

Firefighters and Medical Professionals in Fire Investigation

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Describing firefighters without using the word “hero” would be tough [1]. After all, their ultimate goal is to prevent or relieve human suffering and loss. They regularly put their own lives on the line to save other lives and protect property. Much of their work is physically exhausting, mentally demanding, and highly dangerous. When a fire or other emergency strikes, they are on the scene battling flames, smoke, collapsing walls, chemical explosions, and numerous other threats. Unlike civilians, they can’t evacuate the premises. They are working hard until the crisis has passed.

Behind every heroic moment, of course, are countless hours of preparation. Career firefighters are highly trained professionals. Their services are essential to every community and every stretch of land across the country.

The job of a firefighter is extremely difficult and dangerous, and is often done in uncontrolled working conditions. Being a firefighter is an honorable and demanding job both in terms of professional training and the necessary health and psychophysical readiness of the person who performs it. Risk assessment identifies and assesses all potential hazards, damages, and efforts that may harm firefighters in the performance of their work tasks and finds the best available solutions to prevent adverse consequences for the health and safety of firefighters. Firefighters rescue people, animals and protect property endangered by fire, flood, earthquakes and other disasters, and also act in various technical interventions, such as traffic accidents, drowning, rescuing people and animals from heights and depths, etc. In order for this protection to be as effectively as possible, professional fire brigades are organized with professionally trained firefighters, who have organized a permanent duty and are ready to help at any time. Given all of the above, and given the terrible fires that have been happening around the world lately, firefighters can be said to be the true heroes of the modern age.

When a fire occurs, the competent institutions must conduct an investigation aimed at determining the cause of the fire and the damage caused. Firefighters are involved in this very complex job, but also, in certain situations, also medical professionals.

Fire investigation can occur in two different stages [2]. The first involves examination of the fire scene to determine the cause, origin and development/spread of fire. The second involves laboratory analysis of samples recovered from a fire scene normally when arson is suspected. While both of these may be linked together, they may be activities carried out by different personnel with different backgrounds and experience.

In a fire investigation, investigators seek to determine the cause and origin of a fire [3]. The cause of the fire may be classified as accidental, natural, incendiary, or undetermined. Fire investigators use a systematic approach to investigate the fire and use their training and experience to evaluate fire patterns, potential ignition sources, fuel loads, fire progression, and other factors to determine what may have happened. As the fire investigator evaluates the fire scene, they may collect evidence to support their hypothesis of how and where the fire started. This is where the fire debris examiner fits in: typically, examiners analyze evidence recovered from or related to fire scenes to determine if any ignitable liquids are present. Common fire debris evidence includes debris from the scene, suspect or victim clothing, and liquids found at the scene or during the execution of a search warrant. Though closely linked to fire investigation, a fire

debris examiner should avoid terms that are commonly used during investigations such as “arson” and “accelerant,” both of which imply intent. The fire debris examiner should be unbiased and report the objective results of their analyses.

When it comes to the possible causes of a fire, it actually means the causes of a fire, and the causes may be different [4]. Detecting the cause of fire is the ultimate goal of criminal investigation because it determines the type of event that caused the fire, that is, the normative side of the event, which is characterized by fire (according to statistical indicators the most common causes: negligence-inattention, technical causes: failure of electrical installations and devices, children's play, construction flaws, self-ignition, and more, while about 10% of the fires are intentionally caused). A cause of fire is a criterion that distinguishes fire as an event from incrimination whose *modus operandi* contains fire as its determination.

In addition to rescuing people and property, firefighters also help with other hazards, such as floods, storms, traffic accidents, and environmental and other disasters. Medical professionals have the same duties in such situations. In these cases, they direct water, clear facilities, search and mark terrain, clean and neutralize chemicals. Most firefighters also work preventively to prevent fires. In some fire brigades, the organization of work is such that some of their departments deal exclusively with prevention. They are additionally trained to be able to control individual facilities and protect them from fire. Their task is also to acquaint citizens with the dangers of fire, to warn about them and to give advice on how to protect them. When they do not have operational actions, firefighters are informed about the latest developments in firefighting, are included in theoretical classes and perform practical and fitness exercises to be as ready as possible to perform work tasks.

Generally speaking, a fire can be accidental and planted. When it is planted, it is a criminal offense in which the factual situation must also be established. It is a very complex job in which firefighters participate, but also certain professions of the medical profession.

Fires happen for a number of reasons, but regardless of the cause, they destroy property and families and cost taxpayers billions of dollars annually [5]. Whether the fire was started accidentally or deliberately, it must be put out and its cause and origin identified. Certainly, fire scene investigations are also among the most complicated and dangerous.

Crime scene investigation can be straightforward, or it can present challenges that require a multidisciplinary approach to resolve [6]. First responders can be deceived and the scene that seems to be an accidental fire may have, actually, been showed to hide additional offenses. Remember that physical confirmation does not lie, but speedy results can cause the investigator to slip valuable clues. No item is too insignificant to record. If it catches your attention, document it. Mainly in the instance of arson investigations, further crimes may be exposed, ranging from insurance fraud to homicide. The CSI must be diligent and observant and follow standard protocols for every type of scene response.

References

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