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REGARDING DETERMINATION OF THE CONCEPTS OF EXAMINATION OBJECT AND SOURCE DATA IN ACCIDENTS INVOLVING ELECTRICAL INJURIES

Performing forensic engineering examinations of electrical accidents is characterized by a significant variety of factual circumstances of a negative event occurrence, extremely large amount of electrical equipment nomenclature and the number of standards for technical and operational regulations of their use. A separate feature of such researches is the high informative nature of forensic examination objects.

At the present stage, scientists and forensic practitioners have scientifically substantiated and given a definition to forensic examination object: one of the basic concepts of forensic science. Analysis of scientific literature and developments of scientists in this field indicates that there is still insufficient attention paid to research of the source data concept used by a forensic expert while performing a comprehensive examination of electrical accidents involving electrical injuries.

In order to ensure the proper quality, integrity and correctness of an expert conclusion according to the results of researches on accidents involving electrical injuries, it is necessary to clearly define the content and understanding by a forensic expert of the concept of source data used for research and which are without doubt crucial for its results.

The need for a detailed consideration of relation criteria of object and source data concepts, the nature of their relationship is determined by the integrated nature of applied knowledge in this case: in the fields of electrical engineering, occupational safety, life safety, etc.

The article outlines the results of research on relationship and correlation of the object of examination and source data concepts, the author's definition for the concept of examination source data is suggested.

It has been established that the completeness and validity of an expert conclusion and its legal significance for investigation and court directly depend on the completeness and accuracy of the provided data on the circumstances of the accident, which serve as source data for a forensic expert.

Keywords: forensic engineering examination, forensic electrical engineering, accidents involving electrical injuries, forensic examination object, source data.

Formulation of Research Problem. Research on electrical accident by a forensic expert, as a form of cognition, is a somewhat established process based on the use of scientifically grounded methods of achieving the intended goal. It implements reliable (practice-tested) methods that contain algorithms for solving forensic examination tasks. The very process of investigating cases on electric injuries is characterized by a certain retrospectiveness, when the case under study is recognized by the information reflected or recorded in the case file or on physical media.

The scientific paper topic is due to specifications of forensic examination of electrical accidents, which is based on a complex nature of forensic examination and on an integrated approach regarding the application of special knowledge from various fields (occupational safety and health, electrical engineering, forensic medicine, etc.). The purpose of any forensic examination in the event of an electrical accident, including multidisciplinary one, is to conduct a full, objective and comprehensive investigation to provide a reasonable and correct conclusion on raised issues.

At the present stage, domestic and foreign scientists and forensic experts-practitioners have scientifically substantiated and defined general understanding for the basic concepts of forensic examination: object, subject, task, entity. However, in the special literature almost no due attention is drawn to the definition of such a commonly used concept in forensic expert practice as source data of forensic examination. For a forensic expert, the meaning of the concept of source data is of particular importance while research on electrical accidents, which is associated with a highly informative nature of the objects under study, their significant number and variety.

High efficiency of research, ensuring a forensic report of proper quality, integrity and correctness of determining real circumstances of an electrical accident are achieved when a forensic expert (s) conducting forensic examination fully understands, knows and practically applies the conceptual framework of basic definitions and terms, explicitly uses and distinguishes them in each research.

In view of the above, it is expedient to consider the nature of the relationship and ratio between the categorical concepts of forensic examination object and forensic examination source data in the context of a multidisciplinary engineering examination of electrical accidents. The basis for the study of these issues is a comparative analysis of forensic examination object definition and of source data by distinguishing common and distinctive features.

The research is the result of the author's reasoning, based on his own experience in forensic science and analysis of scientific and regulatory sources, the study of forensic expert practice of conducting electrical accident forensic examinations.

Analysis of Essential Researches and Publications. The general principles of forensic expertology, among which the fundamental, undoubtedly, comprise of determining of the object, subject and tasks of forensic science, have been thoroughly studied in scientific papers of the following scientists: T. V. Averyanova, L. Yu. Arotsker, R. S. Belkin, A. I. Vinberg, V. H. Honcharenko, O. M. Zinin, V. K. Lysychenko, N. P. Mailis, H. M. Nadhornyi, H. V. Prokhorov-Lukin, O. R. Rossynska, M. Ya. Sehai, E. B. Simakova-Yefremian, V. Yu. Shepitko, O. R. Shliakhov, M. H. Shcherbakovskyi and others[1].

The above-mentioned scientists have contributed immensely to the development of forensic science, developed and substantiated the definition for fundamental concepts of object, subject, tasks of forensic science, provided conditions for improvement and formed trends for further evolution of forensic theory. Consideration of these basic concepts should be correlated with specific areas of special knowledge, in particular: with a set of knowledge that is integrated in different types of forensic examinations. In general, in terms of such correlation, the object, subject and tasks of forensic science should be considered

[1] *E. g.*: Аверьянова Т. В. Содержание и характеристика методов судебно-экспертных исследований. Алма-Ата: Каз. НИИСЭ, 1991. 240 с. ; Ароцкер Л. Е. Сущность криминалистической экспертизы//*Криминалист. экспертиза*. Москва : ВШ МООП РСФСР, 1966. Вып. 1. С. 51—54 ; Белкин Р. С., Винберг А. И. Криминалистика. Общетеоретические проблемы. Москва: Юрлит, 1973. 264 с. ; Гончаренко В. Н. Методологічні проблеми вчення про предмет криміналістики//*Актуальні проблеми криміналістики:* матеріали міжнар. наук.-практ. конф. (Харків, 25—26.09.2003). Харків: Гриф, 2003. С. 11—13 ; Зинин А. М., Майлис Н. П. Судебная експертиза: учебник. Москва: Право и закон, 2002. 320 с. ; Лисиченко В. К. Криминалистическое исследование документов. Киев: Вища школа. 1971. 77 с. ; Надгорный Г. М. Предмет судебной экспертной отрасли и предмет судебной экспертизы//*Криминалистика и судебная экспертиза.* 1976. Вып. 13. С. 37—43 ; Прохоров-Лукін Г. М. Судова експертиза: поняття та види об'єктів інтелектуальної власності//*Теорія і практика інтелектуальної власності.* 2016. № 6. С. 17—24 ; Россинская Е. Р. Судебная экспертология: генезис, предмет, система, функции, тенденции развития//*Criminalistics and Forensic Expertology: science, studies, practice.* Vilnius; Varšuva, 2016. P. 32—49 ; Сегай М. Я. Судебная экспертология: объект, предмет, природа и система науки//*Теорія та практика судової експертизи і криміналістики*. Харків: Право, 2003. Вип. 3. С. 25—32 ; Сімакова-Єфремян Е. Б. Теоретико-правові та методологічні засади комплексних судово-експертних досліджень: дис. … д-ра юр. наук: 12.00.09. URL: http://nauka.nlu.edu.ua/download/diss/Simakova/d_Simakova.pdf (date accessed: 12.12.2019) ; Шепітько В. Yu. Тенденції і перспективи розвитку криміналістики (концептуальність підходів і дискусійність поглядів)//*Актуальні проблеми криміналістики:* матеріали Міжнар. наук.-практ. конф. (Харків, 25—26.09.2003). Харків: Гриф, 2003. С. 7—8 ; Шляхов А. Р. О предмете судебной экспертизы//*Некоторые вопросы теории судебной экспертизы*: тез. науч. сообщ. на VII теор. семинаре — криминалистических чтениях (26.06.1975). Москва: ВНИИСЭ, 1975 ; Щербаковський М. Г. Предмет судової експертизи//*Форум права*. 2016. № 5. С. 199—203.

as a set of patterns that are specific to a particular field of knowledge and have their own features.

This conditions relevance of the theoretical consideration and determination of relation between the concepts of the object of forensic science and source data for its implementation as the basis of a comprehensive research, which undoubtedly comprises of comprehensive research on electrical accidents[1].

The **Article Purpose** is to determine relationship and distinguish relation between the concepts of object and source data in multidisciplinary forensic engineering analysis of electrical accidents.

Main Content Presentation. The process of violations investigation in the field of electrical safety, especially if they result in injuries, and consideration of criminal proceedings against them in trial, apart from procedural part adopted by the Criminal Procedural Code of Ukraine, has one more aspect, which is in its essence determination and cognition of truth by means of proof. The process of determining truth in cases of electrical accidents is based on a retrospective analysis of data on the past event. Obtaining full information on such an event is based on application of a set of special knowledge (in the field of health safety and electrical engineering). A person with special knowledge — a forensic expert — learns about the event by examining examination objects which are the source of information.

Generally, an object (from the Latin *objectus* is a subject) is: 1) a philosophical category denoting any real or imaginary, material or ideal reality, which is viewed as something external in relation to man and his consciousness and which becomes the subject of theoretical and practical activities of the entity; 2) the object in the theory of cognition is a component of the cognitive process which is characterized as interaction between the object and subject. There are certain types of this interaction: interaction of object and entity as subject formations that affect each other objectively; interaction between object and cognitive abilities of an entity, namely, sensations and thinking; the relationship between object and means (methods) of its mastering; object-knowledge relationship[2].

The dictionary of main terms of forensic science provides the following definition for examination object: these are materialized, defined by procedural legislation sources of information[3].

In general, the forensic examination object is defined as material (materialized) sources of information (objects, formations, etc.) which a forensic

[1] Мєшков О. О. Поняття та теоретичний базис судової експертизи випадків електротравмування//*Актуальні проблеми експертного забезпечення досудового розслідування:* матеріали наук.-практ. семінару (Дніпро, 24.05.2019). Дніпро: Дніпроп. держ. ун-т внутр. справ, 2019. С. 109—112.

[2] Філософський енциклопедичний словник/НАН України, Ін-т філософії імені Г. С. Сковороди//редкол.: В. І. Шинкарук (голова) та ін. Київ: Абрис, 2002. VI. С. 438.

[3] Словарь основных терминов судебных экспертиз/отв. ред.: А. И. Винберг, А. Р. Шляхов, А. А. Эйсман. Москва: ВНИИСЭ, 1980. С. 53.

expert investigates (explores) on the basis of application of special knowledge within the subject of forensic examination with the help of certain methods and means to solve tasks (issues) addressed by an authorized person (body)[1].

The famous scientist O. R. Shlyakhov defined objects of examination as carriers of information on facts and events, sources of factual data obtained through application of special knowledge[2].

R. S. Belkin shared his views regarding the essence of forensic examination objects, who worded it as follows: it is a physical object that contains information needed to solve forensic expert tasks (physical evidence, corpse, physical environment of a crime scene, samples for comparative analysis, other case materials)[3]. However, later he slightly expanded his definition, by also adding to physical objects processes that include various phenomena, events, actions [4].

The same definition for forensic examination object is provided by T. V. Averyanova[5] and Yu. K. Orlov, who believes that in the cognitive sense the forensic examination object can be any fact[6].

O. M. Zinin and N. P. Mailis observe the concept of forensic examination object from two perspectives: science and practice. Regarding the concepts of forensic science, an object is a kind (type) of objects, a certain class, a category of objects that are characterized by common features. In practical forensic expert activity, it is a specific subject or subjects that are provided to a forensic expert for research. Most often it is physical evidence. These include: prints of people and animals, objects, mechanisms, aggregates, parts of these objects, substances, materials, products, documents and printing products, etc. Also considered objects are events, facts, phenomena and other intangible objects, the necessity to study which in the process of investigation requires special knowledge and forensic examination. However, research on such events, facts and phenomena and other intangible objects is carried out through corresponding material carriers[7].

The particular attention is paid to the definition of forensic examination object suggested by E. B. Simakova-Yefremian. She believes that it is not

[1] Основи судової експертизи: навчальний посібник для фахівців, які мають намір отримати або підтвердити кваліфікацію судового експерта/авт.-уклад.: Л. М. Головченко, А. І. Лозовий, Е. Б. Сімакова-Єфремян та ін. Харків: Право, 2016. С. 27.

[2] Шляхов А. Р. Предмет и система криминалистической экспертизы: сб. науч. тр./Москва: ВНИИСЭ, 1971. Вып. 3. С. 16.

[3] Белкин Р. С. Криминалистическая энциклопедия. 2-е изд., доп. Москва: Мегатрон XXI, 2000. С. 139.

[4] Его же. Курс криминалистики. 3-е изд., доп. Москва: Закон и право, 2001. С. 459.

[5] Аверьянова Т. В. Судебная экспертиза. Курс общей теории. Москва: Норма, 2009. С. 208.

[6] Орлов Ю. К. Использование специальных знаний в уголовном судопроизводстве. Судебная экспертиза: общие положения: учеб. пособ. Москва, 2004. Вып. 2. С. 7.

[7] Зинин А. М., Майлис Н. П. Op. cit. С. 18.

quite reasonable to consider processes and phenomena objects for forensic examination: "a forensic expert does not directly investigate the phenomenon or process related to a crime: they have already taken place in the past. The forensic expert examines material and materialized carriers (the latter encompasses carriers of information reflected in certain documents, etc. which are examined by a forensic expert) <…>. The circumstances of phenomena and processes that took place while preparation, commission and concealment of a crime and factual data on them constitute the concept of forensic examination subject" [1].

We support such an approach to determining the content of object of forensic examination and consider it acceptable, as it most fully corresponds to the essence of electrical accidents forensic multidisciplinary examination. An electrical accident is the result of an adverse impact on a person of a hazardous factor of an electrical nature. Electric shock is almost instantaneous, its harmful effects on a human are due to laws of various processes duration and their relationship: distribution and supply of current in different environments, conditions for its occurrence, consequences in the form of electric arc, effects of electrodynamic current, etc. This negative manifestation leaves certain signs: melting, charring of various surfaces, characteristic electrical labels, physiological changes in the body, destruction of individual elements in electrical installation, damage to clothing, shoes, other things and materials. In some cases, electrocution provokes operation of emergency modes in electrical installation (short circuit, break), which are recorded by means of protective device alarms or other technical means (e.g., information and diagnostic complex Regina). Research on forensic examination objects, which have certain imprints or recorded certain signs or properties of processes or phenomena, allow a forensic expert with better understanding of the process of electrical accident on the basis of special knowledge to determine factual data and circumstances of an accident, which is essentially the subject of forensic examination.

Undoubtedly, a forensic expert carries out determination and study of the past processes or phenomena that occurred while electrocution on the grounds of research on material or materialized carriers that at some point recorded or reflected certain peculiarities of such course of events. On the other hand, the question arises: why not investigate similar phenomena and processes in real time during reproduction of the event circumstances, would not they be forensic examination objects in this case? It is clear that it is possible. However, with certain cautions.

Firstly. Reproduction of phenomena and processes that arise while electrocution is essentially a laboratory (forensic expert) experiment. It helps a forensic expert obtain similar or identical (similar, alike) in nature and manifestations properties in conditions that actually took place earlier.

[1] Сімакова-Єфремян Е. Б. Op. cit. URL: http://nauka.nlu.edu.ua/download/diss/Simakova/d_Simakova.pdf (date accessed: 10.04.2020). С. 156—157.

Secondly. In some cases, it is impossible or technically challenging to reproduce (repeat) the same phenomena and processes in the laboratory or at the scene. For example, falling of wires of high-tension transmission line on the ground, interphase short circuit of busbars with arising of an electric arc.

Thirdly. If it is possible to make such an experiment, it would not be feasible from a technical standpoint to reproduce or repeat all conditions, factors and factual circumstances, their complex and a lot of different variations against which the course of phenomena and processes has taken place at the time of injury to a person. Reproduced (repeated) during the experiment phenomena and processes are in a way idealized (simplified) models of those that arose.

Fourthly. By conducting experiments, a forensic expert can study accompanying phenomena and processes that to some extent caused and contributed to the emergence and development of an electrical accident. For example, with the help of instrumental methods non-compliance with regulatory defined value of electrical resistance of insulation of equipment current-carrying element can be detected, which, in turn, resulted in emergence of dangerous potential on current-carrying parts.

Thus, a forensic expert indirectly studies real processes and phenomena that occurred while electrocution by analyzing and summarizing obtained results on the study of identical (reproduced) or related phenomena and processes and their spreading to an electrical accident. Based on such research, taking into consideration other circumstances, factors and conditionalities, he finally determines the mechanism of electrical accident occurrence which comprises of a defined process or phenomenon, its development, properties, role and degree of impact on an accident and its consequences.

Thus, with regard to phenomena and processes, a forensic expert: a) determines the fact of their existence in the past, their type, course, development; b) investigates indirectly, by analyzing external manifestations recorded (reflected) on information carriers, generalization and research on reproduced (identical, similar) processes or phenomena.

The modern definition of forensic examination object is laid down in Art. 1 of the Law of Ukraine: *On judicial examination*. In accordance with this Law, forensic science is a study based on special knowledge in the field of science, technology, art, craft, etc., of objects, phenomena and processes to provide an expert conclusion on issues that are or will be the subject of court proceedings [1].

A similar norm according to the content is laid down in Art. 69 of the Criminal Procedural Code of Ukraine, which stipulates that a forensic expert in criminal proceedings is a person who has scientific, technical or other special knowledge. He has the right in accordance with the Law of Ukraine: *On Judicial Examination* to conduct a forensic examination and is entrusted to conduct research on objects, phenomena and processes that contain information about

[1] Про судову експертизу: Закон України від 25.02.1994 р. № 4038-XII (as amended and supplemented)//*Відомості Верховної Ради України (ВВР).* 1994. № 28. Ст. 232.

circumstances of the criminal offense act, and to give an opinion on issues that arise while criminal proceedings and relate to the field of his knowledge [1].

In our opinion, it would be appropriate to make certain changes in the legislation of Ukraine to determine a general definition for the term forensic examination objects: material (materialized) sources of information (objects, formations, etc.) which a forensic expert investigates (explores) on the basis of application of special knowledge within the subject of forensic examination with the help of certain methods and means to solve tasks (issues) addressed by an authorized person (body).

The analysis of forensic expert practice at KhRIFE for 2014—2019 shows that forensic experts constantly use the term source data while forensic examination, in particular, on electrical accidents. Nevertheless, in the current legislation there is no corresponding definition, and this provision is insufficiently studied in the scientific literature on the theoretical and applied substantiation of forensic activity issues.

According to paragraph 2.3 of the Instructions on appointment and conduct of forensic examinations, a forensic expert is not allowed to "independently collect materials to be examined, as well as select source data for forensic analysis, if they are ambiguously reflected in provided materials" [2]. And what are source data? What is the meaning of this concept? Let's try to provide a reasoned answer to the questions posed.

Data: information, indicators needed to get acquainted with someone or something, to characterize someone, something or to make certain conclusions, decisions [3]. Source data is interpreted as initial indicators of something (based on which certain research is often conducted) [4].

The meaning of the term *source data* in practice depends on the type of forensic examination where it is used. In trace evidence analysis, source data contained in the materials of proceedings provided by the investigator (court) are important for solving a forensic expert task: it is information about traces, samples, other objects which inspect them, parts of the whole to be identified. These source data can be contained in a decree, order on appointment of examination, protocols of scene inspections, findings of a forensic expert regarding earlier conducted forensic examinations and other documents in which information on circumstances and time of detection of traces, ways of their

[1] Кримінальний процесуальний кодекс України: Закон України від 13.04.2012 р. № 4651-VI (as amended and supplemented)//*Відомості Верховної Ради України (ВВР)*. 2013. № 9—10, 11—12, 13. Ст. 88.

[2] Інструкція про призначення та проведення судових експертиз та експертних досліджень: затв. наказом Мін'юсту України від 08.10.1998 р. № 53/5 (as amended and supplemented). URL: https://zakon.rada.gov.ua/laws/show/z0705-98 (date accessed: 10.04.2020).

[3] Словник української мови: в 11 т./АН УРСР. Інститут мовознавства//за ред. І. К. Білодіда. Київ: Наукова думка, 1970—1980. Т. 2. С. 210.

[4] Ibidem. Т. 1. С. 527.

recording and seizure, storage conditions, trace formation, changes on inspecting objects, etc. is recorded [1]. Source data in road accident analysis are information on circumstances of an accident and objects of forensic examination which are necessary to determine the mechanism of an accident and resolve addressed issues. Source data should be provided in the decree (order) on the appointment of forensic examination to the extent needed to resolve addressed issues[2].

As we can see, source data of trace evidence and car accident analyses are physical objects and information contained in them and are significant for a forensic expert. That is, taking into consideration these definitions, source data of forensic examination, in fact, are contained in case file (materialized carriers) which are objects of forensic examination. We believe, in this case, source data are equated with objects of forensic examination, which is not aligned with provisions of paragraph 2.3 of the Instructions on the appointment and conduct of forensic examinations which single out them in different categories.

For example, to conduct forensic examination in the field of occupational safety and health, investigators are provided with materials on criminal proceedings by studying which a forensic expert concluded that some documents indicate a victim's belonging to staff members of a company and performance of work assignments by him, and in others: carrying out of work by the same person under a contractor agreement. A forensic expert addressed an investigator with inquiry to find out what kind of relationship the victim had with a company: labor or contractual. In this case, forensic examination objects are case files: interrogation reports, inspection of a scene, other documents which a forensic expert examines in order to solve a forensic expert task. And source data is information on a victim's employment relationship with a company or carrying out of certain work under a contractor agreement. The mentioned circumstance is essential for proper resolution of a forensic expert task: to determine the cause of an accident and full range of cause-effect relations between officials' actions / inaction and occurred negative events.

Authors of the *Theoretical foundations on life safety forensic engineering monograph* define source data as follows: 1) a set of information as to circumstances of emergency and (or) features of forensic examination objects contained in a decree or order on forensic examination appointment and (or) in case files provided to a forensic expert: factual source data; 2) scientific and technical, reference data needed for a forensic expert to provide a forensic report and which he chooses independently [3].

[1] Мазниченко Ю. О., Садченко О. О., Юсупов В. В. Словник термінів: термінологічний словник судово-трасологічної експертизи. Київ: Талком, 2018. С. 17—18.

[2] Кисельов В. Б. Тлумачний словник основних термінів судової автотехнічної і транспортно-трасологічної експертизи. Київ: КНДІСЕ, 2000. 20 с.

[3] Кривченко Ю. О., Бордюгов Л. Г., Сабадаш В. В., Бєліков А. С., Моісєєв О. М. Теоретичні основи судової інженерно-технічної експертизи безпеки життєдіяльності: моногр./Донецький НДІСЕ. Донецьк: Східний ВД, 2013. С. 241—242.

We do not agree with this definition of source data. In particular, the second part of this definition contradicts paragraph 2.3 of the Instruction on the appointment and conduct of forensic examinations. Scientific-technical and reference data used by a forensic expert while forensic examination cannot be source data, since, firstly, a forensic expert selects them independently, the initiator (customer) of forensic examination does not provide them; secondly, in order to distinguish data that will be used during research, it is expedient to use special knowledge (you need to determine the source of such data, the need for their use, their affiliation and links with forensic examination object); thirdly, they are reference, scientific and technical data, which are theoretically substantiated and verified in practice, a certain axiom, constant and needs no confirmation (proof), and therefore they cannot be worded ambiguously.

Summarizing the above, we conclude that source data, in essence, is an internal manifestation of forensic examination objects, its qualitative property, information component, which a forensic expert checks for their ability and uses to determine the facts and circumstances related to the scope of forensic examination subject.

A distinctive feature of source data from the event under study is that a forensic expert does not define source data: they are provided by an investigator (initiator of appointed forensic examination) without the use of special knowledge and they need not to be proven by a forensic expert. Source data are singled out for examination, for example, in the procedural document on the appointment of forensic examination, or they may be contained in case file (material or materialized carriers). It should be noted that source data must be admissible (i.e. obtained or clarified in the manner established by procedural legislation) and reliable (i.e. the ones that do not contradict certain objective scientific knowledge). In view of this a forensic expert should check technical feasibility of source data before solving forensic expert tasks.

A significant point in the use of source data while the study of electrical accidents is indispensable critical analysis of data provided by a forensic expert for their scientific knowledge admissibility, availability of contradictions against laws of electrical engineering, correctness, logic and possible existence (duration) from a technical standpoint.

To sum up the above, we suggest the following definition for the concept of source data of electrical accidents forensic examination related to electrocution: it is a set of information about facts, circumstances, traces associated with electric injury, properties and features of processes, phenomena and objects recorded or in some way reflected in materials provided for a forensic expert and materials used by a forensic expert while solving tasks of forensic examination.

Forensic examination objects act as sources of information to determine factual data and circumstances of a case, i.e. of such information as to facts and circumstances that constitute forensic examination subject [1]. The above-

[1] Орлов Ю. К. Заключение эксперта и его оценка (по уголовным делам): учеб. пособ. Москва: Юрист, 1995. С. 11—12.

mentioned confirms the availability of existing logical links between the object and subject of forensic examination, as, according to definition, the subject of multidisciplinary forensic examination in forensic science (in particular, in cases of electric injury) are factual data (facts) and circumstances of a case in relation to determination of nature, properties, objects condition, generic (group) affiliation, sources of origin or specific objects by their imprints by means of using appropriate means (methods) as a result of research on material and materialized carriers in order to solve diagnostic, identification and situational tasks of forensic science [1]. The means of such communication are also source data of forensic examination.

Undoubtedly, integrity, quality and informativity of the reflected and in some way recorded information on an event itself, i.e. source data, will depend on integrity and quality of forensic examination objects of electrical accidents provided for research. The most exhaustive, valid, accurate and authentic source data while the study of electrical accidents play a crucial role in reproducing the mechanism of event occurrence, consequently, determine the true cause of an accident. This, in turn, helps to determine the full range of cause-effect relations of actions / inaction of individual persons which resulted in negative consequences caused by the influence of harmful factors of an electrical nature on a person. This helps to achieve the main goal of forensic multidisciplinary examination of electrical accidents: solution of a forensic expert task and provision of comprehensive answers to the questions posed by an investigator (initiator of forensic examination).

Conclusions. A forensic expert must possess professional knowledge in professional field while multidisciplinary forensic engineering analysis on electrical accidents as well as have a clear and sufficient understanding as to the concepts of object and source data of forensic examination.

Source data of forensic examination is a sum of information about facts, circumstances, traces related to electrocution, properties and peculiarities of processes, phenomena and objects, which are recorded or in some way reflected in materials provided for a forensic expert and materials used by a forensic expert while resolving issues of forensic examination. Source data are means of logical connection between the object and subject of forensic examination which organically and inextricably combine them.

Disclosure of the content of these concepts, determination of relation and correlation between the object, subject and source data of forensic examination have ultimate goal, which is to create such a universal algorithm, forensic methodology (technique) that allows forensic experts while multidisciplinary forensic examination on electrical accidents effectively implement scientific basis for qualitative, complete and comprehensive determination of the cause of an accident and the full range of cause-effect relations between actions / inaction of individual persons and negative consequences.

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О. О. Мєшков

ДО ПИТАННЯ ВИЗНАЧЕННЯ ОБ'ЄКТА І ВИХІДНИХ ДАНИХ СУДОВОЇ ЕКСПЕРТИЗИ НЕЩАСНИХ ВИПАДКІВ ЕЛЕКТРОТРАВМУВАННЯ

Проведення судової інженерно-технічної експертизи нещасних випадків, пов'язаних з електротравмуванням, характеризується різноманітністю фактичних обставин настання негативної події, значною номенклатурою електротехнічного обладнання та чималою кількістю норм технічного й експлуатаційного регламентування їх застосування. Окремою характерною ознакою проведення таких досліджень є висока інформативність об'єктів експертизи. На сучасному етапі вчені й експерти практики науково обґрунтували та надали різноманітні авторські визначення одного з базових понять судової експертології — об'єкта експертизи. Проте, практично поза увагою залишається розгляд поняття «вихідні дані», яке експерт використовує під час проведення дослідження.

З метою забезпечення високої якості, повноти та правильності висновків експерта за результатами проведених досліджень нещасних випадків, пов'язаних з електротравмуванням, необхідне чітке визначення змісту та розуміння експертом поняття «вихідні дані», на яких ґрунтується проведення дослідження та які, беззаперечно, мають вирішальне значення для його результатів.

У статті наведено результати дослідження взаємозв'язку та співвідношення понять «об'єкт експертизи» та «вихідні дані», запропоновано авторське визначення поняття «вихідні дані».

Ключові слова: судова інженерно-технічна експертиза, електротехнічна експертиза, експертиза в галузі охорони праці та безпеки життєдіяльності, нещасні випадки, пов'язані з електротравмуванням, об'єкт експертизи, вихідні дані.

О. О. Мешков

К ВОПРОСУ ОПРЕДЕЛЕНИЯ ПОНЯТИЙ ОБЪЕКТА И ИСХОДНЫХ ДАННЫХ СУДЕБНОЙ ЭКСПЕРТИЗЫ НЕСЧАСТНЫХ СЛУЧАЕВ ЭЛЕКТРОТРАВМИРОВАНИЯ

Проведение судебной инженерно-технической экспертизы несчастных случаев, связанных с электротравмированием, характеризуется разнообразием фактических обстоятельств наступления негативного события, чрезвычайной номенклатурой электротехнического оборудования и большим количеством норм технической и эксплуатационной регламентации их использования. Отдельной характерной чертой проведения таких исследований является высокая информативность объектов экспертизы.

На современном этапе учёные и эксперты-практики научно обосновали и дали определение одного из базовых понятий судебной экспертологии — объекта экспертизы. Анализ научной литературы и наработок учёных в данной области свидетельствуют о том, что ещё недостаточно внимания уделено изучению понятия «исходные данные», используемые экспертом при проведении комплексной экспертизы несчастных случаев, связанных с электротравмированием.

С целью обеспечения надлежащего качества, полноты и правильности заключения эксперта по результатам проведения исследований несчастных случаев, связанных с электротравмированием, необходимо чёткое определение содержания и понимание экспертом понятия «исходные данные», которые используют для проведения исследования и которые, вне всякого сомнения, имеют решающее значение для результатов этого исследования.

Необходимость детального рассмотрения критериев соотношения понятий объекта и исходных данных, характера их взаимосвязи обусловлена комплексной природой применяемых при этом знаний: в области электротехники, в сфере охраны труда, безопасности жизнедеятельности и других.

В статье приведены результаты исследования взаимосвязи и соотношения понятий объекта экспертизы и исходных данных, предложено авторское определение понятия «исходные данные экспертизы».

Установлено, что от полноты и истинности предоставленных данных об обстоятельствах произошедшего случая, являющихся исходными для эксперта, напрямую зависит полнота и правильность заключения эксперта и юридическая значимость такого заключения для следствия и суда.

Ключевые слова: судебная инженерно-техническая экспертиза, электротехническая экспертиза, несчастные случаи, связанные с электротравмированием, объект экспертизы, исходные данные.

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