related fire hazard level I	Buildings with rooms intended for simultaneous occupancy of more than 50 people who are not their permanent users, but not intended for use to people with limited ability to move	
Occupancy-related fire hazard level II	Buildings intended above all for people with limited ability to move, e.g. hospitals, day care centres, kindergartens, old people's homes	
Occupancy-related fire hazard level III	Public utility buildings, not qualified as occupancy-related fire hazard level I and II	
Occupancy-related fire hazard level IV	Residential buildings	
Occupancy-related fire hazard level V	Multiple-flat residential buildings, not qualified as occupancy-related fire hazard level I and II	

Table 1. The comparison of previous and current classification of buildings (source: Cholerzyński W.: Components of building fire safety for...<sup>6</sup>).

tion systems may be entrusted to a company or people having appropriate qualifications and experience.

People responsible for fire protection<sup>4</sup>, that is prevention and spread of fire, who are not employed in fire protection units, ought to have tertiary education and complete a fire protection specialist training or be a major in fire safety engineering, or have a Bachelors Degree in Fire Safety Engineering, or should have their qualifications in fire safety engineering recognised.

The above-mentioned people responsible solely for operations related to providing fire security of the building should have at least secondary education and a fire safety officer training or the professional title of a fire safety technician.

## 2 Fire classification of buildings

Technical-building fire requirements for a particular building are determined depending on their purpose, height and the number of stored goods. Depending on their purpose buildings are divided into the following groups:

- classified as hazardous to people,
- buildings used for production and storage purposes,
- · stocktaking buildings.

The elementary rule of classification is the main purpose of the building (occupancy, storage, production). What is important, this classification applied to buildings and their parts that constitute separate fire zones, defined as an occupancy-related fire hazard zone or a production and storage-related fire hazard zone.

Public facilities and boarding houses<sup>5</sup> are recognised in one or more categories of hazard for people (Table 1).

There is a separate classification based on the so-called fire load density for buildings intended for storage, processing and production, as well as garages.

Fire zones of garages, hydrophore plants, boiler houses, district heating substations, electrical switchboards etc. are subject to the same safety requirements as production and storage-related fire zones. Besides, fire zones may included in more than one category of hazard to people if buildings have 'mixed' purpose (e.g. office and multiple-flat residential buildings) or if these purposes change periodically. In such cases they should meet the requirements of each such category.

#### 2.1 Building classification into height groups

Fire safety requirements change depending on the height of the building (both categorised as occupancy-related and production and storage-related fire zones). Height is measured from above ground level at the lowest lying point of the entrance to the building or its part that is on the

<sup>&</sup>lt;sup>4</sup> State Fire Service Act of 24 August 1991 (Journal of Regulations No. 88, heading 400, with amendments).

<sup>&</sup>lt;sup>5</sup> The Minister of Infrastructure's Regulation of 12 April 2002 of technical conditions of buildings and their location (Journal of Regulations No. 75, heading 690, with amendments). Dz.U. nr 75, poz. 690, ze zm.

<sup>&</sup>lt;sup>6</sup> Cholerzyński W. - Components of building fire safety for auditors of qualification training of privates and non-commissioned officers of the State Fire Service, National Headquarters of the State Fire Service, Education for Safety Foundation, Warsaw 2005.

Classification	Buildings	Residential buildings
Low (L)	Up to 12 m altitude above ground level	Up to 4 overground storeys inclusive
Medium high (MH)	From 12 to 25 m altitude above ground level	From 4 to 9 overground storeys inclusive
High (H)	From 25 to 55 m altitude above ground level	From 9 to 18 overground storeys inclusive
High-rise (HR)	More than 55 m altitude above ground level	

Table 2. Building classification based on height (source: Cholerzyński W.: Components of building fire safety for...8).

first overground stay to the top of the highest lying ceiling, including thermal insulation and its protective layer and excluding engine rooms or other technical facilities, or to the highest lying point of a flat roof or roof construction that is directly above the rooms intended for occupancy<sup>7</sup>.

A significant change was introduced in 2009. In accordance with it top floor extensions and technical facilities. Table 2 presents building classification based on height.

The above-mentioned criteria concerns directly technical-building and fire requirements for particular buildings and affect the choice and type of fire-fighting devices and used elements.<sup>8</sup>

### 2.2 Evacuation

In case of fire the most important thing for people staying in the building is escaping from it safely. As a result in each building appropriate escape conditions enabling quick and safe evacuation from a fire zone or a zone covered by the fire must be provided. Such conditions need to take the following aspects into account: the number of people staying in the building and their physical fitness, and the construction of the building and its size. Therefore, the owner or the administrator of the building has to take care of technical fire protection measures. Their duties include among others:

- ensuring an adequate number and width of escape exits,
- keeping acceptable length, width and height of escape passages and routes,
- keeping escape routes and rooms safely sectioned,

- protecting escape routes listed in technical-building regulations against smoke and using devices and other technical solutions preventing smoke and removing it,
- ensuring emergency (safety and evacuation) and warning lighting in facilities in which it is essential to evacuate people,
- enabling passing warning signals and voice communications via audible warning systems in building in which it is required<sup>9</sup>.

In case of fire general passageways in the building – horizontal (e.g. hallways and corridors) and vertical (e.g. stairs and stairways) can be used as escape routes. However, they have to be appropriately marked by safety signs and explicitly show the direction of escape. Evacuation can be carried out in three ways:

- directly outside the building,
- from horizontal (e.g. corridors) and vertical rooms (e.g. staircases, ladders) by escape routes outside the building,
- to an adjacent fire zone and then into another one or outside the building<sup>10</sup>,
- life-threatening buildings.

The owner of the building is obliged to ensure appropriate fire protecti on conditions. This obligation can be – partially or completely – taken over by the administrator of the building, suitably to tasks and duties entrusted to them.

Buildings designed and built when various laws were in force often do not meet current standards. It also concerns buildings that have been converted, extended or overbuilt, or whose purpose has been changed. In such cases fire protection conditions need to be adjusted so that they meet current standards.

<sup>&</sup>lt;sup>7</sup> The Minister of the Interior's Regulation of 7 June 2010 of fire protection of building, other construction works and areas (Journal of Laws of 22 June 2010).

<sup>&</sup>lt;sup>8</sup> Cholerzyński W. - Components of building fire safety for auditors of qualification training of privates and non-commissioned officers of the State Fire Service, National Headquarters of the State Fire Service, Education for Safety Foundation, Warsaw 2005.

<sup>&</sup>lt;sup>9</sup> The Minister of the Interior's Regulation of 7 June 2010 of fire protection of building, other construction works and areas (Journal of Laws of 22 June 2010).

<sup>&</sup>lt;sup>10</sup> The Minister of the Interior's Regulation of 24 July 2009 on fire-fighting water supply and fire escape routes (Journal of Laws No. 124, heading 1030).

There is a necessity to adjust, or to be exact, eliminate some factors if technical conditions in the building are life-threatening for people. This happens if:

- the width of a passage, travel distance or a fire escape route, or the flight of stairway landing acting as a fire escape route is less than that determined by technicalbuilding regulations by one third,
- the length of fire escape route or travel distance is 100% greater than that determined by regulations,
- a fire zone room is classified to occupancy-related fire hazard level I or II or belongs to a fire escape route:
- the facing of ceiling or suspended ceiling is made of flammable or dripping under the effect of flame or alternatively of flammable floor covering,
- wall coverings in the escape route are made of flammable material (in case two escape directions were not ensured),
- an appropriate escape route in a stairway of a high building other than residential building or a high-rise building has not been sectioned,
- fire escape routes have not been secured against smoke,
- there is no required warning lighting in the fire zone classified as occupancy-related fire hazard level I, II or V or on a fire escape route leading outside the building<sup>11</sup>.

In case any of the above-mentioned situation takes place, measures aimed at improving it should be taken in accordance with technical-building regulations if possible.

However, sometimes it is not possible to make adjustments to building to make them meet regulations in force, e.g. if a stairway is very narrow and there is not a possibility to widen it or if the layout of the premises does not allow to shorten too long fire escape routes etc.

In such a situation the owner or the administrator of the building should apply for a permit to use other solutions compensating for building conditions that are impossible to improve. The permit is issued by the Provincial Commandant of the State Fire Service based on an expertise prepared by a research unit or a surveyor and a fire protection specialist<sup>12</sup>.

### **3** Fire safety instruction

Owners and administrators of buildings are also obliged to prepare documentation of fire protection. The most important document is the Fire Safety Instruction containing the norms of conduct preventing fire and facilitating rescue action in case of fire.

The obligation to prepare such a document results from the article 6 of the Ministry of the Interior Regulation<sup>13</sup>.

Fire safety instructions are supplied by owners, administrators or users of buildings or its parts constituting separate fire zones. That is why owners, administrators or users of buildings or its parts constituting separate fire zones, building intended for public utility functions, multi-flat residential buildings, production, storage and stocktaking buildings, supply and implement a fire safety instruction including:

- fire protection conditions resulting from the purpose of the building and its type of usage, used technological process, storage and technical conditions of the building, including the risk of fire outbreak;
- specification of which fire-fighting devices and extinguishers the building needs to be equipped with and how they should be maintained;
- norms of conduct in case of fire or other threat;
- manners of securing dangerous jobs in terms of fire;
- conditions and organisation of evacuation of people and practical means of their inspection;
- means of acquainting the users of the building, including employees, with fire regulations ant the content of fire protection instruction;
- tasks and duties of the users of the building as regards fire protection;
- building plans including their location and the location of the area around them with regard to graphic data relating particularly to:
  - surface area, height and the number of storeys,
  - distance from neighbouring buildings,
  - fire parameters of flammable substances present in the building,
  - fire load density found in a fire zone or fire zones,
  - the level of fire hazard zone, the expected number of people on each storey and in individual rooms,
  - location of rooms and outside surfaces classified as ex zones,
  - the classification of the building into fire zones,

<sup>&</sup>lt;sup>11</sup> Conference proceedings, *The evaluation of fire outbreak risk and the analysis of ignition source in production and storage premises.* CS PSP 2007, p. 45.

 $<sup>^{\</sup>rm 12}$  T. Laurowski, The handbook of fire protection. KaBe, Krosno 2010, p. 43.

<sup>&</sup>lt;sup>13</sup> The Minister of the Interior's Regulation of 7 June 2010 of fire protection of building, other construction works and areas (Journal of Laws of 22 June 2010).

- evacuation conditions indicating the direction of escape and escape routes,
- location of fire-fighting devices and extinguishers, taps for main gas-fittings, flammability hazard materials and location of fire-fighting devices controls,
- indicate access routes for fire brigade rescue crane,
- outside fire hydrants and other sources of water,
- fire escape routes and other travel distances, marking entrances to fenced areas;
- indicate persons or entities who drew up the instruction<sup>14</sup>.

Fire safety instruction should be adjusted to the specificity of the building and/or technological processes used in an enterprise, company or institution. It is impossible to draw up a correct fire safety instruction without visiting the building. Work needed to draw up this document in a correct way depends on the level of building structure complexity and/or the complexity of technological processes (building type of usage). Professionally drew up and implemented fire safety instruction lowers the risk of fire, enhances the security of building usage, positively influences the possibility to negotiate a lower insurance premium, eases building management, ensures the owner's or administrator's comfort in terms of carrying out their legal duties<sup>15</sup>.

Conditions of fire protection and the above-mentioned plans should be handed over to the Provincial Commandant of the State Fire Service with the aim of using them for planning, organisation and carrying out rescue operation. Storage of documents should enable to use them immediately in a rescue operation. The Provincial Commandant of the State Fire Service may absolve the owner, administrator or user of the building from handing over the above-mentioned document and demand to have them supplemented in justified cases. These documents can be handed over via e-mail<sup>16</sup>.

In production, storage and stocktaking facilities a fire safety instruction may constitute a part of an operation and maintenance manual, and in facilities situated in a closed off area, state defence facilities and facilities situated in prisons and remand centres it may be a part of safety plan or rescue operation plans.

Fire safety instructions should be updated at least every 2 years, and after changes in the building type of usage or in technological process which affect fire protection conditions<sup>17</sup>.

Fire safety instruction is not required for buildings or their parts if there are not any ex zones and if:

- gross building volume or its part constituting a separate fire zone does not exceed 1000 m<sup>3</sup> under the proviso of paragraph 2,
- gross building volume of a stocktaking building does not exceed 1500 m<sup>3</sup>,
- the surface of the fire zone other than the building does not exceed 1000 m<sup>2</sup>.

The fire protection instruction should be put in places available to rescue teams.

The fire protection instruction is not required if gross building volume or its part constituting a separate fire zone does not exceed 1000 m<sup>3</sup> and if the surface of the fire other than the building does not exceed 1000 m<sup>2</sup>. This document should be supplemented with building plans with marked layout of escape routes, extinguishers and fire-fighting devices as it will ease evacuation in case of fire and make the instruction more legible.

The fire protection instruction should be prepared by people having appropriate qualifications because its preparation requires specialist knowledge of fire protection<sup>18</sup>.

# 4 Hand held extinguishers: selection and purpose

Hand held extinguishers are portable devices initiated manually for extinguishing fire in the bud. When selecting and arranging hand held extinguisher in buildings the Minister of Interior Regulation of 7 June 2010 on fire protection of buildings, other construction works and areas (Journal of Regulations of 22 June 2010). In particular the following rules should be taken into consideration:

- facilities need to be equipped in extinguished meeting the requirements of Polish Standards concerning extinguishers,
- the type of an extinguisher should be adjusted to extinguishing those types of fire that can outbreak in the building:

<sup>14</sup> Ibid.

<sup>&</sup>lt;sup>15</sup> H. Cieślak - Fire safety instruction. Rules of preparation and examples. Counseling and Human Resources Training Centre, Warsaw, 2009, p. 56.

<sup>&</sup>lt;sup>16</sup> Ibid, p. 64.

<sup>&</sup>lt;sup>17</sup> The Minister of the Interior's Regulation of 7 June 2010 of fire protection of building, other construction works and areas (Journal of Laws of 22 June 2010).

<sup>18</sup> Ibid.

- A solid materials usually organic ones and which normally burn producing glowing coals,
- B melting liquids and solid materials,
- C gases,
- D metals,
- F fats and oils in kitchen devices,
- a mass unit of fire-fighting agent 2 kg (or 3 dm³) contained in extinguishers corresponds to (apart from cases specified in special provisions):
  - each 100 m<sup>2</sup> surface of a fire zone in the building that is not protected by a permanent extinguisher:
    - classified as occupancy-related fire hazard level I, II, III or V,
    - production and storage surface with the value of fire load density higher than 500 MJ/m²,
    - including an ex zone,
  - each 300 m<sup>2</sup> surface of a fire zone not listed in 1, except for buildings classified as occupancy-related fire hazard level V.
- equipping warehouses in which liquid gas containers are stored and liquid fuel stations with extinguishers is specified by the Ministry of Economy's Regulation of 21 November 2005 on technical conditions that should be met by liquid fuel stations and depots, long-distance transmission pipelines carrying oil and petroleum products and their location,
- the place of threshing, regardless of required extinguishers, needs to be equipped with a water container with a capacity of at least 200 dm³ ready to be used for extinguishing purposes with the use of a bucket or in an equivalent manner¹9.

Fire extinguisher need to be placed in:

- easily available and visible places, especially:
  - by entrance of the building,
  - in stairways,
  - on corridors,
  - by exits,
- places that are not vulnerable to mechanical damage and subjected to heat (furnaces, radiators),
- in multi-storeys buildings in the same place on each storey if conditions allow this<sup>20</sup>.

The following requirements must be met when arranging fire extinguishers:

- the distance from each place in the facility where a person can stay to the closest fire extinguisher should not be greater than 30 m,
- there should be an access of 1 m in width to the extinguisher.

#### It should also be remembered that:

- meeting technical-building, fittings and technological fire-fighting requirements is understood as building a facility in accordance with regulations in force, the Polish Standards, equipping buildings in wiring, lighting and plumbing installation, ensuring and obeying the duration of their servicing by professional and cleaning flues and ventilation systems,
- equipping buildings, construction works and areas in required fire-fighting devices and fire extinguishers is understood as equipping them with dry powder extinguishers, compressed CO<sub>2</sub> extinguishers, liquid extinguishers, above ground hydrants and underground hydrant network used to extinguish fires from the outside of a building, fire hydrant cupboards in the interior hydrant network used to put off fire inside, fire alarm installation, permanent fire extinguishers and fire hydrants, fire alarms, fire blankets,
- providing maintenance of fire-fighting devices and fire
  extinguishers in a way guaranteeing their effective and
  reliable functioning is understood as ensuring they are
  serviced periodically and repaired in case of a necessity,
- providing security to people staying in the building, construction works and in the area around it as well as a possibility of evacuation in case of fire is understood as marking escape routes in areas, escape routes with exits in facilities, equipping facilities in safety and evacuation lighting, marking escape routes and exits in accordance with the Polish Standards, equipping escape routes in smoke dampers and sprinkler installations, ensuring the correct width of escape routes, escape routes with exits, ensuring order and condition of being passable to escape routes and exits and the possibility to open exits, preparing evacuation plans, organising fire drills to ensure safe and proper evacuation,
- preparing buildings, construction works or areas for rescue operations is understood as ensuring approach roads, entrance gates, water protection in the form of a fire hydrant network with above ground or underground hydrants, fire-fighting water containers, equipping facilities in fire switches, rescue ladders enabling rescue teams accessing the roof, equipping facilities in permanent fire extinguishers, smoke dampers, organising fire drills with fire service participation,
- acquainting employees with fire regulations is understood as acquainting them with issues in terms of fire protection, the division of fire service units, norms of conduct in case of fire or other local threats, norms of conduct during fire operations, equipping facilities with fire-fighting devices, using these in fire operations, obeying regulations when making use of wiring, light-

<sup>&</sup>lt;sup>19</sup> The Minister of the Interior's Regulation of 7 June 2010 of fire protection of building, other construction works and areas (Journal of Laws of 22 June 2010).

<sup>&</sup>lt;sup>20</sup> Ibid.

ing protection, smoke, ventilation or technological installations,

defining norms of conduct in case of fire, natural disaster or other local threat is understood as preparing proper fire protection instructions, norms of conduct for wooded areas, safety reports for major risk of accidents enterprises, preparing fire emergency instruction for individual facilities and technological installations<sup>21</sup>.

Summing up, it needs to be highlighted that based on an existing civil-law contract the administrator or the user of the building is fully or partially responsible for the fulfilment of the above-mentioned fire protection duties with respect to the building, construction works or the area. If such a contract has not been drawn up, the responsibility for fire protection duties lies with the actual administrator of the building, construction work or the area.

# 5 Responsibility for organising fire protection in an enterprise

Employers have a duty to appoint a person responsible for fire-fighting issues in the workplace. This duty was introduced by the Act of 21 November 2008 on amendments to the Employment Law (Journal of Acts No. 223, heading 1460), in effect since 18 January 2009 with later amendments moderating the qualifications requirements of such persons. The requirement concerning the necessity of completing the fire safety officer training (the practice of relating the Employment Law with the Fire Protection Act was abandoned). For the moments it is enough for the appointed employee to have a health and safety training completed as the training framework includes fire protection issues.

Employees need to be given the following personal details of these persons:

- · surname,
- post,
- · phone number,
- e-mail address<sup>22</sup>.

Regulations introduce the obligation to appoint the number of such persons appropriate to the size and needs of the workplace, but do not specify it. However, it seems that companies operating in different sites should appoint one person in each location. If a company is big then

appointing one person in each department is worth considering. After all, the point is to introduce a reasonable fire prevention and efficient evacuation in case of fire.

The person appointed to fight fire and evacuate employees who has only theoretical training (generally treated marginally) under health and safety training is likely to have problem with fulfilling their duties in case of real threat (such a person should visualise the responsibility for evacuation without any practical training).

Therefore it is important to carry out practical training of evacuation operation, making use of hand fire extinguishers and notifying fire service – at least for the appointed persons. Such training ought to be repeated at least every two years. Trial evacuations, on the other hand, should be repeated not less frequently than every two years. Practical examples should be worked out in a graphical form or demonstrated during a health and safety training or fire drills for employees.

It needs to be remembered that fire safety instructions (some companies are obliged to prepare them for facilities they occupy) should be announced to employees and verified every two years – signing the fire protection instruction does not mean that an employee will know how to behave in case of fire. Thus, it is worth conducting evaluation drills<sup>23</sup>.

# 6 Training employees in fire protection

The Minister of Economy's directive of 27 July 2004 (Journal of Regulations 2004 No. 180, heading 1860 with amendments) obliges employers to train employees in health and safety, including fire protection<sup>24</sup>.

It is the employer's duty to ensure that employees undergo training adequate to their post and providing them with information on and instructions concerning their post or their activity. Training may be organised and conducted by employees or by contracted or agencies having proper qualifications to conduct health and safety training (based on the Act on the Education System).

Health and safety training are conducted in the following form:

initial training,

<sup>&</sup>lt;sup>21</sup> T. Laurowski, *The handbook of fire protection*. KaBe, Krosno 2010, p. 98.

<sup>&</sup>lt;sup>22</sup> The analysis of causes of fire International Conference Proceedings Poznań 2010, p. 32.

<sup>&</sup>lt;sup>23</sup> B. Rączkowski, *Industrial safety in practice*, ODDK Gdańsk 2008, p. 342.

<sup>&</sup>lt;sup>24</sup> The Minister of Economy's directive of 27 July 2004 on health and safety training (Journal of Regulations 2004 No. 180, heading 1860 with amendments).

· periodical training.

Initial training is conducted in a form of briefing in accordance with framework prepared for individual posts and includes:

- General initial training (general briefing) for every new employees, students engaged in a student apprenticeship and vocational school students engaged in a vocational apprenticeship. The general briefing is conducted by a safety representative or a person fulfilling his duties in the enterprise or an employee appointed by the employer who possesses knowledge and qualifications to conduct briefing,
- On-site initial training (on-site instruction) is organised before admitting a new employee to their workplace. On-site instruction is conducted by the manager appointed by the employer or by the employer if these people have proper qualification and professional experience and are trained in the methods of on-site instruction conduction.

Periodical training is completed by:

- employers and other people managing employees especially managers, masters and foremen,
- blue-collar workers,
- technical-engineering workers,
- office administration workers,
- health and safety workers and other people fulfilling their duties,
- office administration workers and other workers not mentioned in paragraphs 1–4, whose nature of job involves being subjected to serious detriments to health or health and safety responsibilities.

Periodical training of blue-collar workers is conducted in the form of briefings, not less frequently than every 3 years and in case of blue-collar workers whose health and safety are particularly at risk not less frequently than once a year. The Minister of Labour and Social Policy has established a general framework of initial and periodical training for all groups required to undergo training<sup>25</sup>.

The organisers of training provide:

- framework of individual types of training prepared for individual groups of posts,
- framework of instructor training in the methods of instruction conduction – in case if such training is organised.
- lecturers and instructors having knowledge, professional experience and professional preparation ensuring proper completion of the framework of the training,

- proper local facilities where training can be conducted,
- professional equipment necessary to complete the framework of the training,
- proper course of the training and preparation of its records in the form of the framework of the training, registers, exam protocols and records of issued certificates (in accordance with the Minister of Education and the Minister of Labour and Social Policy's Regulation of 12 October 1993 Journal of Regulations 1993 No. 103, heading 472)<sup>26</sup>.

# 7 Duties of people in charge of fire protection in an enterprise

Every company engaging employees has to ensure their industrial and fire safety. That is why it should train one of its employees or employ a safety representative.

The safety representative should have the knowledge of:

- fire-fighting protection organisation,
- duties of legal persons, corporate legal persons, organisations and institutions in terms of fire, natural disasters and other local threats protection,
- fundamental rules of fire protection of devices and installations, buildings, facilities and areas,
- rules of evacuation of people and possessions,
- causes of outbreak and spread of fire and general rules of extinguishing fire,
- fire agents: their types, characteristics and their application possibilities,
- fire-fighting devices and fire extinguishers: their application in construction works, terms of maintenances and servicing,
- terms of conducting inspection of fire protection systems,
- organisation and conduct of fire training for workers,
- fire record-keeping,
- safety signs and fire extinguishers selection and arrangement,
- fire risk evaluation based on the behaviour of materials in a fire environment,
- preparation and carrying out of evacuation,
- how to prepare construction works and an area for a natural disaster and other local threat<sup>27</sup>.

<sup>&</sup>lt;sup>25</sup> The Minister of Economy's directive of 27 July 2004 on health and safety training (Journal of Regulations 2004 No. 180, heading 1860 with amendments).

<sup>&</sup>lt;sup>26</sup> The Minister of Education and the Minister of Labour and Social Policy's Regulation of 12 October 1993 on terms and conditions of qualifications improvement (Journal of Regulations 1993 No. 103, heading 472).

 $<sup>^{\</sup>rm 27}\,$  T. Laurowski, *The handbook of fire protection*. KaBe, Krosno 2010, p. 132.

#### **8** Conclusions

The most important legal aspect regulating issues related to fire protection in an enterprise is the Fire Protection Law<sup>28</sup>. It says that fire protection consists of the implementation of actions aiming to protect life and health, possessions or environment against fire, natural disasters and other local threats. Due to the fact that the knowledge of fire protection is extensive, activities, duties and supervision of fire protection systems may be entrusted to a company or people having appropriate qualifications and experience. The aim of this paper is to specify the most important duties of owners, users or managers in providing protection against fire or other local risks. This results from the fact that given the variety of operating enterprises, the character of their activity, kind of production and used technology, size, fire risk, etc. It is not possible to determine a standard model of a fire protection system for a particular work place.

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- [12] The Fire Protection Law of 24 August 1991 (Journal of Regulations No 81, heading 351, with amendments).
- [13] The Minister of the Interior's Regulation of 24 July 2009 on fire-fighting water supply and fire escape routes (Journal of Laws No. 124, heading 1030).
- [14] The Minister of Economy's Regulation of 27 July 2004 on health and safety training (Journal of Regulations 2004 No. 180, heading 1860).
- [15] The Minister of Education and the Minister of Labour and Social Policy's Regulation of 12 October 1993 (Journal of Regulations 1993 No. 103, heading 472).
- [16] The Minister of Infrastructure of 12 April 2002 on technical conditions of buildings and their location (Journal of Regulations No. 75, heading 690, with amendments).
- [17] The Minister of the Interior's Regulation of 7 June 2010 of fire protection of building, other construction works and areas (Journal of Laws of 22 June 2010).

#### The Polish Standards:

- [18] PS-92/N-01256/01 Safety signs. Fire protection.
- [19] PS-92/N-01256/02 Safety signs. Evacuation.
- [20] PS-92/N-01256/04 Safety signs. Technical fire-fighting measures.

<sup>&</sup>lt;sup>28</sup> The Law of 24 August 1991 on fire protection (Journal of Regulations No. 81, heading 351, with amendments).