

화재감식의 형사법적 연구 Criminal Legal Study of Fire Investigation

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요 약

형사법적 측면에서 화재감식은 그 원인과 피의자를 결정하기까지 일반 국민이 충분히 납득할 수 있어야 하고 기소가 가능해야 하기 때문에 과학적인 조사방법이 깊이 연구되어야 한다. 본 논문에서는 우리나라 화재감식제도의 정비·보완 방안으로 화재관계조사법 및 하위법규의 제정, 화재조사를 위한 합동위원회의 구성, 화재감식장비 등의 현대화, 화재감식 전문교육의 내실화, 부처간 이기주의의 극복 등을 제안하였다.

ABSTRACT

In a side of criminal law, fire investigation, as general people fully can understand and prosecution is possible until deciding its cause and suspect, scientific researching method should be studied deeply. This paper proposes an establishment of fire investigation act and its sub-laws, constitution of joint commission for fire investigation, modernization of fire investigation equipments, substantiality of professional education for fire investigation and subjugation of departmentalism as a method to maintain and supplement an institution of fire investigation in Korea.

Key words : Criminal legal side, Fire investigation, Fire investigation act, Professional education for fire investigation

1. Introduction

1.1 Purpose of Study

In a field of common criminal, a first person for approach scene after occurring criminal is a criminal investigator, as long as there is no special reason, the field is preserved as it is and so an investigation is made easily but in a fire field, a first for approach scene is fire fighting personnel like fire-fighting officials, it is destroyed and destructed in the middle of extinguishing a fire, which makes an activity for field investigation difficult.

As a matter of fact, as a field investigation of fire, by grasping a specific spot to occur and judging accurately a cause of it along the running path of it based on scientific knowledge and experience, recognizes whether the fire is an arson or accidental fire, collects evidential

data, clarifies fact of matter, and is carried out to finally ask criminal liability to a person concerned or a responsible person, it is easy to interfere subjective assumption or presupposition of a staff in charge or a responsible person for investigation.¹⁾

In particular, examining each fire to occur recently, not only its cause or aspect is as diverse as rapidly changing social phenomenon but also in some cases, an 'arson' is camouflaged just like an accidental fire or an accidental fire is pretended as an incidental.

And, once a fire occurs, as not only a size of damage is enormous in life and property, but also it is difficult to recover its original state and it has a character as a public safety accident to bring much suffer and damage to the people, it works as a factor to shrink and restrict an activity range of investigator as well as an importance of fire investigation. Also, in a side of criminal law, a fire investigation, as general people fully can understand and prosecution is possible until deciding its cause and

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a suspect, a scientific researching method should be studied deeply.

This paper has a purpose to carry out more effective and efficient investigation activity by criminal-legally considering an actual state and problem of foreign and domestic investigation system and a method to maintain and supplement a system for fire investigation in Korea.

1.2 Range and Method of Study

It would be made clear that this paper excludes, if possible, pure theoretical thing which needs high level experiment and academic research as a range of study and studies and considers based on the side of criminal policy about fire investigation and field practice of general investigation experts about operating criminal law.

The method of study considers propriety of operating criminal law through field investigation of investigation experts and for this, every documents and academic research papers in foreign and domestic, government publications and statistical reports and web-searching data were referred to.

In addition, we try a technological approach to criminal law including special laws also with reference of documents such as particularly U.S and Japanese fire investigation systems and administrative and statistics and also utilize knowledge acquired based on hands-on-background in the related investigation field like fire investigation, explanation of person concerned and historical investigation complementarily.

2. Foreign Fire Investigation Institution

2.1 U.S. Fire Investigation Institution

In the U.S, an investigation right for a fire suspected as an accidental fire is preferentially given to the chief of fire defense headquarters and, if not him, to the police chief. But, in fact many states authorize that right to the fire chief. The fire station operates an arson investigation team to take complete charge of a fire suspected to arson and staffs, to hold a right to arrest a suspect and prepare for trial, who are trained from police agency belong to the team and except for it fire fighters and police are consisted of. As fire investigation needs special training and education, a small-size fire station might be impossible to investigate. In this case, the arson is handed over a big fire station near a big city. Organization and operating body about fire investigation affairs on fire-fighting administration is operated as proper to actual condition of each state government. In many states, the U.S, laws about State Fire Marshal are

made, and according to them, State Fire Marshal generally execute: ① regulation of storage, sales and usage of combustible and explosive articles, ② regulation about fire alarming facility and installation & maintenance of fire-fighting equipment, ③ regulation about installation and maintenance of fire escape apparatus, ④ regulation about escaping method and maintenance of fire-fighting equipment on firing in a place which a lot of person live, work or gather like factory, poorhouse, hospital, church, school, public hall, theater and nursing home, ⑤ prevention of arson and investigation of fire cause.²⁾

Most fire-fighting authorities including New York hold the right for criminal indictment as judicial system about fire investigation. If so, it is kept in mind that as they are not forced to exercise it unconditionally but the judicatures of each state have various regulations, there is some difference in operation.³⁾

As fire investigators in U.S are required for basic qualification, in general to be a fire investigator, he is required to be over 18 years old with academic career over high school and none of background and character and the NFPA regulates that he must equip requisite knowledge and technique in making, adjusting and finishing an investigation including fire investigation.

2.1.1 Task Force for Fire Investigation

The Task Force is a concept to confront a single-judge system and a system for many people to participate in policy decision with a equal position and make a decision by agreement. In the U.S, 「Fire Research and Safety Act of 1968」 was established by request of President in 1968, the document, ‘America Burning’, a report written, in 1973, by Nation Commission Public Low 90-259 made to research fire problems became a social issue, it has equipped an institutional guarantee of fire investigation which fire-fighting agency has made through stipulating an arson investigation in the Public Low 93-498, The Federal Prevention and Control Act, as an institutional supplement to treat arson in the fire-fighting agency.

2.1.2 Fire Investigation Institution of New York

The Fire Department of New York has a General Affairs article, a Planning & Publication article, a Judicial Affairs article, a Order & Control article, a Personnel & Education article, a Fire article, a article which charges for fire investigation owns a 「Plans and Operation Research Unit」 called as 「FANDOR」 which belongs to the Department Head Office and it has made an efficient operation of personnel and fire-fighting

technology by improving technology and equipment and a fire investigation. What the Fire Department of New York focuses on is a photo-shooting of fire field, they secure a circumstantial evidence including a suspect who is a criminal for incendiary and accidental fire and submit it even to the court.⁴⁾ To make a precise investigation for evidence in a fire field, they exert to secure evidences for a fire field by prompt and detailed photo-shooting from prior to arriving it, around the field, not only crowd to look at but also inside and outside a building burnt to an ignition spot like burnt materials. An investigation faithfully written like this has gotten a credit from prosecutor and court and played an absolute role in keeping an accusation of prosecutors to the criminal for incendiary and accidental fire which police station has sent incidents and prosecuted. Since 1990, the Fire Department of New York has been able to exercise a right for criminal indictment to the crime for incendiary and accidental fire as well.

2.1.3 Fire Investigation Institution of San Francisco

An article to charge for fire investigation of fire authority of San Francisco is very similar to Japanese one and a sub-article of investigation belongs to the prevention article. In a sub-article of investigation, the prevention article which belongs to the operation department, 18 investigators are in charge of, does not investigate an incendiary and the police is responsible for it.⁵⁾ It is considered to be better in that citizen's emotion to fire-fighting get worse.

A range of fire investigation and limit of investigation of the State follows laws or regulations which the judicature sets a concrete range of investigation, and it is endowed with the right and duty for investigation not only about common fires but also about arson like city and county fire-fighting agencies of other States.

A fire suspected of arson through fire investigation is gone through a special committee related to arson composed of fire-fighting, police and prosecutor and connected to even public trial of the court. Particularly, legal charge for arson is made solely by fire-fighting and also after the above committee it is made.

A fire investigation examines closely a beginning and cause of fire only in case of administrative propriety and rational reason and investigates them and when finding a trace of criminal, it is connected to a judicial investigation.

2.1.4 Fire Investigation Institution of Chicago

An administrative decree about the department for

fire investigation and affairs regulates 'director of fire-fighting must investigate all causes of fire. However, as suspected of as arson by unknown, the City Council shall make an investigation. At any case, director must preserve that written investigation.'⁶⁾

The structure of the department of fire-fighting in Chicago has 8 articles including a general affairs article, a command office, an equipment article, a planning article, an investigation article, a prevention article, a personnel article, and a culture article, an investigation article for them independently makes a fire investigation and a detection of arson and an investigator is the one who takes a professional education. The education is carried out not only solely by the fire-fighting authority also taken from professional lesson of external college.

2.2 Fire Investigation Institution in Japan

Japan is one of the countries to well develop a fire-fighting administrative institution. This paper would look for centrally a part of investigation institution about an occurring fire.

Fire investigation institution in Japan is, excluding village and countryside, similar to the U.S institution and only different thing is it does not have a right for criminal indictment to criminal of incendiary and accidental fire and function of fire-fighting administration which belongs to the central government in U.S does not affect local government (state government) at all.

2.2.1 Department in charge of Fire Investigation and Affairs

Japan which is firm in local autonomy sets fire investigation as 「Rules of Metropolitan Police Department」, taking a serious view of characteristics and its condition of each area, lets them organize and operate flexibly and lays stress on fidelity in fire investigation.

Fire investigation of each police station is charged by the sub-article of investigation, Investigation article, and a purpose for fire investigation, as like Korea, is mainly an investigation of fire cause, a collection of evidence and a finding of crime and a judicial measure to suspect. A system for fire investigation is generally constituted well and under mutual assistance and organic cooperation between polices about fire investigations, a flow to exercise a thorough fire investigation can be perceived. As data about fires investigated and examined closely like this by police is recognized for absolute public trust externally, with this public trust it displays a very big influence in operation of civil and criminal

legal relationship.

2.2.2 National Research Institute of Police Science in Japan

Such as National Institute of Scientific Investigation in Korea, as it researches and verifies data about fire which police requests and executes a task to notify its result, now it is installed one institute each province and it has been a long time to convert passive investigation in the past into active task including currently going to see a field, investigating fire cause and collecting evidences. Main tasks of NRIPS in Japan are to execute researches over all investigating activity of police including affairs for investigation technique, development of investigation equipment, research for fire generating apparatus and combustion (investigation task), measure for dangerous articles, judgment and investigation accompanying experiment and medical jurisprudence and forensics.

3. Actual Condition of Investigation Institution in Korea

3.1 Institute in charge of Fire Investigation

To do this, an investigation department has been installed and operated each Police Station and however, current front-line police institution does not have a department exclusively in charge of fire investigation and common criminal investigation department executed as a same task. However, laws related to fire-fighting regulate that fire-fighting institution solely is forced to make an investigation fire cause, but this is enforced so that fire-fighting institution writes statistics of fires, prevents fire and extinguishes fire and so it is different from fire investigation by police with a purpose to operate criminal law regard to criminal like incendiary and accidental fire and treat a person concerned judicially.⁷⁾

3.2 National Institute of Scientific Investigation

Fire investigation made by police is just such a formal things as preliminary investigation and substantially the National Institute of Scientific Investigation (hereinafter called as 'NISI') under the Ministry of Public Administration and Security takes charge of those tasks.

Looking for functions of fire investigation placed on the NISI, a Physical Analysis article is set up at the Forensic Science Department, Headquarters, Seoul and has jurisdiction over Seoul and Gyeonggi Province, a Science and Engineering Office is set up at Southern District Office in Youngdo-gu, Busan and has jurisdiction over investigations happened in Gyeongnam &

Gyeongbuk Province and Busan, a Science and Engineering Office is set up at Western District Office in Jangsung County, Jeon-nam Province and has jurisdiction over fire investigation happened in Jeonnam & Jeonbuk Province, Gwangju and Jeju area and a Science and Engineering Office is set up at Central District Office in Yuseong-gu, Daejeon and has jurisdiction over fire investigation happened in Chungnam & Chungbuk Province and Daejeon area. Also, a Science and Engineering Office is set up at Eastern District Office in Wonju, Gangwon Province and has jurisdiction over fire investigation happened in Gangwon Province.

But, these institutions regulate to train police officers in charge of investigation of district police station besides fire investigations but due to rapid increasing fire investigations every year and insufficient personnel, trainings are not enough in fact. In addition, as the NISI belongs to the MOPAS now, it is pointed as a problem that organic and elastic countermeasure to the criminal investigation is not easy.

3.3 Laws related to Fire Investigation

Once fire occurs, it collaborates with fire-fighting institution, makes a fire-fighting activity and at the same time executes fire investigation.

Especially, fire investigation is a way of compulsory investigation accompanied by power operation rather than arbitrary investigation, the Article 30, 「Framework Act on Fire Services」 is an article to endow civil officers to engage in investigation of fire cause with a right necessary for it, regulates inquiry right, order right for material submission and right for entry investigation and is considered as an endowment of right enough to overcome noncompliance and resistance to an investigation of fire cause by force.

Therefore, a regulation, 'Fire investigation must be executed simultaneously with fire-fighting activity' of Item 1, Article 11, 「Enforcement Decree of the Framework Act on Fire Services」 would also be apply fire investigation which police executes. It is why fire investigation of police is made by every regulation of laws including Article 196 to Article 199, Criminal Procedure Act and criminal investigation rule, etc., but these regulations are comprehensive and fire investigation also runs parallel with common criminal investigation or is carried out as a way of it.

3.4 Exercise of Judicial Power to Crime Like Incendiary and Accidental Fire and Fire Crime

Judicial Power to fire crime on the laws related to

fire-fighting is given, by regulations of Article 5, Item 10 of Article 6, 「Act about Person to Execute Duty of Judicial Police Officer and its Range of Duty」 to special judicial police officer to treat fire affairs, however, in this case, fire incident related to crime like incendiary and accidental fire comes under a crime on criminal law and district police agency treats it.

Looking for legal procedure of police about fire incident, police makes a fire investigation like an investigation of fire cause jointly with fire institution, NISI, other related institutions and organization, requests to investigate gathering materials like evidences to the NISI, and besides investigates persons concerned with witness or person who commits an incendiary and accidental fire and recognizes when confirming a crime according to related laws like criminal law and at this time sends him with an opinion of indictment for restraint or nonrestraint by command from a prosecutor of district public prosecutor's office, and when also not confirming a crime, sends or finishes after a secret examination.

3.5 Problem of Professional Education of Fire Investigator and Investigation Ability

To obtain expertise of fire investigation, first of all, systematic and professional education and training to fire safety agencies should be made and modernization of investigation equipment, scientific analyzing system by every facilities and long-time field experience of investigators should essentially be made.

It is because this is a process necessary to improve reliability to citizen, one of the most important characteristics in modern society and this is evaluated as a criterion to activate an operation of organization and elevate and weigh efficiency of tasks.

But, current actual condition is that not only an education of fire investigation for police is not systematic due to insufficient professional lecturers, but also in some side, education itself is very formal.

Now, education for police is divided into basic education to complete when initiating and whenever promoting (excluding senior policeman), process for practical education as complementary education, process for professional education and other process for investigation command, but except for process for fire investigation (1~2 weeks as a process for practical affairs), a process to instruct fire investigation professionally is none.

3.6 Equipment for Fire Investigation

General police station owns an investigation bag,

called as portable investigation equipment, which the National Police Agency furnishes collectively, but it is only an equipment to investigate common crimes and it is an actual situation insufficient for fire investigation necessary for expertise.

Fire investigation is, as exemplified in 「Regulation of Fire Investigation and Report」 of the MOPAS, 'a series of action to make a necessary experiments to structure, figure, quality, component, property of materials associated to fire and all phenomena related them by scientific method, collect data to disclose fire cause based on its results and collect evident data assuming a finding of crime', but with current equipments it is difficult to make a substantial investigation.

In addition, as a vehicle for investigation is not arranged and an investigation is made with common vehicle or vehicle for detective movement, it is considered it unreasonable from the beginning that a sufficient and detailed investigation is made.

3.7 Cause of Fire and Departmentalism

When one main fire occurs, if fire cause is an incendiary fire, it is thought that an investigation agency which must investigate it and send even to the court feels onerous, and if 'a fire from electricity', when it is broadcasted as a fire from electric leakage even though electricity is not much used in midnight, Korea Electric Power Corporation and Korea Electrical Safety Corporation may worry about blames to neglect electrical safety and so each wishes much not to be an 'incendiary fire' or a 'fire from electricity.'

Because of the above, it is often shown that a fire cause is expressed as distorted or even a right to know of people is deprived as it is so impatient to hide a fire itself.

It might be responsible that an attitude, which a fact is expressed as it is, people's understanding is obtained and then find out a post settlement and measure, is not habituated.

Like the above, if many departments attend at fire investigation with different aims separately, not only to find out accurate cause is not easy, but also credit of people also becomes estranged.

4. Problems of Investigation Institution in Korea

4.1 Lack of Related Laws like Sublaw

In Korea, a single law about criminal investigation including investigation for fire cause does not exist and many relating laws exist.

Investigation about criminal for incendiary and accidental fire made in police holds Chapter 13, Criminal Act, Article 249, Criminal Procedure Act, and Duty Performance of Police Official Act as common laws and Subparagraph 3, Item 1, Article 4, National Security Act, framework act on forest, and Protection of Cultural Properties Act as special laws and rule for criminal investigation as an instruction.

Of course, as a common law, there is a law related to fire-fighting applied to Fire Station, but it is to provide legal base to special activity including fire-fighting of fire agency or investigation of fire cause and it is, in fact, difficult to apply it to fire investigation of police.

Nevertheless, as these laws are mostly mother laws with regard to fire investigation and only a general and proclamatory meaning, detailed matters, by preparing subordinate legislation, should be entrusted and regulated but it is a current condition not to do so.

Particularly, the Chapter 5, 「Framework Act on Fire Services」 is a basic regulation and the most important one, but it holds problems that an object of fire investigation is a 'fire' but a concrete definition for it is lacked and fire damage is regulated as a loss from fire or extinguishing a fire and a foundation to include damage in a calculation for fire damage is prepared but it is obscure to include indirect damage in that damage.

Legal norms like this make an efficient fire investigation including investigation of fire cause go through difficult.

4.2 Problem of Subjective Assumption of Cause

Because fire field which a building is completely burnt not only remains only plain combustion trace but also in the process of extinguishing a fire most are destroyed, for a building condition prior to destruction, it is forced to gather various circumstances and just assume three-dimensionally.

Of course, this holds problems that subjective emotion of investigator might intervene or it is leaned to prediction.⁸⁾

Therefore, when investigating a fire, as a way to complement these problems, a necessity to essentially verify a blueprint or hear an evidence of person concerned and, based on this, investigate a cause with a method to expand from personal side to physical side takes place.

In this case, as degree of loss from a fire gets bigger, dependency on personal side only gets greater.

4.3 Problem like Avoidance of Evidence of Person Concerned

If hearing evidences of persons concerned, vague

memory to be obscure often is included and in certain cases, extreme evidences as if an imaginary thing were experienced directly are also contained.

In addition, as a criminal negligence like an accidental fire, although he does not have memory about his early action, properly memorizes post-action which he experienced, it may be one way to induce to declare it with some time.

But, when making him declare with some time inversely, it should also be kept in mind that he may make a false statement, an exaggeration or a reduced statement to avoid his responsibility.

Sometimes, when problem about compensation to the residents damaged from clear accidental fire would be raised much over criminal responsibility, it might be difficult to find out a place for an accidental fire because he denies his fault obstinately to avoid it.

4.4 Difficult to Recognize Intention

Incendiary fire and accidental fire are recognized basically on intentional criminal or unintentional criminal on the Criminal Law.

But, it is not exaggerated that there is few case to easily decide whether incendiary fire or not from situation to be initially burnt or personal and physical evidences without difficulty.

That is to say, as a fire cause looks like an accidental fire, it cannot be decided as an accidental fire and also, as looking like an incendiary fire, it cannot be decided as an incendiary fire.

Therefore, it is said to need an attitude to investigate and observe even their background in that whether it might be a contradiction to watch the field and consider a negligent act or how the reverse is.

It is kept in mind that there are some cases often to consider as arson only with excessively superficial cause and situation.

4.5 Problem for Lack and Utilization of Investigation Equipment

According to current 「Regulation of Fire Investigation and Report」 of the MOPAS, it is now an actual condition that it is required for minimum 4~7 persons to investigate a fire, but it is now operated with investigators of front-line police station (3~4 persons for a big city, 1~2 persons for others), but it is regulated that these investigators arranged at each police station do not take full charge of fire investigations but take charge of all crimes happened in the district and in some sides, when considering that fire investigation

Table 1. Necessary Standard for Fire Investigator⁹⁾

Division	Large Fire	Special & Important Fire	Small Fire
Investigation Commander	1	1	1
Investigator for Cause	2	1	1
Investigator for Damage	2	1	
Photo-shooting·Drawing	1	1	1
Reporter·Collection of Information	1	1	

would rather be only extremely one portion among various fields, an appropriate countermeasure cannot be carried out, reflecting on aspect of fire to rapid increase and upsize as time goes.

5. Method for Maintenance & Complement of Korean Fire Investigation Institution

5.1 Maintenance of Related Laws

5.1.1 Establishment of Laws Related to Fire

We should prepare for a basis to raise execution power of fire investigation and elevate efficiency on execution, as related laws to lie scattered with a form of numerous legal norm would be simplified as a common law with a form of ‘field investigation act’ or concrete related regulations would be set up at Criminal Procedure Act or Framework Act on Fire Service and ‘fire related investigation act’ would be made as subordinate legislation.

5.1.2 Establishment of Sub-laws

As law ought to be established when its necessity, time and object are determined, when considering it difficult to establish ‘fire related investigation act’ like this, sub-laws including Enforcement Decree or Enforcement Rule of Criminal Procedure Act or Criminal Investigation Rule and Enforcement Decree or Enforcement Rule of Fire Fundamental Act are amended and basic regulations are made and the followings ought to be maintained: ① exemption regulation of criminal act to criminal for incendiary and

accidental fire ② fire cause and person concerned, purpose of damage investigation, definition of terms, cooperative matters with related organizations like the right for compulsory investigation and penal regulation ③ matters to regulate in enforcement decree of fire related investigation act ④ matters regarding to range of fire investigation including investigation of fire cause ⑤ matters regarding to operation of headquarter of investigation for fire field ⑥ matters regarding to utilization of fire investigation materials.

5.2 Composition of Joint Committee for Fire Investigation¹⁰⁾

To construct efficiency and reliability of investigation, it is considered as a point necessary to compose so called Task Force like U.S and Japan.

That is, when an arson or important fire occurs, it is supposed to construct a cooperative system that, to investigate it, police, fire-fighting, authorized experts in academic field and experts related fire investigation in the business (Korea Fire Protection Association, etc.) will compose jointly a committee and they will investigate a fire cause and when a fire related to crime occurs, the committee will automatically participate in fire investigation and investigate its cause.

In addition, investigators gathered from various institutes will be organized as matched to a system for command of arson and minimum joint training and education will be carried out for them.

If a committee is composed, its success is directly a participation of prosecutor. Of course, it is not that this

Table 2. Merit and Demerit of Fire Investigation Committee¹¹⁾

Merit	Demerit
① Reasonable policy decision	① Lack of promptness and effective timing
② Careful decision	② Inefficient operation
③ Security of fairness	③ Lack of responsibility
④ Gurantee of Reliability	④ Irresolute attitude
⑤ Security of succession of policy and stability	⑤ Weakness to pressure of interst organization

committee system has only merit and does not have demerit. However, in spite of submitting tamely more or less demerit, it is necessary to investigate an accurate cause.

So, after examining fully problems about composition of committee and going over and evaluating selection of participating personnel and figures, aspect of incident, administrative side, participation of prosecutor, it might be necessary to continuously manage what ought be of composition not to bring about debates about necessity of it.

5.3 Modernization of Fire Investigation Equipment

With extension and reinforcement of institutions exclusively responsible for fire investigation, one of indispensable factors to improve fire investigation might be modernization of equipments.

To properly settle fire investigation, through securing modernized equipments for fire investigation and loading every kind of new investigation equipments, a system to carry out effective tasks ought to be established.

In addition, to give public trust to result for fire investigation, according to scientific rationality based on the Natural Science, Social Science and Human Science, it is very important for investigation of fire cause to be made.

That is to say, not disputing only fault on an ignition point and management, it should be necessary for intellectual technology for fire investigation to precisely find out every hazardous factor which an ignition point is connects to a line of combustion extension, also expands to side and three-dimensionally and in the end reaches collapse.

Therefore, to overcome difficulty of fire investigation and every restriction and to make a scientific fire investigation, fundamental matters like followings should be equipped: ① grasp of mechanism of fire generation, ② understanding of combustibility of materials ③ proficiency of recognizing method for burning direction ④ acquisition of method for field progress ⑤ acquisition of related laws and social situation ⑥ ability of investigator.¹²⁾

Besides, it is required not only to expand basis like research facility and equipments to actively support but also to thoroughly carry out those matters.

5.4 Substantiality of Professional Education for Fire Investigation

Among employees to charge of fire investigation in

every police station, officials to complete professional education are insufficient and in some cases, there are many employees not to even have an opportunity for education. In addition, although completing education with an opportunity, by promotion and transfer, in a department in charge of fire investigation, even employees without education are appointed as fire investigators and operated now.

So, measures to continuously carry out professional education and arrange an employee with professional education at a department in charge are required. For educational method, escaping theory orientation like current, systematic and experienced education should be carried out in a morgue to obtain various kinds of evidences collected in fire fields and sincerity to make a material with presence to utilize photos and beam projector and use it as an educational aids is required.

Also, through intensifying an exchange agreement for fire investigators with foreign professional educational institute, an opportunity to acquire an advanced investigation system should be expanded.

5.5 To Overcom Departmentalism

Between midnight to dawn, on Feb, 6, 1999, within 2 km radius of at the center of Cheonggye creek including Shindangdong, Sungindong, Shinseoldong, Jegidong, Changsindon in Seoul, 12 fires happened successively, 13 stores of grocery shopping district were burnt and property damage of about 130 million won took place, and at that time, a fire-fighting authority assumed a fire caused by intentional incendiary fire and a police assumed a fire by electric leakage rather than incendiary fire.

To that fact, at that time, the Seoul Shinmun had pointed out in its editorial that ‘when deciding as arson, the police is responsible for it and when deciding as an electric leakage, Korea Electric Power Corp. is responsible for it’ and warned the departmentalism.¹³⁾ It is judged that this has a fundamental reason to distort a truth in order for each department to avoid blame and responsibility. Hereafter, by expressing accurate fire cause, an attitude and courage to obtain understanding and consent from people is required.

6. Conclusion

When a fire occurs, first of all, fire-fighting activity to extinguish a fire is also important, but through field discrimination like precise investigation of fire cause, by clearly identifying a crime and non-crime and when

a fire composes a crime like incendiary and accidental fire on Criminal Law, strictly punishing a suspect, with preventive warning, prevention of re-occurring similar crime will be contributed.

Now, fire investigation of police and fire-fighting agency hold a lot of problems to improve various environmental factors, that is, lack of related laws, insufficiency of institution, professional personnel and equipments, and technical and financial problems. Besides, as fire field is destructed, deformed, and destroyed by combustion and it might be difficult to recognize evidences in the field or its original state, danger to spoil accuracy exists from investigation by superficial observation. Therefore, if scientific method and expertise including watching these problems and dangers, eliminating and complementing and writing thorough investigation results in making field identification are raised, current investigation technique will be elevated even more.

Until diverse alternative plans which this paper proposes are really come true, it requires much time and effort but if reliability to accuracy of fire investigation is recovered from people and a status as professional institution will be elevated, it is considered that more or less detention is not much problem.

So, professional institution in charge of fire investigation should keep an attitude to endeavor more than now including attending at investigation with a mind to think precious trust received until now from people and always pursuit accuracy.

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