ДОНСКОЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ

УПРАВЛЕНИЕ ДИСТАНЦИОННОГО ОБУЧЕНИЯ И ПОВЫШЕНИЯ КВАЛИФИКАЦИИ

Кафедра «Научно-технический перевод и профессиональная коммуникация»

УЧЕБНОЕ ПОСОБИЕ

по английскому языку

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Аннотация

Данное учебное пособие предназначено для студентов специальности 280104 «Пожарная безопасность», изучающих английский язык, а также для студентов, получающих дополнительное образование в сфере профессиональных коммуникаций.

Цель пособия – познакомить студентов с базовой профессиональной терминологией, закрепить навыки чтения и перевода, развить навыки реферирования и аннотирования специальных текстов на английском языке. Текстовый материал пособия аутентичен, подобран по тематическому признаку и по степени сложности.

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ВВЕДЕНИЕ

Данное пособие предназначено для дополнения учебного курса по английскому языку для студентов специальности 280104 «Пожарная безопасность» и разработано в соответствии с государственными требованиями к уровню подготовки специалистов по этому направлению. Цель данного пособия связана с основной задачей подготовки профессиональных кадров – формирование коммуникативных навыков и компетенций.

Предлагаемое пособие предназначено для пополнения словарного запаса профессиональной лексикой на английском языке, а также для развития у студентов навыков письменного перевода с английского языка на русский, анализа содержания и преобразования текстов, а также смыслового свертывания информации. Пособие составлено с использованием аутентичных текстов по пожарной безопасности разной категории сложности.

МЕТОДИЧЕСКИЕ РЕКОМЕНДАЦИИ

Учебное пособие разделено на 3 части. В первой части представлены тексты для аудиторной работы, во второй – тексты для самостоятельной работы, третья часть содержит два приложения: в первом - теоретическую информацию по аннотированию и реферированию текстов, во втором – основные термины и понятия по специальности.

Задания после каждого текста в первой части направлены на понимание текста, выделение главной мысли, членение текста на смысловые разделы и пр.

Вопросы, которые представлены в конце первой части пособия, направлены на работу с текстом для составления аннотаций и реферирования текстового материала. Преподаватель имеет возможность выбрать из предложенного списка те вопросы, которые более всего подходят для данного текста.

Для проверки усвоенных навыков студентам предлагаются тексты из второй части пособия для самостоятельной работы над составлением реферата и/или аннотации.

В приложении 1 студенты найдут краткую информацию о порядке, правилах и рекомендация аннотирования и резюмирования технических текстов на английском языке, а также лексику и речевые клише с переводом на русский язык для практической отработки навыка анализа и изложения текста.

В приложение 2 студенты найдут некоторые определения и термины по пожарной безопасности, которые помогут им лучше закрепить профессиональную лексику.

ЧАСТЬ 1. ТЕКСТЫ ДЛЯ АУДИТОРНОЙ РАБОТЫ.

Text 1. Firefighting: history

Firefighting is the act of extinguishing fires. A firefighter fights these fires to prevent destruction of life, property and the environment. Firefighting is a highly technical skill that requires professionals who have spent years training in both general firefighting techniques and specialized areas of expertise.

Firefighting is believed to have originated during the Roman invasion of Britain in AD43. These organized teams would use buckets and syringes to douse a fire.

Prior to the Great Fire of London, in 1666, London adopted its first building regulations requiring fire-resisting wall separation. After much of London was destroyed the first insurance against fire was introduced by a man named Nicholas Barbon. To reduce the cost Barbon formed his own Fire Brigade. Eventually there were many other such companies. Then at the start of the 1800s, those with insurance were given a badge or mark to attached to their properties. Only those with such a badge would have a fire extinguished. Other buildings with no coverage or under a different company were left to burn.

Steam powered appliances were first introduced in the 1850s, allowing a greater quantity of water to be guided onto a fire. The steam powered appliances were replaced in the early 1900s with the invention of the internal combustion engine.

During the second half of the 20th century, fire protection engineering as a unique profession emerged. This emergence was primarily due to the development of a body of knowledge specific to fire protection engineering that occurred after 1950. Much of this knowledge was developed as a result of full-scale fire testing. This testing was conducted to determine the appropriate firefighting needs to protect new industrial systems and warehouse storage techniques.

As a result of this testing, new sprinklers were developed that replaced pipe systems. Smoke control systems were developed, and smoke detectors replaced heat detectors as the primary fire alarm system initiating device.

Вопросы к тексту:

1. What is firefighting?
2. What is the aim of firefighters' job?

3. What was the reason for Fire Brigade to appear?
4. What was the reason for fire testing?
5. What new systems replaced the old ones?

Text 2. Fire protection engineering

Fire protection engineering is the application of science and engineering principles to protect people and their environments from the destructive effects of fire and smoke.

The discipline of fire protection engineering includes, but is not exclusive to:

- Active fire protection - fire suppression systems, and fire alarm.
- Passive fire protection - fire and smoke barriers, space separation
- Smoke control and management
- Escape facilities- Emergency exits, Fire lifts etc.
- Building design, layout, and space planning
- Fire prevention programmes
- Fire dynamics and fire modeling
- Human behavior during fire events
- Risk analysis, including economic factors

Fire protection engineers identify risks and design safeguards that aid in preventing, controlling, and mitigating the effects of fires. Fire protection engineers assist architects, building owners and developers in evaluating buildings' life safety and property protection goals.

Fire protection engineers, like their counterparts in other engineering and scientific disciplines, undertake a formal course of education and continuing professional development to acquire and maintain their competence. This education typically includes foundation studies in mathematics, physics, chemistry, and technical writing.

Professional engineering studies focus students on acquiring proficiency in material science, statics, dynamics thermodynamics, fluid dynamics, heat transfer, engineering economics, ethics, systems in engineering, reliability, and environmental psychology. Studies in combustion, probabilistic risk assessment or risk management, the design of fire suppression systems, the application and interpretation of model building codes, and the measurement and simulation of fire phenomena complete most curricula.

Вопросы к тексту:

1. Give the definition of fire protection engineering.

2. What components does fire protection engineering include?
3. What and Who do fire protection engineers deal with?
4. What level of education do they have to reach?
5. What kind of studies do students need to acquire?

Text 3. Fire extinguisher

http://www.fire-extinguisher101.com/index.html

Fire extinguisher is a metal container filled with water or chemicals used to put out fires. Fire extinguishers are portable and easy to operate, and can be used to put out small fires before the flame spread.

The kind of fire extinguisher depends on the type of fire involved. Fire prevention experts divide fires into 5 classes – A,B, C and D – depending on the burning materials. *Class A* fires involve ordinary combustible materials such as paper, wood, clothes and plastics. *Class B* fires involve flammable or combustible liquids such as gasoline, kerosene, cooking fat. *Class C* fires involve electrical equipment, such as appliances, wiring, circuit breakers and outlets. *Class D* fires involve combustible metals, such as magnesium, titanium, potassium and sodium. *Class K* fires are kitchen fires. This class was added to the NFPA portable extinguishers Standard 10 in 1998. Kitchen extinguishers installed before June 30, 1998 are "grandfathered" into the standard.

Here are the most common types of fire extinguishers:

- Water extinguishers are suitable for class A fires only. Water extinguishers are filled with water and are typically pressurized with air.
- Dry chemical extinguishers come in a variety of types and are suitable for a combination of class A, B and C fires. These are filled with foam or powder and pressurized with nitrogen. Dry chemical extinguishers have an advantage over CO2 extinguishers since they leave a non-flammable substance on the extinguished material, reducing the likelihood of re-ignition.
- Carbon Dioxide (CO2) extinguishers are used for class B and C fires. CO2 extinguishers contain carbon dioxide, a non-flammable gas, and are highly pressurized. CO2 extinguishers have an advantage over dry chemical extinguishers since they

don't leave a harmful residue - a good choice for an electrical fire on a computer or other electronic devices such as a radio or TV.

- Metal/Sand Extinguishers are for flammable metals (class D fires) and work by simply smothering the fire. The most common extinguishing agent in this class is sodium chloride, but there are a variety of other options. You should have an approved class D unit if you are working with flammable metals.

Вопросы к тексту:

1. What is the definition of a fire extinguisher?
2. What is the difference between 5 classes of fires?
3. What extinguisher can be used for class A fires?
4. What extinguisher can be used for class B and C fires?
5. What extinguisher can be used for class D fires?

Text 4. Fire extinguishers classification

Fire extinguishers are divided into four categories, based on different types of fires. Each fire extinguisher also has a numerical rating that serves as a guide for the amount of fire the extinguisher can handle. The higher the number, the more fire-fighting power.

The following is a quick guide to help choose the right type of extinguisher.

- Class A extinguishers are for ordinary combustible materials such as paper, wood and most plastics. The numerical rating on these types of extinguishers indicates the amount of water it holds and the amount of fire it can extinguish.
- Class B fires involve flammable or combustible liquids such as gasoline, kerosene, cooking fat and oil. The numerical rating for class B extinguishers indicates the approximate number of square feet of fire it can extinguish.
- Class C fires involve electrical equipment, such as appliances, wiring, circuit breakers and outlets. Never use water to extinguish class C fires - the risk of electrical shock is far too great! Class C extinguishers do not have a numerical rating. The C classification means the extinguishing agent is non-conductive.
- Class D fire extinguishers are commonly found in a chemical

laboratory. They are for fires that involve combustible metals, such as magnesium, titanium, potassium and sodium. These types of extinguishers also have no numerical rating, nor are they given a multi-purpose rating - they are designed for class D fires only.

- Wet Chemical fire extinguishers are the best restaurant kitchen appliance hand portable extinguisher available. The new extinguishers are tested and approved for *Class K* fires. They contain a potassium acetate based, low PH agent that was originally developed for use in pre-engineered cooking equipment fire extinguishing systems.

Some fires may involve a combination of these classifications. Then fire extinguishers should have ABC ratings on them.

Вопросы к тексту:

1. When do we choose the Class A extinguishers?
2. How to choose an extinguisher for Class B fires?
3. What is the difference between Class D and Class K fire extinguishers?
4. Is there one extinguisher that can be used for different types of fires?
5. What can guide us to make the right choice of extinguishers

Text 5. Smoke detectors

A smoke detector is a device that detects smoke, typically as an indicator of fire. Commercial and industrial devices issue a signal to a fire alarm system, while household detectors, known as smoke alarms, generally issue a local audible and/or visual alarm from the detector itself.

Smoke detectors are typically housed in a disk-shaped plastic enclosure, but the shape can vary by manufacturer or product line. Most smoke detectors work either by optical detection (photoelectric) or by physical process (ionization), while others use both detection methods to increase sensitivity to smoke. Sensitive alarms can be used to detect smoking in areas where it is banned such as toilets and schools. Smoke detectors in large commercial, industrial, and residen-

tial buildings are usually powered by a central fire alarm system, which is powered by the building power with a battery backup. However, in many single family detached and smaller multiple family housings, a smoke alarm is often powered only by a single disposable battery.

The first automatic electric fire alarm was invented in 1890 by Francis Robbins Upton. In the late 1930s the Swiss physicist Walter Jaeger tried to invent a sensor for poison gas. His device failed: small concentrations of gas had no effect on the sensor's conductivity. Frustrated, Jaeger lit a cigarette—and was soon surprised to notice that a meter on the instrument had registered a drop in current. Smoke particles had apparently done what poison gas could not. Jaeger's experiment was one of the advances that paved the way for the modern smoke detector.

Вопросы к тексту:

1. Why is a smoke detector designed for?
2. What detection methods do they use?
3. What is a smoke detector powered by?
4. How the first smoke detector was invented?

Text 6. Automatic fire detection and alarm systems: Introduction.

Introductory guide to component and system. Robert Dudley.- HIS BRE Press, UK. -2010.

An automatic fire detection and alarm systems protects a building and its occupants by detecting a fire at an early stage of its development. By providing an early warning to the building management team, action can be taken to deal with the fire before its takes hold. Automatic fire detection and alarm systems are a relatively recent development in the range of equipment that has been deployed to combat the threat of fire within commercial and domestic buildings. Smoke detectors, alarm bells and manual call points appear as part of the hi-tech clutter that proliferates on the ceiling and walls of our commercial and public buildings. Although they appear to be passive, the reality I that the automatic fire detection and alarm equipment

used within these systems is constantly vigilant.

This guide introduces the components that are used in automatic fire detection and alarm system, and the types of systems that are available to designers. Automatic fire detection and alarm systems used in buildings have a good record of performance and have demonstrated that they can be effective in reducing the risk to life and property damage from fire.

The guide is aimed at building owners, building managers, specifiers, automatic fire detection and alarm equipment installers, maintenance companies, insurance surveyors, building control practitioners, fire safety officers, risk assessors, and fire and rescue service inspectors. It will also be of interest to anyone who needs to consider or deal with automatic fire detection and alarm systems. The guide sets out to pull together the elements associated with these systems so that the reader has a comprehensive understanding of what goes into putting them together, how to manage them in use and insure that applicable regulatory requirements are met.

Only fixed automatic fire detection and alarm systems are considered in the guide; it is concerned only with these systems installed in commercial and industrial buildings: residential smoke alarms are not dealt with.

This guide is primarily intended for use in the UK and consequently British and European standards and codes have been referenced. The principles of system operation and maintenance, as well as the technical information about components and systems, can be applied in other countries subject to local code requirements.

Вопросы к тексту:

1. Why do we need automatic fire detection and alarm system?
2. What are mains components of such a system?
3. Who the guide is aimed at?
4. What is the main purpose of the guide?

Text 7. Automatic fire detection and alarm systems: Brief historical context.

Introductory guide to component and system. Robert Dudley.- HIS BRE Press, UK. -2010.

The first automatic fire detectors were used over 100 years ago and were based on the principles used in linear heat detectors. Cotton threads were stretched along a ceiling and loaded with tin boxes that acted as weights. In a fire condition, the cotton thread broke and the tin boxes fell to the floor and the clattering sound alerted the occupants of the building.

Heat detectors using a fusible link or bi-metallic switch arrangement were introduced in the late 19th Century; these were superseded in the early 20th Century by pneumatic heat detectors. Electronic heat detectors that use a thermistor to detect heat came into use in the middle of the 20th century.

The first ionization chamber smoke detectors were introduced over 50 years ago and photoelectric smoke detectors were launched onto the market at the start of the 1980s followed by multiple sensor smoke detectors that were developed in the 1990s. Video smoke detection techniques were introduced to the market at the start of the 21st Century.

Electronic based technologies have become established as the basis for products used in the fire industry while products based on mechanical detection technologies are rarely used. From an historical perspective, it is clear that new ideas and new ways of thinking about fire detection have been used to continually develop new technologies and techniques that have been brought about major improvements in fire detection capability.

Вопросы к тексту:

1. What system was used before automatic fire detectors to alert people?
2. What types of detectors have been used since 19th Century?
3. Do we still use mechanical detection technologies?

Text 8. Automatic fire detection and alarm systems: Key components.

Introductory guide to component and system. Robert Dudley.- HIS BRE Press, UK. -2010.

The main component of any automatic fire detection and alarm system is the control and indicating equipment, which is known as the control panel. It provides power to the devices connected to it, and receives and process signals from these devices. The majority of automatic fire detection and alarm systems have devices that are connected to the control panel by current carrying cables, but radio-based wireless systems are also available on the market.

The detection devices connected to the control panel can be point heat or smoke detectors, beam detectors, flame detectors and aspirating detectors that operate automatically on detecting a fire. A fire alarm can be signaled to the control panel by someone operating a manual call point, which is also known as a break glass unit.

Once a fire condition has been signaled to the control panel then alarm devices, such as bells and sounders, will operate and interface units will carry out a series of reprogrammed actions. Output interface units may initiate smoke ventilation equipment, operate fire door release devices or signal to a number of connected fire control systems to begin operating.

An automatic fire detection and alarm system can connect to other systems within the building, such as an extinguishing panel. The extinguishing panel controls the release of gaseous and liquid extinguishing materials by using information from the control panel to decide when and where to initiate the release of material in order to suppress the fire.

Вопросы к тексту:

1. What is the main function of a control panel?
2. How can alarm systems devices be connected to a control panel?

3. What happens when a fire condition is signaled?
4. What does an extinguishing panel use the control panel information for?

Text 9. Automatic fire detection and alarm systems: Inspection and Maintenance.

Introductory guide to component and system. Robert Dudley.- HIS BRE Press, UK. -2010.

Failure to correctly maintain an installed automatic fire and alarm system can lead to the unnecessary evacuation of a building due to a false alarm; the associated costs because of lost productive time and the interruption of commercial life belie such a false economy. The inability of a system to detect a real fire cannot be discounted; neither can the consequential losses nor the damage that such an event would bring.

A named responsible person with the authority and requisite training to manage all aspects of the work required to conduct testing and monitoring should supervise the automatic fire detection and alarm system within a building.

The control panel should be checked each day to ensure that there are no fault conditions being signaled and take appropriate action if a fault has occurred with the system. Each week a manual call point should be activated to ensure that the control panel is able to receive an alarm signal and respond to it. This task needs to be part of a planned programme to ensure that every manual call point is tested at least once within the sequence. To minimize the interruption to life within a building, it is good to practice to conduct tests of the automatic fire detection and alarm system at the same time every week. Consideration must be given to anyone working outside normal hours of business to ensure that they are familiar with the warnings given by audible and visual alarm devices.

Automatic fire detection and alarm systems should be serviced every six months and a planned maintenance programme put into place. Often the best way to deal with this is to enter onto a service

contract with a specialist company. As part of the requirement to demonstrate that the building owner/occupier is meeting their responsibilities under the regulatory Reform (Fire Safety) Order, a record should be kept by the responsible person of all tests, false alarms and maintenance work carried out.

Вопросы к тексту:

1. Why should automatic fire and alarm system be installed correctly?
2. Why is it so important to test manual call points?
3. What are maintenance requirements for an automatic fire and alarm system?

Text 10. Liquid Hydrocarbon Storage Tank Fires: Conclusions.

Liquid Hydrocarbon Storage Tank Fires: Prevention and Response.- BP International Limited, UK. -2008.

Factors that will increase the probability of successful extinguishment of a storage tank fire are:

- The use of low expansion-ratio aspirated foam.
- Adequate application rate.
- Large capacity water/foam monitors in sufficient numbers.
- Efficient handling of foam concentrates.
- Sufficient water supply to monitors (volume and pressure).
- Adequate time and manpower.
- No attempt should be made to apply foam unless resources are available to mount an extended attack for the recommended duration of application. However the GESIP (Groupe d'Etudes et de Sécurité dans L'industrie Pétrolière) tests show that, if there are sufficient foam stocks, an early continuous

foam application at half the extinguishment rate is efficient in reducing the thermal flux, and therefore, in reducing the strain on firefighters and the probability of escalation. This, of course, relies on the concentrate being in good condition.

If it is planned to let a tank fire burn out then it is important for firefighters to know that tank shells exposed to fire normally fail by folding inwards above the liquid. Therefore the available water supplies should be directed to protecting exposures and not on the shell of the tank on fire. External roof drains on floating roof tanks which are normally left open should be closed to prevent the loss of flammable material into the bund.

Storage tank fires are often spectacular in nature, generating much heat accompanied by a highly visible column of smoke. However the application of the correct techniques has resulted in many such fires being successfully extinguished. If the foam is being applied correctly then visible evidence of fire reduction should be seen in less than thirty minutes after commencement. If no signs are seen, then further checks need to be carried out to ensure that the correct rates are being applied.

Вопросы к тексту:

1. What factors influence the extinguishment of a storage tank fire?
2. When it is planned to let a tank fire burn, what should firefighters know?
3. What can influence the storage tank fires to be extinguished successfully?

ВОПРОСЫ ДЛЯ РАБОТЫ С ТЕКСТОМ:

1. Переведите заголовок статьи и определите ее характер (научный, методический, исторический).
2. Прочитайте статью и определите (сформулируйте) ее цель.
3. Прочитайте статью и кратко охарактеризуйте ее:
   - кто автор статьи.
   - какой теме посвящена статья.
   - относится ли данная статья к вашей специальности.
   - содержит ли статья методические рекомендации
   - ваше мнение о практической ценности статьи.
4. Выпишите выходные данные статьи (при наличии).
5. Определите, кому адресована статья.
6. Охарактеризуйте тематику, полноту и новизну сообщенных в статье сведений.
7. Определите характер текста: описание, повествование, сообщение, рассуждение, изложение.
8. Определите практическую значимость статьи.
9. Составьте перечень проблем, затронутых в статье.
10. Определите, содержит ли текст интересную информацию с профессиональной точки зрения.
11. Дайте точный перевод на русский язык заголовка статьи и определите, соответствует ли он содержанию.
12. Ознакомьтесь с рисунками, опишите их и скажите, достаточно ли наглядно они иллюстрируют содержание статьи, что добавляют.
13. Составьте план своего высказывания.

14. Подберите к каждому пункту плана информацию: слова, словосочетания или целые предложения, отражающие ход мысли.
15. Сформулирует выводы авторов статьи.
16. Укажите абзац, в котором дается главный вывод автора.
17. Прочитайте № абзац текста и сформулируйте его основную мысль.
18. Выделите ключевые положения абзаца №..
19. Кратко изложите содержание абзаца №..
20. Выразите содержание каждого абзаца текста одним предложением.
21. Выделите из каждого абзаца положения, которые, по вашему мнению, необходимо включить в реферат.
22. Прочтите текст и разделите его на смысловые части, озаглавьте их.
23. Внимательно прочтите статью и выделите ее ключевые фрагменты.
24. Выделите основные разделы статьи и передайте содержание каждого из них одним – двумя предложениями.
25. Выпишите предложения, которые помогут вам кратко изложить содержание статьи.
26. Отметьте предложения (абзацы), которые могут быть опущены без ущерба для содержания текста.
27. Разделите статью на вступление, основную часть и заключение (выводы автора), напишите краткое изложение основного содержания текста по данной схеме.
28. Составьте план текста.
29. Составьте (краткий) план статьи в виде во-

просов.

30. Перефразируйте главную идею текста и выразите ее своими словами.
31. Составьте аннотацию к тексту, используя рекомендации и лексические клише из Приложения 1.
32. Составьте реферат текста, используя рекомендации и лексические клише из Приложения 1.

ЧАСТЬ 2. ТЕКСТЫ ДЛЯ САМОСТОЯТЕЛЬНОЙ РАБОТЫ.

Text 1. History of the UK Fire and Rescue Service

http://www.fireservice.co.uk/history

The modern day Fire Brigade has evolved following many years of development and improvements since almost pre-history. From the time man discovered fire, he has also battled to control the flames.

The first organised firefighting is believed to have originated in the UK during the Roman invasion in AD43. Even then, fighting fires was often limited to nothing better than buckets of water or simple syringes that squirted water at the fire. Once the Romans left, firefighting took a backward step as communities fell into decline.

During the middle ages many towns and cities simply burned down because of ineffective firefighting arrangements and because of the building materials used at the time; mainly wood. Following some spectacular losses, some parishes organised basic firefighting, but no regulations or standards were in force. The Great Fire of London, in 1666, changed things and helped to standardise urban firefighting.

Following a public outcry during the aftermath of probably the most famous fire ever, a property developer named Nicholas Barbon introduced the first kind of insurance against fire. Soon after the formation of this insurance company, and in a bid to help reduce the cost and number of claims, he formed his own Fire Brigade. Other similar companies soon followed his lead and this was how property was protected until the early 1800s. Policy holders were given a badge, or fire mark, to affix to their building. If a fire started, the Fire Brigade was called. They looked for the fire mark and, provided it was the right one, the fire would be dealt with. Often the buildings were left to burn until the right company attended! Many of these insurance companies were to merge, including those of London, which merged in 1833 to form The London Fire Engine Establishment, whose first Fire Chief was James Braidwood. Braidwood had come to London after holding the position of the Chief Officer of Edinburgh Fire brigade. Edinburgh's authorities had formed the first properly organised brigade in 1824.

A major change in the way fires were fought came into being in the mid 1850s when the first reliable steam powered appliances were adopted by brigades. These appliances replaced the manual engines and allowed a far great quantity of water to be to be directed onto a fire. These Steam powered

appliances were only to last slightly longer than 50 years due to the introduction of the internal combustion engine in the early 1900s.

James Braidwood would die in 1861 whist fighting a warehouse fire in Tooley Street, London. Other areas of the UK had either Volunteer Fire Brigades or Town Fire Brigades. It wasn't until 1938 that many of these brigades were amalgamated.

Before 1938 there were between 1400 and 1500 small municipal fire brigades run by local councils in the UK.

In 1938 the AFS followed by the NFS were formed. The formation on the NFS would ensure uniformity in much of the basic equipment used by the country's Fire Brigades during what was the busiest time ever in the history of the UKs Fire Service.

Following the ending of the war the N.F.S was taken over by local County Authorities.

The Fire Services Act (1947) became effective on the 1st of April 1948; this resulted in 148 County Council and County Borough run Fire Brigades. This act has since been updated as recently as 2004. In 1974 following local government re-organisation many brigades were amalgamated, losing many City and County Borough Fire Brigades.

Further changes, carried out in 1986, saw the formation of some Municipal Boroughs and some County Brigades were renamed. More recently, many of these Brigades have been removed from Local Authority control and have become independent Fire Authorities.

There are at present 63 brigades in England, Wales, Scotland and Northern Ireland.

Text 2. The History of American Fire Fighting

By joycescape Sep 23, 2008

http://www.infobarrel.com/The_History_of_American_Fire_Fighting#kcrrH7J7CRYzJKXT.99

An organized firefighting corporation is vital to the survival of any civilization. Without dedicated professionals to quash flames, fires can spread quickly and bring down entire city blocks. This ultimately results in lost lives and extensive financial damages. Thus, it is easy to see why the United States has made a commitment to maintaining trained firefighters since the very first years of its history.

When the Jamestown settlement was established in Virginia in 1607, it did not take long for America's first colonists to recognize the problem of fire. In January of the following year, raging flames destroyed a good part of the set- tlement. This forced colonists to

come up with a plan for dealing with fires. They started using "bucket brigades" to help quash flames. When a fire was reported, all available people would form two lines near the flames. Buckets of water would be passed down one line, tossed onto the fire, and then return the other way to get refilled. As for fire warnings, early colonists used their voices in addition to rattles, gongs, and other easily crafted noisemakers to spread word of the flames.

Despite early efforts from colonists, it was not until 1648 that an organized fire corps was developed. In this year, the government of New Amsterdam, now known as New York, created four fire warden positions. A law was also created banning wooden chimneys and thatched roofs. These building components were two of the major fire hazards in early American cities. It was the duty of the fire wardens to enforce these laws and inspect buildings for other hazards. Those who did not comply with regulations were fined by the city. Within a few years, other settlements follow suit. These were the first steps towards creating an organized firefighting industry in America.

Among the earliest fire brigades were those in Boston and Philadelphia. These cities were the first to purchase actual fire engines to facilitate movement to and from fires. Boston acquired its vehicle in 1653 and Philadelphia followed in 1719. Of course, in this early period the engines were actually horse or man powered vehicles with hand-pumps for helping stream water at the flames. Most early hand-pumps were constructed in England and shipped to the American colonies. This made it difficult to acquire many of the pumps. Additionally, it took a lot of effort to work these devices, and the tubs needed to be frequently refilled. However, they were ultimately far more effective than standard bucket brigades.

The United States' founding fathers were also very interested in fire prevention and control. In fact, George Washington himself served as a volunteer firefighter in Virginia. He even bought his town its first fire engine. Fellow American politician Thomas Jefferson was

also on a volunteer brigade. Additionally, Benjamin Franklin worked to improve firefighting by founding the Union Fire Company in Philadelphia in 1736. Franklin was inspired by a visit to Boston, where he admired the city's level of firefighting preparedness. He wanted to bring this same quality to Philadelphia. Franklin even wrote a newspaper article on the dangers of fires in order to raise awareness. Ultimately, his efforts were successful and the Union Fire Company became the model for other firefighter bands in other cities.

Although the first firefighting systems in America were run by volunteers, many of these eventually gave way to professional leagues. This was especially true in major urban centers where volunteers were simply not organized enough and lacked sufficient funding to deal with fire problems. After several major fires in cities like New York, it was clear that paying professionals to fight fires would result in a higher quality system. Additionally, improved organization would diminish rivalries and encourage the use of better technology. Although many volunteer firefighters resented the change, professional groups eventually won over most of America's cities.

One of the most important developments in firefighting technology took place around the same time as the switch from urban volunteers to professional forces. In the early 1800s, inventors in England designed a steam-powered water pump. Coal was used to power the steam pump, which could then stream water into hoses. The additional force made all the difference when fighting difficult fires. Plus, these new devices required less manpower to use. Subsequently, many volunteer firefighters did not want to implement the new technology. However, as their position became less and less influential, steam pumps made their way into the American firefighting system.

The first paid firefighting company in the United States was located in Cincinnati, Ohio. It was founded in 1853 and soon followed by counterparts in New York and Philadelphia. By using paid departments cities were guaranteed a consistent group of individuals available to fight fires. Additionally, career firefighters were held to higher standards of training and efficiency. This meant they were better-equipped to perform their duties and less likely to be injured on the job.

During the twentieth century, firefighters were able to improve their efforts even more thanks to new technologies. The first major invention was the internal combustion engine. This naturally led to the development of automobiles and, subsequently, fire trucks. Firefighters also learned to utilize radio communication and a special breathing device called the "self-contained breathing apparatus" (SCBA).

This made firefighting safer and allowed firefighters to rescue more individuals from a flaming building.

Today, American firefighting involves a number of individuals with specialized jobs. Aside from traditional firefighters, there are also those who deal with hazardous materials, skyscrapers, and fires on the seas. Additionally, many fire companies have separate ambulatory units to assist injured victims. Both volunteers and paid servicemen participate in all these duties. Naturally, modern firefighting also requires greater training and a higher budget for equipment and personnel.

Firefighters must be available at all hours of the day, every day of the year. Fires can occur at any time without warning. Thus, for the United States to remain safe from damage, it needs to retain firefighting forces across the country. Firefighters must also receive proper training and equipment in order to do their jobs effectively. Thankfully, the United States has met the challenges of developing a corps of firefighters and remains one of the most fire-ready nations in the world.

Text 3. The History of Firefighter Personal Protective Equipment

06/16/2008 by Paul Hasenmeier

http://www.fireengineering.com/articles/2008/06/the-history-of-firefighter-personal-protective-equipment.html

Firefighting is a dangerous profession that requires specialized equipment to effectively and safely mitigate a fire emergency. An important part of this equipment is the firefighter's personal protective equipment (PPE): coat, pants, hood, helmet, boots, gloves, breathing apparatus, and personal alert safety system (PASS) device. The personal protective equipment structural firefighters wear today is drastically different than what they wore in the early years. Unfortunately, there isn't a lot of good and accurate information documented about the history of PPE, but some theories of yesteryear and modern day requirements have helped me to piece together how a firefighter's ensemble came to be.

Early Years

We can look back at American history and see that fire was present in our country's first colonies. In the 1600s, firefighters had to deal with the fire, heat, and smoke without modern technology. Struc-

tures often burned to the ground because firefighters fought the fires from the outside. Interior operations were not possible because the everyday clothing firefighters wore offered insufficient protection from heat and flames.

As firefighting evolved, so did the equipment firefighters wore. Jacobus Turck, the "caretaker" of New York City's two then-new Newsham hand pumpers, is credited with inventing the first fire helmet in the 1730s. It was leather, with a high crown and wide brim. Years later in 1836, Henry T. Gratacap designed a helmet similar to the one we use today, referred to as the "traditional" fire helmet.[1] The design was a reinforced dome-shaped leather helmet with a front shield and brim rolling to a long back tail. Finally the firefighter's head was awarded some protection from falling materials and water that ran off the back of the helmet. Some old images also show firefighters holding the helmets in front of their faces as they battle wind or intense heat from a fire.

Around the same time Gratacap was producing the fire helmet of the future, the firefighter's uniform also took a step forward. Wool, a heavy material that gave some protection against hot and cold environments, was used. Firefighters' pants and a long trench coat with a stiff collar were made of wool. Under the coat, firefighters wore a cotton or wool shirt that was usually red in color. To finish off the uniform, they wore leather boots.[2]

As rubber development progressed, it played a beneficial role in firefighter clothing. Rubber slickers worn over the wool coats added another layer of protection from the heat and most definitely kept the wearer dry. Boots made of rubber also kept the wearer's feet dry. Some archived history of the Huron (OH) Fire Division also confirms the use of rubber boots purchased for $10 and rubber raincoats purchased for $12 in the mid 1930s.

Also in the early years, respiratory protection for firefighters was minimal. Tales are told of firemen growing beards, soaking them in water, biting the beards, and breathing through them when in a smoke-filled environment. The beard may have acted as a filter, but they would still get choked up by the fire's by-products.

It wasn't until 1825 Italian scientist Giovanni Aldini attempted to design a mask to provide heat protection and fresh air. The concept spurred many more attempts to make a device that would be more effective. A miner named John Roberts invented a filter mask that was widely used in Europe and the United States. During the same time period, several attempts were made to invent a helmet with a hose attached to a pump that supplied fresh air.

The first self-contained breathing apparatus came in 1863, when James Braidwood put two canvas bags together lined with rubber. The airtight sac was worn on the firefighter's back and secured with shoulder straps and a waist belt. Two rubber hoses connected to a mouthpiece allowed the wearer to inhale fresh air. Different size sacs were filled with air by a set of bellows and sealed with corks until needed. Firefighters also wore goggles, a leather hood, a nose clamp, and a whistle to complete Braidwood's invention.

Bunker Gear/Turnout Gear

As the firefighter's personal protective equipment continued to develop, the terms "bunker gear" and "turnout gear" become part of history. After speaking at length with fire history curator David Lewis, I can put forth several theories as to the terms' origins. In the mid 1800s, "bunking" was the practice of sleeping at New York City's volunteer firehouses, so the firefighter's "bunking gear" would be the clothing he would wear when responding or "turning out" to a fire during nighttime hours. Another theory about "bunker pants" comes from soldiers responsible for firing cannons from the built-up bunkers of World War I who wore padded pants. These pants protected their legs from shrapnel, water, mud, and hot shell casings flying around and in these bunkers. After the war, the soldiers often became firefighters and adopted the protective pants as part of their new uniform, according to Lewis.

Further Development

During and after the World Wars, steady progress was being made in the development of firefighting personal protective equipment. Long rubber trench coats, long rubber boots, and the traditional fire helmet were commonly seen. The long rubber boots were often referred to as three-quarter boots and covered the firefighter's leg to above the knee (photo 1).

It wasn't until after World War II when standards for firefighter personal protective equipment were developed. Several organizations began performance testing and creating standards for the equipment. The frontrunner in this endeavor was the National Fire Protection Association

(1) Note the three-quarter boots and long trench coat. [Photo courtesy of Huron (OH) Fire Division.]

(NFPA), which still develops standards for protective clothing today (NFPA 1971, *Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*).

The committee at the time wanted to see a firefighting coat with three layers: an outer shell that was flame resistant and would withstand temperatures of 500ºF for about five minutes, a middle layer that prevented water from soaking the wearer, and an inner layer that protected against the three heat transfer methods (convection, conduction, and radiation). Other standards addressed the protective equipment dealing with the firefighters' hands and feet. Resistance to heat and resistance to puncture were two important parts of the standard. Specifically, a steal shank and toe were required in the leather or rubber boots.

Also after World War II, Scott Aviation made breathing equipment for crews working in airplanes at high altitudes. The engineers noticed that the firefighters were still using filter masks and rebreathers that didn't provide adequate breathing air. Similar concepts were applied to the Scott Air-Pack, introduced in 1945.

I interviewed one of the most seasoned veterans of the Huron Fire Division to understand the specific protective equipment that was worn in the late 1970s. Firefighter Steve Dircks explained to me that when he started with the department in 1978, he was issued a vinyl silver long coat, three-quarter rubber boots, orange rubber gloves, and a plastic fire helmet resembling the material used in modern day construction hard hats. This entire ensemble was purchased for $190. Dircks remembered that it wasn't until 1984 when new turnout gear was issued, consisting of pants with suspenders and a coat of black cotton material (photo 2).

It wasn't until 1982 that the NFPA developed a standard for personal alert safety system (PASS) devices. These devices send out an audible alarm when a firefighter remains motionless or is running out of air. Also in the 1980s, advanced fire-resistive materials such as Nomex® and Kevlar® were used to make the outer shell of the coats and pants.

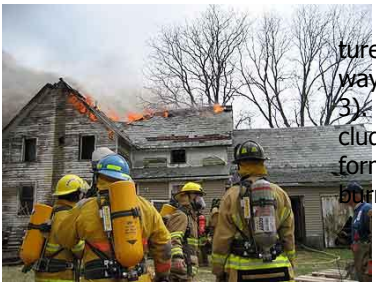
(2) A uniform similar to what firefighter Steve Dircks started his career with. [Photo courtesy of Huron (OH) Fire Division.]

Today and Tomorrow

The firefighting personal protective equipment in use today consists of a combination of previous years' testing and technology. I took a look at the gear hanging on my hook at the fire station.

Both the coat and pants have three layers similar to those the first NFPA standard required. The materials and temperature rating have improved along with new additions of webbing integrated into the coat for rescue, multiple pockets for miscellaneous tools, and removable knee pads. The fire helmet still resembles Henry Gratacap's design but has better interior suspension, a chin strap, and a fire-resistive flap that covers the ears and neck. Leather boots, gloves, and a hood complete the turnout gear ensemble.

When entering a fire or smoke-filled environment today, the self-contained breathing apparatus (SCBA) provides great protection. SCBAs weigh much less than the early models but still have an air supply secured to the firefighter's back with shoulder straps and a waist belt. The air bottles are being made out of a composite material that can sustain high pressures. Integrated PASS devices turn on once the air bottle is opened, which sends out an audible alarm if the firefighter remains motionless, and transmits how much air is in the bottle to a receiver in the face mask. Personal escape ropes are also being added to the pack harness, and handles are designed into the back plate in the event of a needed rescue. Because of chemical, biological, radiological, and nuclear concerns in today's society, options are available to protect against these hazards. New standards will soon require these options.



(3) The firefighting personal protective equipment of today has greatly improved from years past. (Photo by Lauren Yeagle.)

Turnout gear and SCBA manufacturers continue to design and produce new ways to improve firefighter safety (photo 3). Some of the future standards may include the following: increased thermal performance standards because materials burn hotter, heat sensors located in various locations throughout the turnout gear, and global positioning systems (GPS) integrated into the SCBA for better firefighter accountability, according to Mark Gibson, an SCBA technician.

Throughout history, firefighting personal protective equipment has evolved in many ways. Fire can be a harsh reality, but today's firefighters are much more prepared and protected than the firemen breathing through their whiskers years ago

Text 4. Electrical Fire Safety

Electrical fires in our homes claim the lives of 485 Americans each year and injure 2,305 more. Some of these fires are caused by electrical system failures and appliance defects, but many more are caused by the misuse and poor maintenance of electrical appliances, incorrectly installed wiring, and overloaded circuits and extension cords.

The Problem:. During a typical year, home electrical problems account for 67,800 fires, 485 deaths, and $868 million in property losses. Home electrical wiring causes twice as many fires as electrical appliances.

The Causes: Electrical Wiring. Most electrical fires result from problems with "fixed wiring" such as faulty electrical outlets and old wiring. Problems with cords and plugs, such as extension and appliance cords, also cause many home electrical fires.

Home Appliances. The home appliances most often involved in electrical fires are electric stoves and ovens, dryers, central heating units, televisions, radios and record players.

Safety Precautions

- Routinely check your electrical appliances and wiring.
- Replace all worn, old or damaged appliance cords immediate-

ly.

- Use electrical extension cords wisely and don't overload them.
- Keep electrical appliances away from wet floors and counters; pay special care to electrical appliances in the bathroom and kitchen.
- Don't allow children to play with or around electrical appliances like space heaters, irons and hair dryers.
- Keep clothes, curtains and other potentially combustible items at least three feet from all heaters.
- Use safety closures to "child-proof" electrical outlets.

Text 5. Fireworks and Summer Fire Safety

Families also enjoy camping in the summer. It is important to follow the park's rules for the use and extinguishing of campfires.

Summertime should be a time for fun and making happy memories. Knowing a few fire safety tips and following instructions will help everyone have a safe summer.

Fireworks Safety

- The best way to enjoy fireworks is to visit public fireworks displays put on by professionals who know how to safely handle fireworks.
- If you plan to use fireworks, make sure they are legal in your area.
- Never light fireworks indoors or near dry grass.
- Always have a bucket of water and/or a fire extinguisher nearby. Know how to operate the fire extinguisher properly.
- Do not wear loose clothing while using fireworks.
- Stand several feet away from lit fireworks. If a devise does not go off, do not stand over it to investigate it. Put it out with water and dispose of it.

- Always read the directions and warning labels on fireworks. If a devise is not marked with the contents, direction and a warning label, do not light it.
- Supervise children around fireworks at all times.

Barbecue Safety

- Do not wear loose clothing while cooking at a barbecue.
- Be careful when using lighter fluid. Do not add fluid to an already lit fire because the flame can flashback up into the container and explode.
- Keep all matches and lighters away from children. Teach your children to report any loose matches or lighters to an adult immediately. Supervise children around outdoor grills.
- Dispose of hot coals properly - douse them with plenty of water, and stir them to ensure that the fire is out. Never place them in plastic, paper or wooden containers.
- Never grill/barbecue in enclosed areas - carbon monoxide could be produced.

Text 6. Smoking Fire Safety

Cigarettes are the number one cause of fatal home fires in the United States, averaging 900 deaths per year over the past ten years. Cigarette fires also kill people who do not smoke.

Fire safety experts recommend the following steps for smokers to reduce their risk of fire:

- If you smoke, smoke outside.
- Choose fire-safe cigarettes. They are less likely to cause fires.
- Close a matchbook before striking and hold it away from your body. Set your cigarette lighter on "low" flame.

- Use deep, sturdy ashtrays placed on something sturdy and hard to ignite, like an end table.
- Don't leave cigarettes, cigars or pipes unattended. Put out all smoking materials before you walk away.
- Before you throw out butts and ashes, make sure they are out by dowsing in water or sand.
- If smokers have visited, check under furniture and cushions for cigarette butts that may have fallen out of sight.
- Don’t smoke if you are sleepy, have been drinking, or taken medicine or other drugs.
- Never smoke in bed. Replace mattresses made prior to the 2007 Federal Mattress Flammability Standard.
- Don’t smoke in a home where oxygen is used.
- Develop and practice a fire escape plan. In case of a fire, crawl or stay low to the ground, beneath the smoke, and use the escape plan you have worked out. Get out and stay out.
- Install a smoke alarm on every level of your home. Test smoke alarm batteries every month and change them at least once a year. Consider installing a 10-year lithium battery-powered smoke alarm, which is sealed so it cannot be tampered with or opened.

Text 7. Practice fire safety

Of course, the best way to practice fire safety is to make sure a fire doesn't break out in the first place. That means you should always be aware of potential hazards in your home.

Check all electrical appliances, cords, and outlets

- Are your electrical appliances in good condition, without loose or frayed cords or plugs?
- Are your outlets overloaded with plugs from the TV, comput-

er, printer, video game system, and stereo?

- Are you overusing an extension cord?
- Do the light fixtures in your home contain bulbs that are the correct wattage?

Look around your house for potential problems. And unless you're a trained electrician, be careful about do-it-yourself electrical projects. Studies have shown that many home fires are caused by improper installation of electrical devices.

Be careful in the kitchen

Did you know that cooking is the leading cause of home fires in the United States? The kitchen is rife with ways for a fire to start: food left unsupervised on a stove or in an oven or microwave; grease spills; a dish towel too close to the burner; a toaster or toaster oven flare-up; a coffee pot accidentally left on.

Always supervise kids while cooking and practice safe cooking habits — like turning all pot handles in so they can't be accidentally knocked over and not wearing loose-fitting clothing that could catch fire around the stove.

Check the fireplace

Fireplaces should be kept clean and covered with a screen to keep sparks from jumping out. Only wood should be burned in the fireplace — paper and other materials can escape while burning and ignite nearby items. Never leave a fire burning unattended and make sure a fire is completely extinguished before leaving the house or going to bed. Have the chimney professionally cleaned once a year.

Text 8. Construction Fire Safety: interior work and building enclosure phase

As trade workers begin interior work, fire protection systems are installed. The fire protection engineer may be involved in the design, permit process and acceptance testing for alarm, detection, sprinkler, standpipe and other fire protection systems. Requests for information and clarification often must be fielded by fire protection engineers.

Before certain areas are concealed, inspections must take place, and the timing is important to prevent project delays. These items include fire-rated shafts, electrical work, sprinkler and standpipe

hydrotests, fire-stopping and fire-proofing. The relationship built up between the design team, fire protection program manager, code authorities and responders could pay dividends as this work is coordinated.

When the building exterior walls are in place, the required stairway must be enclosed. This protects construction workers and responders from smoke and heat that cannot vent readily. Phasing of construction must be done so that egress is not adversely impacted. Before exterior wall enclosure begins, whether the jurisdiction will allow the stairway to be enclosed on a floor-by-floor basis along with the exterior walls or whether the stairway must be fully enclosed first should be determined.

Towards the end of this phase, acceptance testing of systems is conducted. It is a good idea to invite emergency response agencies to witness the testing of systems with which they will interact (especially alarm detection and control). Alternatively, separate demonstrations could be conducted to educate emergency responders on the use of these systems - preferably prior to occupancy.

ПРИЛОЖЕНИЕ 1. МЕТОДИЧЕСКАЯ СПРАВКА

Навыки аннотирования и реферирования технического текста позволяют легче понимать смысл читаемого материала, быстро извлекать нужную информацию из текста и ее фиксировать.

Аннотированием называется процесс составления кратких сведений о печатном произведении (книге, статье, докладе и т.д.), позволяющих судить о целесообразности его более детального изучения. При аннотировании учитывается содержание произведения, его назначение, ценность и направленность.

Аннотация – краткая характеристика текста с точки зрения содержания, формы, читательского назначения и других особенностей, дополняющих библиографическое описание.

Аннотация должна быть изложена простым языком без использования ненужных и малопонятных терминов. Она должна в сжатой форме сообщать, о чем говориться в тексте и какие теоретические и/или практические знания дает это произведение. По своему содержанию аннотации бывают нескольких типов, самым популярным из которых является описательная.

Описательная аннотация – описание содержания текста с помощью безличных конструкций в форме краткой справки; может быть составлена на любой вид печатного произведения. Обычный объем описательной аннотации 300-500 знаков, т.е. в среднем аннотация содержит 3-4 предложения на любую печатную статью вне зависимости от ее размера.

Текст описательной аннотации должен состоять из трех частей:

Вводная часть с выходными данными – название аннотируемого материала, фамилия автора, год издания, место издания, номер, объем (количество страниц, иллюстраций, таблиц).

Описательная часть – два-три основных положения, наиболее характерных для данной статьи. Они должны содержать в себе тематику (если она не раскрыта в названии), цель данной работы и область применения, а также способы, с помощью которых достигаются поставленные автором цели.

Заключительная часть, где содержатся отдельные особенности изложения материала, а иногда выводы

Аннотация не имеет абзацев и начинается с существа вопроса или с вводных фраз. *Например:*

На русском языке

Демонстрация тормозного пути автомобиля на уроках физики. Grimm R.D. A classroom demonstration of automobile, stopping distances. "The Physics Teacher", N.Y., 1998, No. 11, ил. (англ.).

Рассматривается проблема отбора учебного материала, адекватного практическим интересам учащихся старших классов средней школы при изучении физики. Описывается простой опыт, демонстрирующий независимость тормозного пути тел от их массы при условии одинаковой начальной скорости движения на одинаковой поверхности при одном и том же коэффициенте трения. Адресовано учителям физики в общеобразовательных школах.

На английском языке

Grimm R.D. A classroom demonstration of automobile stopping distances. "The Physics Teacher", N.Y., 1998, No. 11.

The choice of facts that can teach some physics and are at the same time important to high school students is discussed. A simple classroom demonstration showing the lack of dependence of stopping distances on mass provided the initial velocity and the coefficients of friction are the same for bodies in motion on the same surface is made.

При аннотировании можно рекомендовать использовать следующую последовательность действий:

1. Прочтите заголовок текста. Определите, дает ли он представление о содержании текста.
2. Просмотрите, делится ли статья на разделы (есть ли подзаголовки).
3. Если «да», прочтите подзаголовки.
4. Обратите внимание, есть ли рисунки, схемы, таблицы.
5. Если «да», прочтите подписи под ними.
6. Прочтите первый и последний абзацы текста и по ключевым словам определите, о чем текст.

Также следует помнить о соблюдении языковых особенно-

стей аннотации:

1. Излагать основные положения оригинала просто, ясно, кратко.
2. Избегать повторений
3. Не повторять заглавия текстов.
4. Соблюдать единство терминов и обозначений.
5. Использовать общепринятые сокращения.
6. Употреблять преимущественно страдательный залог.
7. Опускать прилагательные, наречия, вводные слова, не влияющие на содержание.

Реферирование – это одна из самых широко распространенных письменных форм извлечения информации. Если в аннотации приводится лишь краткий перечень рассматриваемых вопросов, то в реферате излагается существо вопросов и приводятся важнейшие выводы.

Реферат (от лат. referre – сообщать, докладывать) – это сокращенное содержание печатного произведения с основными фактическими данными и выводами. Реферат представляет собой объективное, лишенное эмоций сообщение информации первоисточника на основе ее смысловой переработки. Он акцентирует внимание на новых сведениях и определяет целесообразность обращения к первоисточнику.

Существует много видов рефератов, но наиболее интересным для нас является информативный реферат, т.е. конспективное изложение существенных положений оригинала.

Изложение содержания статьи в реферате ведется по степени важности отобранных сведений. Сначала в концентрированной форме излагается существо вопроса, далее кратко приводятся необходимые фактические данные. План составления реферата может не совпадать с планом статьи.

Реферат – это единый, логически компактный сгусток основного содержания статьи, поэтому, как правило, не имеет разделов или рубрик.

Текст реферата начинается с изложения существа реферируемой статьи. Здесь следует избегать вводных фраз (в отличие от аннотации).

В реферат не включаются ис- торические справки, введения

(если они не составляют основного содержания статьи), описание раннее опубликованных работ и общеизвестные положения.

Текст реферата составляется по определенному плану:

1. Тема, предмет (объект), характер и цель работы. Здесь нужно показать особенности темы, которые необходимы для раскрытия цели и содержания работы.
2. Метод проведения работы (если этот метод или методы – новые, то нужно дать их описание).
3. Конкретные результаты работы (теоретические или экспериментальные).
4. Выводы, рекомендации, оценка, предложения, описанные в первоисточнике.
5. Область применения.

Если в статье отсутствует какая-либо из перечисленных выше частей (например, в статье ничего не говорится о применении), то ее в реферате опускают, сохраняя последовательность изложения.

В конце реферата могут даваться примечания референта (при наличии в нем противоречий или ошибок), но интерпретация или критика первоисточника в самом реферате не допускается. Текст реферата заканчивается сведениями о количестве иллюстраций, таблиц, библиографии, за которыми идут ф.и.о. референта.

Объем реферата не зависит от объема реферируемой статьи, а определяется ее содержанием, количеством сведений и их научной ценностью. Средний объем для журнальных статей – 1000 печатных знаков.

Основным отличием языка аннотации от языка реферата является то, что в аннотации основное содержание передается своими словами, которые представляют высокую степень абстрагирования и обобщения. В реферате же формулировки и обобщения заимствуются из самого текста оригинала.

К языку реферата предъявляются следующие основные требова-

ния:

1. Краткое, точное и объективное изложение материала.

2. Применение стандартной терминологии. Следует избегать непривычных терминов и символов и разъяснять их при первом упоминании в тексте.

3. Термины, применяемые в реферате более трех раз и смысл которых ясен из контекста, рекомендуется после первого употребления полностью заменить аббревиатурами (сокращениями) в виде начальных заглавных букв этих терминов. При первом упоминании такая аббревиатура дается в скобках непосредственно за термином, при последующем употреблении – без скобок. В одном реферате не рекомендуется применять более трех различных аббревиатур.

Как правило, при написании реферата сложные предложения преобразуются в простые, широко используются неопределенно-личные предложения.

Формулы в реферате приводятся в следующих случаях:

– без формул невозможно построение реферата;
– формулы выражают итоги работы;
– формулы существенно облегчают понимание работы.

Допускается включать в реферат иллюстрации и таблицы, если они помогают раскрытию основного содержания работы.

При составлении реферата следует придерживаться следующем последовательности этапов работы:

1. Просмотровое чтение с целью получения общего представления о тексте в целом.

2. Знакомство с графиками, рисунками, схемами, таблицами для уточнения сведений, полученных при первом чтении.

3. Выделение и нумерация абзацев, содержащих конкретную

информацию по теме статьи, с подчеркиванием в них ключевых фрагментов.

4. Перегруппировка ключевых фрагментов в соответствии с их тематикой и планом написания реферата.

5. Составление логического плана статьи.

6. Вторичное изучающее чтение выделенных абзацев с сокращением малосущественной информации и обобщением оставшейся основной информации.

7. Редактирование полученной информации и написание ее в форме реферата.

8. Проверка правильности приведенных цифр, сокращений и т.д.

При оформлении аннотаций и рефератов на русском языке на публикации иностранных авторов необходимо указывать название материала на иностранном и русском языках, фамилию автора – на иностранном языке, а также в круглых скобках язык, на котором написана статья.

Следует запомнить:

Аннотация лишь перечисляет вопросы, которые освещены в первоисточнике, не раскрывая самого содержания этих вопросов. Аннотация отвечает на вопрос: «О чем говорится в первичном тексте?» В аннотации основное содержание передается своими словами, которые представляют высокую степень абстрагирования и обобщения.

Реферат представляет собой объективное, лишенное эмоций сообщение информации первоисточника на основе ее смысловой переработки. Он обращает внимание на новые сведения и сообщает существенное содержание основных вопросов. В реферате формулировки и обобщения заимствуются из самого текста оригинала.

Пример отличия аннотации от реферата:

Текст первоисточника

Морякам хорошо известно место, которое находится к востоку от побережья Флориды. Сюда заходят корабли, чтобы пополнить запасы пресной воды, которые истощились за время долгого плавания. Берут воду из чаши диаметром в 30 метров, которая лежит в море среди соленых вод. Эту область пресной воды образует источник, который расположен на дне моря на глубине 40 метров.

Аннотацию к этому тексту можно написать так:

В данном тексте рассказывается о том, как моряки пополняют запасы

пресной воды в соленом море.

Реферат может быть таким:

В тексте рассказывается о том, что моряки запасают пресную воду со дна моря из источника диаметром 30 метров, находящегося к востоку от побережья Флориды на глубине 40метров.

Лексические модели, которые можно использовать при составлении аннотаций и рефератов на английском языке:

The article is headlined…. The headline of the article I have read is… The author of the article is… The article is written by… . It's published in… It's printed in…	Статья называется… Название статьи, которую я прочитал… Автор статьи… Статья написана… Она опубликована… Она напечатана…
The main idea of the article is… The article is about… The article is devoted to… The article deals with…. The article touches upon…. The purpose of the article is to give the reader some information on…	Основная мысль этой статьи… Статья о… Статья посвящена… Статья связана с … Статья затрагивает… Цель статьи – ознакомить читателя с…
The aim of the article is to provide the reader with some material (data) on…. The author starts by telling the reader that… The author writes (states, stresses, thinks, points out) that …	Цель статьи ознакомить читателя с материалами/данными о… В начале статьи автор пишет … Автор пишет, (утверждает, подчеркивает, полагает, выделяет), что…
The article describes … According to the text ... Further the author reports (says)… It is important to note (stress, underline)…	Статья описывает, … Согласно тексту… Далее автор сообщает… Важно отметить, (подчеркнуть)…
In conclusion…. The author comes to the conclusion that… I found the article interesting (important, dull, of no value, too hard to understand) because…	В заключение… Автор приходит к заключению, что… Статья показалась мне интересной, (важной, скучной, не представляет для меня интереса, слишком трудная для понимания), так как…

Логические коннекторы

Прежде всего	Beforehand
Во-первых	Firstly
Во-вторых	Secondly
Тем не менее	Nevertheless
Затем	Then
Далее	Further
Кроме того	Besides
Наконец, в целом	Finally, In general
Как указывается выше	As mentioned above
Иными словами	In other words
Однако	But
С одной стороны	On the one hand
С другой стороны	On the other hand
Таким образом	Thus
Поэтому	That is why
Следовательно	Therefore
Отсюда	Hence

ПРИЛОЖЕНИЕ 2. ОСНОВНЫЕ ПОНЯТИЯ И ВЫРАЖЕНИЯ

DEFINITIONS

ALARM NOTIFICATION APPLIANCE. A fire alarm system component such as a bell, horn, speaker, light or text display that provide audible, tactile or visible outputs, or any combination hereof.

ALARM VERIFICATION FEATURE. A feature of automatic fire detection and alarm systems to reduce unwanted alarms wherein smoke detectors report alarm conditions for a minimum period of time, or confirm alarm conditions within a given time period, after being automatically reset, in order to be accepted as a valid alarm-initiation signal.

ANNUNCIATOR. A unit containing one or more indicator lamps, alphanumeric displays or other equivalent mean in which each indication provides status information about a circuit, condition or location.

CONSTANTLY ATTENDED LOCATION. A designated location at a facility staffed by trained personnel on a continuous basis where alarm or supervisory signals are monitored and facilities are provided for notification of the fire department or other emergency services.

DELUGE SYSTEM. A sprinkler system employing open sprinklers attached to a piping system connected to a water supply through a valve that is opened by the operation of a detection system installed in the same areas as the sprinklers. When this valve opens, water flows into the piping system and discharges from all sprinklers attached thereto.

EMERGENCY VOICE/ALARM COMMUNICATIONS. Dedicated manual or automatic facilities for originating and disturbing voice instructions, as well as alert and evacuation signals pertaining to a fire emergency, to the occupants of a building.

FIRE COMMAND CENTER. The principle attended or unattended location where the status of detection, alarm communication and control systems is displayed, and from which the system(s) can be manually controlled

MANUAL FIRE ALARM BOX. A manually operated device used to initiate an alarm signal.

RECORD DRAWING. Drawings (as "builts") that document the location of all devices, appliances, wiring sequences, wiring methods and connections of the component of a fire alarm system as installed.

SMOKEPROOF ENCLOSURE. An exit stairway designed and constructed so that the movement of the products of combustion produced by a fire occurring in any part of the building into the enclosure is limited.

ZONE. A defined area within the protected premises. A zone can define an area from which a signal can be received, an area to which a signal can be sent or an area in which a form of control can be executed.

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