AN TOÀN NAM VIỆT

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THE DOCUMENT

ON GROUP 4 OCCUPATIONAL SAFETY TRAINING

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The training materials for Occupational Safety Group 4 were compiled by the teaching staff of An Toan Nam Viet, following the framework program stipulated in Article 18 of Decree 44/2016/NĐ-CP and amended and supplemented in Decree 140/2018/NĐ-CP.

1. BASIC KNOWLEDGE OF HAZARDOUS AND HARMFUL FACTORS IN THE WORKPLACE

a. Concepts of the work environment, elements of the work environment, and the impact of the work environment on workers in Group 4 safety training materials

1. Concept of the work environment.

The environment is the set of all natural and social factors surrounding humans. Elements of the work environment:

- Temperature & humidity;
- Noise;
- Toxic substances;
- Radiation and light;
- Dust.

2. Impact of the work environment on workers
   - Maximum temperature and humidity in the workplace: 32 degrees Celsius and 80%. The air temperature inside industrial production facilities is often 1.5-6 degrees Celsius higher than outside (textiles, leather, footwear, mechanics, electricity) and humidity is often above 75% (seafood processing, beer production, printing, metal plating, etc.). The impact of high heat and humidity will make workers feel uncomfortable, tired, and reduce labor productivity. Frequent exposure to high temperatures will cause heat regulation disorders, heatstroke, loss of minerals, etc. Excessive sweating causes intense thirst, decreased chloride in blood plasma, leading to complications such as headaches, vomiting, and muscle cramps.
   - High humidity increases the risk of illness and causes heat loss:
   - Humans can hear sounds from 16 to 20,000 Mega Hertz (Hz) and hear best from 500 to 4,000 Hz. In Vietnam, the noise standard during 8 working hours for employees is a maximum of 85 dBA.
   - In industrial labor, working with high noise exceeding the allowable standard of 85 dBA in 8 hours/day and lasting for more than 3 months, there is a risk of occupational noise-induced hearing loss (NIHL). It also affects psychology, causes fatigue, and can affect other organs if exposed regularly, reducing work productivity and potentially causing occupational accidents.
   - Toxic substances such as: Acetone, mercury, lead, exhaust fumes, etc…
   - Radiation and light (affecting skin and eyes)
   - Dust (causing respiratory diseases, blood poisoning, etc.)

b. Concept of working conditions, factors constituting working conditions, and the impact of working conditions on workers' health in Group 4 safety training materials

1. Concept of working conditions.
    - Working conditions are the totality of natural, technical, and socio-economic factors manifested through tools and means of labor, objects of labor, technological processes, work environment, and their arrangement and interaction in relation to humans, creating certain conditions for humans in the labor process. Working conditions affect human health and life.
    - Tools and means of labor can be convenient and advantageous or cause difficulties and dangers for workers. Objects of labor also affect workers in various ways, such as electricity, explosives, radiation, etc. These impacts also depend on technological processes, production levels (rudimentary or modern, backward or advanced), and the work environment, which can be diverse, with many convenient and favorable factors or, conversely, very harsh and toxic, all of which have a significant impact on workers' health.
2. Impact of working conditions on workers' health

In any specific working condition, there are always physical factors that have adverse effects, are dangerous, and pose a risk of accidents or occupational diseases for workers. These are called hazardous and harmful factors. Specifically:

- Physical factors such as temperature, humidity, noise, vibration, harmful radiation, and dust.
- Chemical factors such as toxic chemicals, vapors, gases, toxic dust, and radioactive substances.

- Biological and microbiological factors such as bacteria, viruses, parasites, insects, and snakes.
- Adverse factors related to working posture and discomfort due to cramped workspace, unsanitary factories.
- Unfavorable psychological factors... are all hazardous and harmful factors.

c. Hazardous and harmful factors causing occupational accidents, causes, and preventive measures in Group 4 safety training materials

1. Hazardous and harmful factors causing occupational accidents in Group 4 safety training materials

These are factors related to poor working conditions, posing a risk of occupational accidents for workers, including:

- a) Heat sources:
  - Primarily affects workers who come into contact with or operate equipment in high-temperature environments such as furnaces, molten metal, cooking areas, etc...
  - Working in these locations often leads to fatigue, discomfort, poor appetite, and nervous tension, making workers less alert.
- b) Electricity sources:
  - When workers come into contact with electrical sources, depending on the voltage level and current intensity, there is a risk of electric shock, electric discharge, electromagnetic fields, and fires caused by electrical shorts, potentially paralyzing the respiratory and cardiovascular systems.
- c) Falling, collapsing, and collapsing objects:
  - Often the result of unstable or unsustainable material states, such as furnace collapses, falling objects from heights in construction, rockfalls in mining, collapsing walls, electric poles, or construction projects...
- d) Flying debris:
  - Commonly encountered as chips from machining processes like grinding, turning, metal chiseling, or flying rocks from blasting.

1. Causes and preventive measures.
    - Causes:
        - a) Group of technical causes.
            - The technological process contains hazardous and harmful factors: moving parts, dust, noise, etc…
            - Design and structure are not guaranteed, not suitable for the physiological characteristics of the user; poor durability; lack of signals, signaling mechanisms, overload prevention such as safety valves, brakes, inappropriate lighting; noise, vibration exceeding the allowable limit, etc…
            - Not mechanizing or automating heavy and dangerous labor tasks.
            - Not implementing or not correctly implementing technical safety regulations, such as pressure equipment not being inspected before being put into use, lack of or incorrect use of personal protective equipment, etc…
        - b) Group of management and organizational causes.
            - Unreasonable organization and arrangement of the workplace, difficult working postures.
            - Recruitment, assignment, training, and education are not conducted properly or do not meet requirements.
    - Basic technical safety measures and means:
        - a) Safety measures for workers themselves.
            - Perform work operations and postures appropriately, following safety principles, avoiding bending postures, postures that can cause spinal injuries, herniated discs, etc.…

- Ensure optimal movement and operation space, adaptation between humans and machines.…
- Ensure working conditions for sight, hearing, touch, etc.…
- Ensure appropriate psychology, avoid overload, stress, or monotony.

- b) Implement safety shielding measures.

The purpose of safety shielding equipment is to isolate hazardous areas from workers, such as areas with high voltage, moving parts, or places where people could fall.

Requirements for Protective Equipment:

- Prevent adverse and dangerous impacts during the production process.
- Do not cause obstacles or discomfort for workers.
- Do not affect labor productivity or equipment capacity. Classification of shielding equipment:
- Shielding for moving parts and mechanisms.
- Shielding for electrical conductors.
- Shielding for harmful radiation sources.
- Shielding for trenches, pits, and high working areas.
- Fixed shielding and temporary shielding.

- c) Use of preventive devices and mechanisms.
  - The purpose of using preventive devices and mechanisms is to prevent adverse effects caused by production process failures, and to prevent the spread of production failures. The failure can be caused by overload (pressure, temperature, voltage, etc.) or by random damage to parts or components of the equipment.
  - The task of preventive devices and mechanisms is to automatically eliminate the risk of failure or accident when the object being prevented exceeds the specified limit. Preventive devices only work well when properly calculated at the design and manufacturing stages, and especially when used in compliance with safety regulations.
  - Classification of preventive devices and mechanisms:
    - Systems that can automatically restore their ability to work when the object being prevented returns below the specified limit, such as spring-loaded safety valves, thermal relays, etc…
    - Systems that restore their ability to work by replacing with a new one, such as fuses, shear pins, etc…
- d) Use of safety signals and signs.
  - The purpose of safety signals is to:
    - Warn workers of potential hazards.
    - Guide necessary actions.
    - Identify technical and safety regulations through conventional signs of colors and drawings (road signs, etc.).
  - Safety signals can be used:
    - Lights, colors.
    - Sounds: horns, bells, etc.
    - Paint colors, drawings, letters.
    - Clocks, measuring instruments.

        - Requirements for safety signals:
            - Easy to recognize.
            - High reliability, less confusion.
            - Easy to implement, in accordance with customs, scientific and technical basis and requirements of standardization.
- e) Ensuring safe distances and dimensions.
    - Safe distance is the minimum space between workers and vehicles, equipment, or the smallest distance between them to avoid adverse effects of production factors such as the distance between power lines and people, safe distance when blasting, distance between machines, distance in tree cutting, wood pulling, safe distance for radiation, etc.…
    - Depending on the technological process and the characteristics of each type of equipment, different safe distances are specified.
- f) Implementation of mechanization, automation, and remote control.
    - This is a measure to liberate workers from dangerous and harmful areas. Mechanized, automated, and remotely controlled equipment replaces humans to perform operations remotely, in difficult and dangerous conditions, while improving labor productivity.
- g) Provision of personal protective equipment.
    - Providing personal protective equipment is a supplementary and supportive protective measure, but it plays a very important role when other protective measures do not ensure the safety of workers, especially in conditions of outdated equipment and technology.
    - Personal protective equipment can include:
        - Eye protection: various types of protective glasses.
        - Respiratory protection: masks, respirators, breathing apparatus, etc.
        - Hearing protection to prevent noise, such as earplugs, earmuffs, etc.
        - Head, hand and foot protection: various types of helmets, shoes, gloves, etc.
        - Protective clothing: to protect workers from the effects of heat, chemicals, radiation, pressure, etc.
    - Personal protective equipment must be manufactured according to state quality standards, and the issuance and use must comply with legal regulations. Employers must conduct quality checks on personal protective equipment before issuance and periodically check according to standards when put into use.
- h) Conducting preventive testing of equipment.
    - Testing the durability and reliability of machinery, equipment, structures, and their components is an essential safety measure before putting them into use. The purpose of preventive testing is to assess the quality of the equipment in terms of functionality, durability, and reliability to decide whether to put the equipment into use or not. Preventive testing is conducted periodically or after maintenance or repair periods.

d. Concepts of occupational diseases, causes, and preventive measures in Group 4 safety training materials

1. Concept and Classification of Occupational Diseases in Group 4 Safety Training Materials
    - Concept:
        - Occupational diseases are illnesses that arise due to the frequent and prolonged influence and impact of harmful factors arising from production on the body of workers. These are pathological conditions that are characteristic of or related to an occupation.
    - List of Occupational Diseases Covered by Insurance and Guidelines for Diagnosis and Assessment:
        - Occupational silicosis
        - Occupational asbestosis
        - Occupational byssinosis (brown lung disease)
        - Occupational talcosis
        - Occupational coal worker's pneumoconiosis (black lung disease)
        - Occupational chronic bronchitis
        - Occupational asthma
        - Occupational lead poisoning
        - Occupational poisoning by benzene and its homologues
        - Occupational mercury poisoning
        - Occupational manganese poisoning
        - Occupational trinitrotoluene poisoning
        - Occupational arsenic poisoning
        - Occupational pesticide poisoning
        - Occupational nicotine poisoning
        - Occupational carbon monoxide poisoning
        - Occupational cadmium poisoning
        - Occupational noise-induced hearing loss
        - Occupational decompression sickness
        - Occupational disease caused by whole-body vibration
        - Occupational disease caused by hand-arm vibration
        - Occupational radiation sickness
        - Occupational cataract
        - Occupational chloracne
        - Occupational melanosis
        - Occupational chrome ulcer
        - Occupational skin disease due to prolonged exposure to wet and cold environments
        - Occupational skin disease due to contact with natural rubber and rubber additives
        - Occupational leptospirosis
        - Occupational hepatitis B
        - Occupational tuberculosis
        - Occupational HIV infection
        - Occupational hepatitis C
        - Occupational mesothelioma

2. Causes and Preventive Measures in Group 4 Safety Training Materials

    - Characteristics of Causes.
        - Due to the impact of various harmful factors in the working environment on the body, occupational diseases are often complex. One cause can lead to many different pathological syndromes, for example, lead can cause anemia, autonomic nervous system disorders, etc. Conversely, a syndrome can also be caused by many different factors, for example, benzene, lead, and arsenic all cause anemia and weakness, although the mechanisms are different.
    - Preventive Measures.

In order to protect and improve the health of workers against occupational hazards, the following issues should be prioritized.

- Technical Improvement

Technical improvements include advances in production, automation, and mechanization, which not only reduce the burden of labor but also reduce the time of exposure to occupational hazards. This is considered by authors around the world as the number one priority because it proactively minimizes occupational hazards right from the source.

- Reasonable Labor Organization.

Reasonable labor organization includes the distribution of labor in accordance with the anatomical structure, psychology of workers, labor intensity, reasonable working and resting regimes, for example, machines suitable for the anatomical size of the body, labor with harmonious muscle groups, working time in different environments will increase labor productivity and reduce the risk of occupational disorders.

- Measures to Restore Workers' Health.

After a process or a shift, the worker's body needs to be restored to physiological and biochemical balance. Measures to restore workers' health include a full and reasonable diet, rest, entertainment, and rehabilitation exercises.

In any circumstance, mental activities also contribute significantly to improving the health of workers. Finally, taking care of health, early detection of disorders and occupational diseases with the spirit of primary health care for everyone, so that we can gradually improve and strengthen the health of workers effectively..

e. Concept of Safety Engineering, Basic Contents of Safety Engineering Work, and the Impact of Safety Engineering on Occupational Safety and Health in Group 4 Safety Training Materials

1. Concept of Safety Engineering in Group 4 Safety Training Materials

- Safety engineering is a system of organizational and technical measures aimed at preventing the impact of hazardous factors in production. To achieve the goal of preventing the impact of hazardous factors in production on workers, these measures must be thoroughly applied right from the design, construction, or manufacture of machinery, equipment, and technological processes. During production operations, appropriate safety equipment must be implemented synchronously.
- All of these measures are specifically stipulated in technical safety standards and other relevant documents.

2. Basic Contents of Safety Engineering Work.
   - The main contents of safety engineering include the following issues:
     - Identifying hazardous areas.
     - Determining safety measures for management, organization, and work operations.
     - Using appropriate safety equipment: Shielding devices, preventive devices, insurance devices, signals, signs, personal protective equipment, etc.
3. Impact of Safety Engineering on Occupational Safety and Health in Group 4 Safety Training Materials
   - Safety engineering plays a crucial role in occupational safety and health. It serves as the basis for occupational safety and health to develop measures and solutions to prevent the impact of harmful factors in production on workers. Additionally, safety engineering is the foundation for determining permissible exposure limits for each job to ensure occupational safety and health.
4. Relationship and Influence of Safety Engineering on Occupational Safety and Health.
   - Safety engineering is closely related to occupational safety and health. It aims to require employers, when designing or constructing buildings, to base their work on regulations to ensure absolute safety for people and equipment. Based on safety engineering, designers of structures must propose safety measures for each specific task. However, technological advancements and competition in goods production have led to rapid changes in working conditions, production processes, and labor organization. Legal regulations on occupational safety are legal regulations that must be followed in production, labor organization, and control of the environment and working conditions, but sometimes the law cannot keep up with these changes. Therefore, to promptly address occupational safety and health challenges and ensure the health of workers, the International Labour Organization (ILO) has issued guidelines on Occupational Safety and Health Management Systems.
   - Therefore, it is highly feasible and flexible in implementation, contributing to promoting occupational safety and health and developing a safety culture at the workplace.
   - Occupational safety and health have the basic characteristics of not being mandatory to implement like legal regulations, not being legal, and not replacing legal regulations, procedures, standards, and national standards.
   - With the above-mentioned feasibility and flexibility, it is an effective tool to help employers and employees promptly respond to changes in occupational safety and health in actual production. In other words, occupational safety and health are tools and practical measures to support employers, employees, and businesses, management agencies at all levels to continuously improve working conditions and improve occupational safety and health management.

2. METHODS TO IMPROVE WORKING CONDITIONS IN GROUP 4 SAFETY TRAINING MATERIALS

a. Dangerous and Harmful Factors When Working in Group 4 Safety Training Materials

- Identifying Dangerous and Harmful Factors.
    - During the labor process, whether manual labor or mechanized and automated labor, harmful factors can appear. These factors affect the human body, depending on the type and level of impact, can cause injuries, death, and occupational diseases..
    - To assess dangerous and harmful factors in production, managers are required to understand and master the regulations in occupational safety and health standards related to the industry, business, and workers.
    - Concept of Working Conditions.
        - Working conditions are the totality of technical, labor organization, economic, social, and natural factors, expressed through technological processes, tools, labor objects, workers' capacity, and the interaction between these factors, creating working conditions for people in the production process.
        - Working conditions in an enterprise are assessed based on the following main aspects:
            - Safety status of the technological process and machinery and equipment used in production.
            - Labor organization, including the use of labor, labor intensity, posture and position of workers when working, and mental stress.
            - Overall capacity of the workforce, demonstrated through proficiency in work and the ability to recognize and prevent hazards in production.
            - Factory conditions, including compliance with regulations on design and construction, fire prevention and fighting, machinery layout, and industrial hygiene standards.
        - If the above-mentioned working condition assessment indicators do not comply with the regulations in occupational safety and health standards, it will negatively affect workers (causing occupational accidents and diseases), leading to low labor productivity and production efficiency.
    - Dangerous Factors.
        - Dangerous factors are always lurking in areas such as:
            - Use of mechanical machinery
            - Installation, repair, and use of electricity
            - Installation, repair, and use of pressure equipment
            - Installation, repair, and use of lifting equipment
            - In machine installation and construction
            - In the metallurgy industry
            - In the use and storage of chemicals
            - In mining
            - In oil and gas exploration and exploitation
        - In these production areas, dangerous factors have mostly been summarized specifically by regulations in technical safety standards. These factors are

dangerous to workers mainly due to violations of safety regulations or lack of occupational safety and health training when performing work.

- Dangerous factors in production are factors that, when impacting humans, often cause injuries, crushing of body parts, or destruction of the human body. These impacts cause immediate accidents, sometimes leading to death. Common dangerous factors include:
  - Transmission and movement of machinery and equipment
  - Flying objects
  - Falling, collapsing objects
  - Slipping, tripping
  - Electric current
  - Heat source
  - Chemical explosion
  - Physical explosion
  - Explosion of explosives (explosive materials)

- Harmful Factors.
  - These factors arise during the production process and, when impacting humans at levels exceeding their tolerance limits, will cause damage to bodily functions and reduce work capacity. This impact usually occurs gradually and over a long period. The ultimate consequence is occupational disease. Common harmful factors are:
    - Microclimate
    - Industrial dust
    - Toxic substances
    - Light (lighting)
    - Noise
    - Vibration and shock
    - Overexertion

b. Characteristics, Causes, and Effects of Dangerous and Harmful Factors on Workers in Group 4 Safety Training Materials

- Characteristics, Causes, and Effects of Dangerous Factors
  - Transmission and Movement of Machinery and Equipment: Such as belt drives, gear drives, conveyor belts, rolling mills, and cutting blades often cause accidents like entanglement, amputation, etc.
  - Flying Objects: Common cases include workpieces being ejected due to improper clamping, grinding wheel fragments breaking, wood splinters, and rocks flying during blasting. These often cause injuries like bruises and cuts.
  - Falling, Toppling, and Collapsing Objects: Usually the result of unstable or insecure material states, such as furnace collapses or building collapses. These often cause injuries like bruises and fractures.
  - Electric Current: Depending on the voltage and current intensity, it can cause electric shock, paralyzing the respiratory and cardiovascular systems, or electric arcs causing burns and fires.
  - Heat Source: Can cause burns, including open flames, steam, and molten metal.
  - Chemical Explosion:

- A chemical reaction of substances accompanied by the release of a lot of heat and gas occurring in a very short time, creating a large pressure that causes an explosion, destroying obstacles and causing accidents to people within the explosion range.
- Substances that can cause chemical explosions include flammable gases and dust. When they mix with air in a certain ratio and are ignited, they will explode. Each type of flammable gas can only explode when mixed with air in a certain ratio. The wider the explosive limit of the flammable gas mixture with air, the greater the risk of chemical explosion. For example, acetylene has an explosive limit from 3.5 to 82% by volume, while ammonia has an explosive limit from 17 to 25% by volume.

- Physical Explosion:
  - In actual production, pressure equipment can explode when the pressure of the substance contained in it exceeds its allowable limit or due to cracks, dents, corrosion from prolonged use without inspection, or pressure exceeding the allowable pressure.
  - When the equipment explodes, it generates a very large force, breaking obstacles and causing accidents to people around it.
- Explosion of Explosives (Explosive Materials):
  - Explosives, when detonated, generate greater power, breaking objects, causing vibrations and shock waves within a certain radius.

Characteristics, Causes, and Effects of Harmful Factors on Workers.

- Microclimate: This refers to the physical state of the air in a confined workspace, including temperature, humidity, thermal radiation, and air velocity. These factors must

be maintained within certain limits, suitable for the psychological and physiological characteristics of human labor. Exceeding these limits results in an unfavorable microclimate, which can affect the psychology, health, and working capacity of individuals.

- Industrial Dust: This is a collection of tiny particles suspended in the air. The most dangerous dust particles are between 0.5 and 5 micrometers in size. When inhaled, 70-80% of these particles enter the lungs and settle in the alveoli, causing lung damage or pneumoconiosis (dust lung disease).
- Toxic Substances: Most chemicals used in industry and agriculture, as well as many substances generated during technological production processes, are toxic to humans. They are often in liquid, solid, or gaseous forms and enter the body through the respiratory tract, digestive system, or skin absorption. When toxic substances enter the body in amounts exceeding the tolerance limit, chronic poisoning can occur, leading to occupational diseases. Acute poisoning can even result in death.
- Light (Illumination): Light intensity, also known as illuminance, can cause eye diseases if it is too high or too low, reducing work capacity and increasing the risk of occupational accidents.
- Noise: Noise is an unpleasant sound for humans, generated by the movement of parts or components of machines, collisions, etc. Noise exceeding permissible limits can lead to occupational deafness.
- Vibration and Shock: These can be divided into two types: whole-body vibration and hand-arm vibration. Whole-body vibration occurs when workers stand or sit on platforms or floors where machines operate, causing the floor or machine platform to vibrate and shake the entire body of the worker. Hand-arm vibration occurs when a part of the worker's body, while using pneumatic handheld tools, comes into contact with a vibrating part of a machine or equipment, causing vibration in a part of the worker's body.
- Both types of vibration, depending on the level, can cause damage to bones, joints, and cardiovascular disorders. If the vibration exceeds the permissible limit, it can lead to occupational diseases.
- Overexertion: Excessive physical exertion beyond the body's endurance can cause various respiratory and cardiovascular problems, fatigue, loss of concentration, leading to accidents, and even sudden death.

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3. ASSESSMENT OF RISKS CAUSED BY DANGEROUS AND HARMFUL FACTORS WHEN PERFORMING WORK OR OPERATING EQUIPMENT WITH STRICT OSH AND VOSH REQUIREMENTS IN GROUP 4 SAFETY TRAINING MATERIALS

Assessing and managing dangerous and harmful factors is a continuous process through practical inspections and learning from accidents and incidents occurring at the enterprise or at other enterprises in the same industry, by analyzing the causes to prevent recurrence. The assessment

process must be conducted regularly and the role of occupational safety in economic and social development must be considered.

The formulation of OSH policies must be based on the assessment and management of dangerous and harmful factors in production. It is especially important to assess the impact of hazards on people, property, and the environment to determine measures to eliminate, reduce, and control them.

a. Requirements When Conducting Assessments of Dangerous and Harmful Factors in Group 4 Safety Training Materials

- Ensure comprehensive consideration of all production areas under management to identify risk factors.
- Establish measures to control and prevent risks in all production areas.
- Leaders at all levels are responsible for risk management and preparing material and technical conditions for managing and handling dangerous and harmful factors.

b. Main Contents of Assessing and Managing Dangerous and Harmful Factors in Group 4 Safety Training Materials

- Identify hazards.
- Assess the impact of dangerous and harmful factors on people, property, and the environment.
- Determine measures to eliminate and reduce risks.
- Inspect and evaluate the implementation of measures.
- Control to ensure that hazards are within acceptable limits.

Identified dangerous and harmful factors need to be classified according to their likelihood of occurrence and consequences to prescribe mitigation measures. Different types of risks require different management approaches.

c. Common Hazardous Factors in Group 4 Safety Training Materials

- Risks to Workers at the Workplace
  - Working at height.
  - Working in confined spaces.
  - Working in areas with high risks of poisoning, fire, and explosion.
- Risks to the General Working Environment.
  - Lack of vocational training and OSH training before assigning tasks.
  - Unreasonable production organization.
  - Lack of safety measures during construction.
  - Lack of personal protective equipment.
  - Failure to implement state regulations on OSH in ensuring safe working conditions for workers.
- Risks to Equipment, Facilities, and Assets.
  - Incorrectly determining technology can also lead to risks.
  - Imperfect technical equipment, lack of safety devices, and not being periodically inspected can also lead to risks.

d. Essential Factors for Effective Implementation and Management of Dangerous and Harmful Factors in Group 4 Safety Training Materials

- Periodically review and evaluate risk management work and its results for continuous improvement.
- Facilitate two-way communication with workers and stakeholders on OSH issues, and encourage the sharing of OSH lessons learned within and outside the enterprise.

- Top management is responsible for ensuring the consistency of risk management principles for all activities, while avoiding conflicts between the functions and tasks of individuals and decentralized departments.

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4. MEASURES TO IMPROVE WORKING CONDITIONS AT THE WORKPLACE IN GROUP 4 SAFETY TRAINING MATERIALS

a. Overcoming Unfavorable Microclimate Conditions in Group 4 Safety Training Materials

- Mechanization and automation.
- Applying natural or forced ventilation (using ventilation fans, etc.) to increase air circulation and regulate temperature.
- Using adequate personal protective equipment.
- Building shelters to protect against cold, rain, and sun when working outdoors.

b. Dust Control in Group 4 Safety Training Materials

- Implementing measures to reduce dust generation at the source, spraying water to reduce the amount of dust suspended in the air, using dust extraction systems, etc., especially for dust that causes lung diseases.
- Enhancing industrial hygiene with vacuum cleaners, especially for dust that can easily cause fire and explosion.
- Using adequate personal protective equipment.

c. Noise and Vibration Control in Group 4 Safety Training Materials

- Ensuring the prescribed distance from the noise source to the workplace.
- Immediately reducing noise from the source, such as assembling machines and equipment with quality assurance, adhering to maintenance procedures, etc.
- Applying measures to isolate, eliminate noise and vibration, or measures to reduce noise propagation, such as using soundproof covers, sound absorbers, soundproof chambers, planting trees, etc.
- Using adequate personal protective equipment.

d. Proper Lighting in Group 4 Safety Training Materials

- Ensure general and local lighting standards at the workplace for workers in each specific task.

e. Radiation Protection in Group 4 Safety Training Materials

- Organize the workplace reasonably, comply with regulations on marking, storage, transportation, and use of radioactive substances.
- Apply safety measures when working with sealed radioactive sources, such as safe shielding, avoiding activities in front of the beam, increasing safe distance, and reducing exposure time.
- Apply safety measures when working with open sources, such as preventing radioactive substances from entering the body, checking the body after exposure, promptly organizing decontamination, and using fume hoods for isolation.
- Use adequate personal protective equipment.

f. Production and Labor Organization Measures in Group 4 Safety Training Materials

- Arrange the factory layout, walkways and transportation routes, and storage areas for semi-finished and finished products reasonably. The working area must ensure the necessary space for each worker.
- Ensure workplace hygiene.
- Implement measures to treat waste and wastewater.
- Organize reasonable working hours and rest periods.
- Provide healthcare, material support, and recuperation for workers

g. Psychological and Physiological Measures for Workers in Group 4 Safety Training Materials

- Machines and equipment must be suitable for the worker's body, not requiring them to work under excessive stress, at an overly urgent pace, or in constrained positions.
- Build harmonious and cooperative relationships in the workplace for the development of the enterprise. Here, we pay attention to radiofrequency electromagnetic fields. Currently, many types of machines generating electromagnetic fields are used in various industries, such as:
    - Information: radio and television broadcasting.
    - Industry: metal heating and tempering.
    - Military: radar.
    - Medicine: disease diagnosis and treatment.
    - Civil: microwave ovens.
- Preventive Measures...
    - Reduce the intensity and density of energy flow by using loads, absorbing power, shielding, increasing safe contact distance, arranging equipment reasonably, using warning devices and signals, using adequate personal protective equipment, organizing reasonable working hours and rest periods, and increasing environmental monitoring and health checks for workers.

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5. SAFETY CULTURE IN PRODUCTION AND BUSINESS IN GROUP 4 SAFETY TRAINING MATERIALS

a. Safety Culture in the Workplace in Group 4 Safety Training Materials

The concept of safety culture, or "Safety Culture" in English, emerged globally several decades ago. Many countries and authors have defined it differently, but they generally refer to the humanitarian meaning, attitude, and behavior towards effective management of occupational safety and health. In June 2003, at the International Labour Conference, the issue of safety culture was presented comprehensively and systematically.

Safety culture is understood as a culture in which the right to a safe and healthy working environment for workers is valued by all sectors and levels. It is a culture in which the government, authorities, employers, and employees, with a system of rights, responsibilities, and obligations, actively participate in ensuring a safe and healthy working environment; it is a culture where the principle of prevention is prioritized.

In other words, with the viewpoint that "The only national asset is the people," valuing people in the labor and production process, all levels of government, organizations, and individuals, with their responsibilities, rights, and obligations, must proactively and actively prevent, ensure, and build a safe, hygienic, and comfortable working environment and conditions for workers, in which workers are continuously protected from occupational accidents and diseases, but also

valued, enjoy the achievements, and actively contribute to improving the culture in labor and production. This is the cause of occupational safety and health with culture and high humanity.

According to the International Labour Organization, safety culture in the workplace consists of three elements: A complete legal system of the state; the enterprise's compliance with the law, creating the best conditions to implement occupational safety procedures and standards; and the self-awareness and self-protection of workers.

Thus, it can be said that safety culture in the workplace is also an inseparable part of corporate culture. As mentioned above, corporate culture includes legal and ethical elements. The legal element can naturally be understood as the complete legal system of the state, including regulations for labor protection procedures and standards. The ethical element here is understood as the employer's care for the employees, manifested in the strict implementation of labor protection procedures and standards, and caring for the lives and emotions of employees towards the enterprise. "Countries around the world are increasingly valuing occupational safety and health and the corporate environment. Therefore, "social responsibility standards" and "codes of conduct" (COC) have been introduced, sharing three common points: "Taking care of workers' health; ensuring occupational safety and health conditions; and protecting the environment." All products that violate one of these three points are considered "unclean products" and are boycotted by the world."

Therefore, building a good safety culture in the workplace is an indispensable requirement for businesses today. This is not an easy issue and requires the right and deep awareness of the head of the enterprise. The reality in Vietnam shows that there are still many businesses that do not pay attention to this issue, but only focus on how to maximize profits for the enterprise, as the heads of these businesses have not yet realized the importance of corporate culture, business culture, and safety culture in the sustainable development of their businesses. Therefore, at present and in the coming years, promoting, educating, and building standards for business culture are essential to develop a team of Vietnamese entrepreneurs capable of reaching out to the world.

Implementing a safety culture in the integration period helps businesses create a good working environment, ensuring occupational safety and health, a healthy, joyful, and exciting cultural environment for workers to feel secure in production, and a stable material life, bringing great benefits to the enterprise by creating trust from product users and the trust of partners. Especially, it creates a favorable environment for investors and partners to feel secure in joint ventures and cooperation with the enterprise, helping the enterprise develop sustainably.

Building and maintaining a culture of prevention-oriented safety and health requires utilizing all available means to enhance understanding, knowledge, and general awareness of the concepts of hazards, risks, and how to prevent and control them. No matter how well a business is performing, it should always consider how it can perform even better. This process includes finding ways to improve existing systems and processes and how to utilize new technologies for the benefit of everyone.

b. How to Achieve a Safety Culture in the Workplace?

Governments are responsible for developing and implementing a comprehensive national policy on occupational safety and health to promote a preventive culture in all their citizens from a young age, starting with education.

Employers are responsible for committing to providing a safe and healthy working environment by establishing occupational safety and health management systems based on the ILO's guidelines on ILO-OSH 2001.

These guidelines state that:

Occupational safety and health, including compliance with legal and national regulations on occupational safety and health, is the responsibility and obligation of the employer. The employer must direct and commit to implementing occupational safety and health activities within the enterprise and make appropriate organizational arrangements to establish an occupational safety and health management system.

Workers are responsible for cooperating with their employers in creating and maintaining a preventive culture in the workplace and actively participating in the enterprise's occupational safety and health management system. They need to be consulted, informed, and trained on all occupational safety and health issues and must have the time and resources to participate actively, for example, in safety and health committees. As stated in the ILO-OSH guidelines:

Worker participation is an essential element of an occupational safety and health management system in an organization.

The ILO - the only tripartite organization in the world, bringing together governments, employers, and workers, and treating them fairly - has been tasked with influencing the global Occupational Safety and Health agenda. UN Secretary-General Kofi Annan wrote:

The safety and health of workers are part and parcel of human security. As a leading agency in protecting workers' rights within the United Nations, the ILO has always been at the forefront of advocating and implementing activities to improve safety and health in the workplace. Safe work is not only a major economic policy but also a fundamental human right.

- Levels of Safety Culture

A company's safety culture can be divided into the following levels:

Poor: These are companies where safety responsibility is unclear, and safety exists only in form. Safety regulations are not disseminated or followed, those in charge say one thing and do another, safety violations occur and are either punished or concealed without being reported to relevant parties.

Reactive: In Vietnamese terms, this is "closing the stable door after the horse has bolted," a slightly higher level of safety culture. Only after an incident occurs are deficiencies and gaps in safety addressed at a local level, not at a higher level of system errors.

Proactive: Safety culture is deeply ingrained in the company's operations. The company has a safety management system that is actively applied in daily activities, and the workforce and management have a deep understanding of technological safety and personal safety. Every action of each individual and the company bears the mark of safety culture. For example, the factory accepts the risk of production loss when conducting periodic maintenance tests of emergency shutdown valves.

- Building a Safety Culture
- To build a safety culture, attention must be paid to developing the safety culture of each individual and the culture of the entire company. The safety culture of each individual is influenced by many factors: from occupation, country, region, family, etc. Within the scope of the profession, personal safety culture is reinforced first and foremost by the company's general safety policies, safety behavior requirements for each member, safety campaigns, training programs, and a significant part is influenced by the behavior of those responsible for safety.
- As many sociologists have analyzed, the culture of each person is influenced by many factors, and it is formed over a very long process, so changing it is not easy and cannot be done overnight. Safety culture is a part of the overall culture, so it is no exception. Vietnam, in this very specific development stage, has its own characteristics in terms of general culture and safety culture, etc…

c. Trends in Building a Safety Culture in Enterprises in Group 4 Safety Training Materials

Following the trend of international integration, an enterprise is considered to have a competitive advantage and many potential growth opportunities when, in addition to modern machinery and equipment, it also has a safe working environment and always prioritizes the safety of its workforce. Experience from developed countries shows that building a safety culture is one of the important criteria for businesses to survive and develop sustainably.

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6. RIGHTS AND OBLIGATIONS OF EMPLOYERS AND EMPLOYEES; POLICIES AND REGIMES ON OCCUPATIONAL SAFETY AND HEALTH FOR EMPLOYEES; FUNCTIONS AND TASKS OF THE STUDENT SAFETY AND HEALTH NETWORK.

a. Rights and Obligations of Employers: Article 7 of Law No. 84/2015/QH13

1. Employers have the following rights:
    - a) To request employees to comply with the regulations, procedures, and measures to ensure occupational safety and health at the workplace;
    - b) To reward employees who comply well and discipline employees who violate occupational safety and health regulations;
    - c) To complain, denounce, or sue in accordance with the law;
    - d) To mobilize employees to participate in emergency response and khắc phục sự cố, tai nạn lao động.
2. Employers have the following obligations:
    - a) To develop, organize the implementation of, and actively coordinate with agencies and organizations in ensuring occupational safety and health at the workplace under their responsibility for employees and related persons; to pay occupational accident and disease insurance for employees;
    - b) To organize training and guidance on regulations, rules, procedures, and measures to ensure occupational safety and health; to provide adequate tools and equipment to ensure occupational safety and health; to implement healthcare and occupational disease detection; to fully implement the regime for employees who suffer from occupational accidents and diseases;
    - c) Not to force employees to continue working or return to the workplace when there is a risk of occupational accidents that seriously threaten the lives or health of employees;
    - d) To appoint supervisors to inspect the implementation of regulations, procedures, and measures to ensure occupational safety and health at the workplace in accordance with the law;
    - e) To arrange a department or person to handle occupational safety and health; to coordinate with the Executive Board of the grassroots trade union to establish a student

safety and health network; to define responsibilities and assign authority for occupational safety and health;

- f) To carry out reporting, investigation, statistics, and reporting of occupational accidents, occupational diseases, and technical incidents that cause serious occupational safety and health risks; to collect statistics and report on the implementation of occupational safety and health; to comply with the decisions of specialized inspectors on occupational safety and health;
- g) To consult with the Executive Board of the grassroots trade union when developing plans, regulations, procedures, and measures to ensure occupational safety and health.

b. Rights and Obligations Regarding Occupational Safety and Health of Employees: Article 6 of Law No. 84/2015/QH13

1. Employees working under labor contracts have the following rights:
   - a) To be guaranteed fair working conditions, occupational safety, and health; to request the employer to be responsible for ensuring occupational safety and health conditions during work and at the workplace;
   - b) To be fully informed about hazardous and harmful factors at the workplace and preventive measures; to be trained on occupational safety and health;
   - c) To have access to labor protection regimes, healthcare, and occupational disease detection; to have occupational accident and disease insurance paid by the employer; to fully enjoy the regime for employees who suffer from occupational accidents and diseases; to be reimbursed for medical examination fees for injuries and illnesses caused by occupational accidents and diseases; to proactively undergo medical examinations to determine the level of reduced work capacity and be reimbursed for examination fees in cases where the examination results meet the conditions for adjusting the increase in occupational accident and disease benefits;
   - d) To request the employer to arrange suitable work after stable treatment due to occupational accidents and diseases;
   - e) To refuse to work or leave the workplace while still being paid in full and not be considered to have violated labor discipline when there is a clear risk of occupational accidents that seriously threaten their lives or health, but must immediately report to the direct manager to have a solution; to only continue working when the direct manager and the person in charge of occupational safety and health have khắc phục the risks to ensure occupational safety and health;
   - f) To complain, denounce, or sue in accordance with the law.
2. Employees working under labor contracts have the following obligations:
   - a) To comply with regulations, procedures, and measures to ensure occupational safety and health at the workplace; to comply with agreements on occupational safety and health in labor contracts and collective bargaining agreements;
   - b) To use and maintain personal protective equipment provided; to use safety and health equipment at the workplace;
   - c) Promptly report to the responsible person when detecting a risk of technical incidents causing occupational safety and health problems, occupational accidents, or occupational diseases; proactively participate in rescue and khắc phục sự cố, tai nạn lao động according to the incident handling plan, emergency response, or when ordered by the employer or competent state agency.

3. Employees working without labor contracts have the following rights:
    - a) To work in safe and hygienic conditions; to be facilitated by the state, society, and family to work in a safe and hygienic environment;
    - b) To receive information, communication, and education on occupational safety and health; to be trained on occupational safety and health when performing jobs with strict requirements for occupational safety and health;
    - c) To participate in and enjoy occupational accident insurance on a voluntary basis as prescribed by the government. Based on socio-economic development conditions and the state budget capacity in each period, the government shall specify details on financial support for voluntary occupational accident insurance premiums;
    - d) To complain, denounce, or sue in accordance with the law.
4. Employees working without labor contracts have the following obligations:
    - a) To be responsible for occupational safety and health in the work they perform as prescribed by law;
    - b) To ensure occupational safety and health for related persons during work;
    - c) To inform local authorities to promptly prevent acts that cause occupational safety and health problems.
5. Officials, public employees, civil servants, and people in the people's armed forces have the same rights and obligations regarding occupational safety and health as employees stipulated in clauses 1 and 2 of this Article, unless otherwise specified in legal documents specifically applicable to this group..
6. Apprentices and trainees working for employers have the same rights and obligations regarding occupational safety and health as employees stipulated in clauses 1 and 2 of this Article.
7. Foreign workers working in Vietnam have the same rights and obligations regarding occupational safety and health as employees stipulated in clauses 1 and 2 of this Article; however, participation in occupational accident and disease insurance shall be implemented in accordance with government regulations.

c. POLICIES AND REGIMES ON OCCUPATIONAL SAFETY AND HEALTH FOR EMPLOYEES IN LAW NO. 84/2015/QH13:

Article 21. Health Examinations and Treatment of Occupational Diseases for Employees

1. Every year, employers must organize at least one health examination for employees; for employees working in arduous, hazardous, or dangerous occupations or jobs, or especially arduous, hazardous, or dangerous occupations or jobs, employees with disabilities, young employees, and elderly employees must be examined at least once every 6 months.
2. During health examinations as prescribed in Clause 1 of this Article, female workers must undergo gynecological examinations, and those working in environments exposed to factors that may cause occupational diseases must be examined for occupational diseases.
3. Employers must organize health examinations for employees before assigning them to work and before transferring them to more arduous, hazardous, or dangerous occupations or jobs, or after they have recovered from occupational accidents or diseases and return to work, unless they have been examined by a medical board to assess their reduced work capacity.
4. Employers must organize health examinations for employees and occupational disease detection at medical examination and treatment facilities that meet professional and technical requirements.
5. Employers must take employees diagnosed with occupational diseases to medical examination and treatment facilities that meet professional and technical conditions for treatment according to the occupational disease treatment regimen prescribed by the Minister of Health.
6. The costs of health examinations, occupational disease detection, and treatment of occupational diseases for employees paid by employers as prescribed in Clauses 1, 2, 3, and 5 of this Article shall be included in deductible expenses when determining taxable income according to the Law on Enterprise Income Tax and included in regular operating expenses for administrative agencies and non-business units without service activities.

Article 22. Arduous, Hazardous, and Dangerous Occupations and Jobs

1. Arduous, hazardous, and dangerous occupations and jobs, and especially arduous, hazardous, and dangerous occupations and jobs are classified based on the characteristics and specific working conditions of each occupation or job.
2. The Minister of Labor, War Invalids, and Social Affairs shall issue a List of arduous, hazardous, and dangerous occupations and jobs, and especially arduous, hazardous, and dangerous occupations and jobs after consulting with the Ministry of Health; and shall prescribe standards for classifying labor according to working conditions.
3. Employers must fully implement labor protection and healthcare regimes for employees working in arduous, hazardous, and dangerous occupations and jobs, and especially arduous, hazardous, and dangerous occupations and jobs as prescribed by law.

Article 23. Personal Protective Equipment in Labor

1. Employees working in jobs with hazardous or harmful factors must be provided with adequate personal protective equipment by the employer and must use it during work.
2. Employers must implement technological, technical, and equipment solutions to eliminate or minimize hazardous and harmful factors and improve working conditions.

3. When providing personal protective equipment, employers must ensure the following principles:
    - a) The right type, the right subjects, sufficient quantity, and quality assurance according to national technical standards and regulations;
    - b) Not paying money instead of providing personal protective equipment; not forcing employees to buy or collect money from employees to buy personal protective equipment;
    - c) Instructing and supervising employees in using personal protective equipment;
    - d) Organizing the implementation of detoxification, disinfection, and decontamination measures to ensure hygiene for used personal protective equipment in places prone to poisoning, infection, and radiation.
4. The Minister of Labor, War Invalids, and Social Affairs shall prescribe the regime for providing personal protective equipment in labor.

Article 24. Material Support

1. Employees working in conditions with hazardous or harmful factors shall be provided with material support by the employer.
2. The provision of material support shall follow the following principles:
    - a) Help increase the body's resistance and detoxification;
    - b) Ensure convenience, safety, and food hygiene;
    - c) Implement during shifts or working days, except in special cases where labor organization cannot organize centralized support on-site.
3. The Minister of Labor, War Invalids, and Social Affairs shall prescribe the provision of material support.

Article 25. Working Hours in Conditions with Hazardous or Harmful Factors.

1. Employers are responsible for ensuring that the exposure time of employees to hazardous or harmful factors is within the safety limits specified in the corresponding national technical regulations and relevant legal provisions.
2. Working hours for employees working in especially arduous, hazardous, and dangerous occupations or jobs shall be implemented in accordance with labor law regulations.

Article 26. Health Recuperation

Every year, employers are encouraged to organize health recuperation for employees working in arduous, hazardous, or dangerous occupations or jobs, especially arduous, hazardous, or dangerous occupations or jobs, and employees with poor health.

Article 27. Employee Health Management

1. Employers must base on the health standards prescribed for each type of occupation or job and the results of health examinations to arrange suitable work for employees.
2. Employers are responsible for establishing and managing employee health records and occupational disease records; notifying employees of the results of health examinations and occupational disease detection; and annually reporting on the management of employee health under their responsibility to the competent state health management agency.

Article 41. Principles of Implementing the Regime for People with Occupational Accidents and Diseases from the Occupational Accident and Disease Insurance Fund

1. The Occupational Accident and Disease Insurance Fund is a component fund of the Social Insurance Fund; the contribution, benefit, management, and use of the fund shall be implemented in accordance with the provisions of this Law and the Social Insurance Law.
2. The contribution rate for occupational accident and disease insurance is calculated based on the monthly salary of the employee and is paid by the employer.
3. The level of benefits and support for people with occupational accidents and diseases is calculated based on the level of reduced work capacity, the contribution level, and the contribution period to the Occupational Accident and Disease Insurance Fund.
4. The implementation of occupational accident and disease insurance must be simple, easy, convenient, and ensure timely and full benefits for participants in occupational accident and disease insurance.

Article 42. Use of the Occupational Accident and Disease Insurance Fund.

1. To pay for medical examination fees for injuries and illnesses caused by occupational accidents and diseases for cases eligible for benefits as prescribed in Articles 45 and 46 of this Law; to pay for medical examination fees for cases where employees proactively undergo medical examinations to determine the level of reduced work capacity as prescribed in Point b, Clause 1, and Clause 3, Article 47 of this Law, and the examination results meet the conditions for adjusting the increase in occupational accident and disease benefits.
2. To pay lump-sum benefits, monthly benefits, and service benefits.
3. To pay for assistive devices, prosthetics, and orthotics.
4. To pay for recuperation and health recovery.
5. To support prevention and risk sharing for occupational accidents and diseases.
6. To support career transition for people with occupational accidents and diseases when returning to work.
7. The cost of managing occupational accident and disease insurance shall be implemented in accordance with the provisions of the Social Insurance Law.
8. To pay for health insurance for people who leave work and receive monthly occupational accident and disease insurance benefits.

Article 43. Subjects Applying the Occupational Accident and Disease Insurance Regime.

1. The subjects applying the occupational accident and disease insurance regime as prescribed in this Section are employees participating in compulsory social insurance as prescribed in Points a, b, c, d, dd, e, and h, Clause 1, Article 2, and employers prescribed in Clause 3, Article 2 of the Social Insurance Law.
2. In cases where an employee enters into a labor contract with multiple employers, each employer must pay occupational accident and disease insurance according to each concluded labor contract if the employee is subject to compulsory social insurance participation. When suffering from an occupational accident or disease, the employee shall be entitled to occupational accident and disease insurance benefits according to the principle of contribution and benefit as prescribed by the Government.

Article 44. Contribution Level and Sources of the Occupational Accident and Disease Insurance Fund

1. Each month, the employer shall contribute a maximum of 1% of the salary fund used as the basis for paying social insurance for the employees specified in Article 43 of this Law to the Occupational Accident and Disease Insurance Fund.
2. The sources of the Occupational Accident and Disease Insurance Fund include:
    - a) The contribution under the responsibility of the employer as prescribed in Clause 1 of this Article;
    - b) The profits from investment activities of the fund as prescribed in Articles 90 and 91 of the Social Insurance Law;
    - c) Other lawful sources of income.
3. Based on the ability to ensure the balance of the Occupational Accident and Disease Insurance Fund, the Government shall specify in detail the contribution level to the fund as prescribed in Clause 1 of this Article.

Article 45. Conditions for Receiving Occupational Accident Benefits

Employees participating in occupational accident and disease insurance are entitled to occupational accident benefits when they meet all of the following conditions:

1. Suffer an accident in one of the following cases:
    - a) At the workplace and during working hours, including while performing necessary personal needs at the workplace or during working hours as permitted by the Labor Code and internal regulations of the production and business establishment, including rest breaks, meals during shifts, supplemental meals, menstrual hygiene, bathing, breastfeeding, and using the restroom;
    - b) Outside the workplace or outside working hours when performing work at the request of the employer or a person authorized in writing by the employer to directly manage labor;
    - c) On the route from home to work or from work to home within a reasonable time frame and route;
2. Have a work capacity reduction of 5% or more due to the accident specified in Clause 1 of this Article;
3. The employee is not entitled to benefits paid by the Occupational Accident and Disease Insurance Fund if they fall under one of the causes specified in Clause 1, Article 40 of this Law.

Article 46. Conditions for Receiving Occupational Disease Benefits

1. Employees participating in occupational accident and disease insurance are entitled to occupational disease benefits when they meet all of the following conditions:
    - a) Have an occupational disease listed in the List of Occupational Diseases issued by the Minister of Health as prescribed in Clause 1, Article 37 of this Law;
    - b) Have a work capacity reduction of 5% or more due to the disease specified in Point a of this Clause.
2. Employees who have retired or are no longer working in occupations or jobs with a risk of occupational diseases listed in the List of Occupational Diseases issued by the Minister of Health

as prescribed in Clause 1, Article 37 of this Law, but are found to have an occupational disease within the prescribed time, shall be assessed to consider and resolve the benefits according to the Government's regulations..

Article 47. Assessment of Work Capacity Reduction

1. Employees with occupational accidents or diseases shall be assessed or reassessed for their level of work capacity reduction in one of the following cases:
    - a) After the injury or illness has been initially treated and stabilized, but sequelae remain affecting health;
    - b) After the injury or illness has recurred and been treated and stabilized;
    - c) In cases where the injury or occupational disease cannot be treated and stabilized according to the regulations of the Minister of Health, the employee shall be assessed before or during the treatment process
2. Employees shall be assessed for the total level of work capacity reduction in one of the following cases:
    - a) Having both an occupational accident and an occupational disease;
    - b) Having multiple occupational accidents;
    - c) Having multiple occupational diseases.
3. Employees specified in Point b, Clause 1 of this Article shall be reassessed for occupational accidents and diseases after 24 months from the date the employee was concluded by the Medical Assessment Council on the percentage of work capacity reduction immediately before; in cases where the nature of the occupational disease causes the employee's health to decline rapidly, the assessment time shall be conducted earlier as prescribed by the Minister of Health.

Điều 48. Trợ cấp một lần

1. Người lao động bị suy giảm khả năng lao động từ 5% đến 30% thì được hưởng trợ cấp một lần.
2. Mức trợ cấp một lần được quy định như sau:
    - a) Suy giảm 5% khả năng lao động thì được hưởng năm lần mức lương cơ sở, sau đó cứ suy giảm thêm 1% thì được hưởng thêm 0,5 lần mức lương cơ sở;
    - b) Ngoài mức trợ cấp quy định tại điểm a khoản này, còn được hưởng thêm khoản trợ cấp tính theo số năm đã đóng vào Quỹ bảo hiểm tai nạn lao động, bệnh nghề nghiệp, từ một năm trở xuống thì được tính bằng 0,5 tháng, sau đó cứ thêm mỗi năm đóng vào quỹ được tính thêm 0,3 tháng tiền lương đóng vào quỹ của tháng liền kề trước tháng bị tai nạn lao động hoặc được xác định mắc bệnh nghề nghiệp; trường hợp bị tai nạn lao động ngay trong tháng đầu tham gia đóng vào quỹ hoặc có thời gian tham gia gián đoạn sau đó trở lại làm việc thì tiền lương làm căn cứ tính khoản trợ cấp này là tiền lương của chính tháng đó.
3. Bộ trưởng Bộ Lao động - Thương binh và Xã hội quy định chi tiết việc tính hưởng trợ cấp tai nạn lao động, bệnh nghề nghiệp trong trường hợp người lao động thay đổi mức hưởng trợ cấp do giám định lại, giám định tổng hợp.

Article 48. Lump-Sum Benefits

1. Employees with a work capacity reduction from 5% to 30% shall be entitled to a lump-sum benefit.

2. The level of the lump-sum benefit is specified as follows:
    - a) A 5% reduction in work capacity shall be entitled to five times the base salary, and then for each additional 1% reduction, an additional 0.5 times the base salary shall be granted;
    - b) In addition to the benefit specified in Point a of this Clause, an additional benefit shall be granted based on the number of years of contribution to the Occupational Accident and Disease Insurance Fund, from one year or less shall be calculated as 0.5 months, and then for each additional year of contribution to the fund, an additional 0.3 months of the salary contributed to the fund in the month immediately preceding the month of the occupational accident or the determination of occupational disease shall be granted; in the case of an occupational accident occurring in the first month of contribution to the fund or having an intermittent contribution period and then returning to work, the salary used as the basis for calculating this benefit is the salary of that month

Article 48. Lump-Sum Benefits

- The temporary suspension, resumption, and payment of monthly occupational accident and disease benefits, and service benefits shall be implemented in accordance with the provisions of Article 64 of the Social Insurance Law; the dossiers and procedures for resolving the resumption of monthly occupational accident and disease benefits shall be implemented in accordance with the provisions of Articles 113 and 114 of the Social Insurance Law. In the case of temporary suspension of benefits as prescribed in Point c, Clause 1, Article 64 of the Social Insurance Law, the social insurance agency must notify in writing and clearly state the reasons; the decision to terminate benefits must be based on the conclusion or decision of the competent state agency.
- A person receiving monthly occupational accident benefits who moves to another location within the country and wishes to receive benefits at the new place of residence shall submit an application to the social insurance agency where they are currently receiving benefits. Within 05 days from the date of receiving the application, the social insurance agency is responsible for resolving it; if it is not resolved, a written response with clear reasons must be provided.
- A person receiving monthly occupational accident and disease benefits who goes abroad to settle shall be entitled to a one-time lump-sum benefit; the amount of the one-time lump-sum benefit is equal to 03 months of the current benefit level. The dossier and procedures for resolving the one-time lump-sum benefit shall be implemented in accordance with the provisions of Clause 2, Clause 3, Article 109, and Clause 4, Article 110 of the Social Insurance Law.
- The level of monthly occupational accident and disease benefits and service benefits shall be adjusted according to the provisions of the Social Insurance Law.

Article 50. Time of Receiving Benefits

1. The time of receiving benefits as prescribed in Articles 48, 49, and 52 of this Law shall be calculated from the month the employee completes treatment and is discharged from the hospital or from the month of the conclusion of the Medical Assessment Council in cases of non-hospitalization; in the case of a comprehensive assessment of the level of work capacity reduction as prescribed in Clause 2, Article 47 of this Law, the time of benefits shall be calculated

from the month the employee completes treatment and is discharged from the hospital for the last occupational accident or disease, or from the month of the conclusion of the comprehensive assessment of the Medical Assessment Council in cases of non-hospitalization..

In cases where an employee suffers an occupational accident or disease and the time of completion of treatment and discharge from the hospital cannot be determined, the time of receiving occupational accident and disease benefits shall be calculated from the month of the conclusion of the Medical Assessment Council; in cases of HIV/AIDS infection due to occupational accidents, the time of receiving benefits shall be calculated from the month the employee is issued a Certificate of HIV/AIDS infection due to occupational accidents.

2. In cases where employees are assessed for work capacity reduction as prescribed in Point b, Clause 1, and Clause 2, Article 47 of this Law, the time of receiving new benefits shall be calculated from the month of the conclusion of the Medical Assessment Council..

Article 51. Assistive Devices and Prostheses

1. Employees with occupational accidents or diseases who suffer from impaired bodily functions shall be provided with money to purchase assistive devices and prostheses according to the duration based on the condition of the injury or disease and as prescribed by medical examination and treatment facilities, orthopedic and rehabilitation facilities that meet professional and technical requirements.
2. The Minister of Labor, War Invalids, and Social Affairs shall specify in detail the types of assistive devices and prostheses, duration, amount of money for purchasing assistive devices and prostheses, and dossiers and procedures for implementation.

Article 52. Service Benefits

Employees with a work capacity reduction of 81% or more who suffer from spinal paralysis or blindness in both eyes or amputation or paralysis of both limbs or mental illness, in addition to the benefits prescribed in Article 49 of this Law, shall also receive a monthly service benefit equal to the base salary.

Article 53. Benefits When an Employee Dies Due to an Occupational Accident or Disease

The relatives of an employee shall be entitled to a one-time lump-sum benefit equal to thirty-six times the base salary in the month the employee died and shall be entitled to death benefits as prescribed by the Social Insurance Law in one of the following cases:

1. An employee who is working dies due to an occupational accident or disease;
2. An employee dies during the initial treatment period due to an occupational accident or disease;
3. An employee dies during the treatment period for an injury or illness without having been assessed for work capacity reduction.

The dossier for receiving death benefits in the case of an employee dying due to an occupational accident or disease shall be implemented in accordance with the provisions of Clause 1, Article 111 of the Social Insurance Law.

Article 54. Recuperation and Health Recovery after Injury or Illness Treatment

1. Employees who have been treated and stabilized for injuries due to occupational accidents or illnesses due to occupational diseases, within the first 30 days of returning to work, if their health has not yet recovered, are entitled to rest and recuperate from 5 to 10 days for each occupational accident or disease.

In cases where the conclusion of the Medical Assessment Council on the level of work capacity reduction has not been received within the first 30 days of returning to work, employees are still entitled to rest and recuperation benefits after treatment for injuries or illnesses as prescribed in Clause 2 of this Article if the Medical Assessment Council concludes that the level of work capacity reduction meets the conditions for receiving occupational accident and disease insurance benefits.

2. The number of days of rest and recuperation prescribed in Clause 1 of this Article shall be decided by the employer and the Executive Board of the grassroots trade union; in cases where the employer has not yet established a grassroots trade union, the employer shall decide. The duration of rest and recuperation is specified as follows:
    - a) Up to 10 days for cases of occupational accidents or diseases with a work capacity reduction of 51% or more;
    - b) Up to 07 days for cases of occupational accidents or diseases with a work capacity reduction from 31% to 50%;
    - c) Up to 05 days for cases of occupational accidents or diseases with a work capacity reduction from 15% to 30%.
3. Employees specified in Clause 1 of this Article shall be entitled to 01 day equal to 30% of the base salary.

Article 55. Support for Career Transition for People with Occupational Accidents and Diseases When Returning to Work

1. In cases where people with occupational accidents or diseases are arranged by the employer for new jobs under their management as prescribed in Clause 8, Article 38 of this Law, if the employees need to be trained for career transition, they shall be supported with tuition fees.
2. The support level shall not exceed 50% of the tuition fees and shall not exceed fifteen times the base salary; the maximum number of support times for each employee is two, and only one support can be received in 01 year.

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7. REGULATIONS ON OCCUPATIONAL SAFETY AND HEALTH, SAFETY SIGNS AND INSTRUCTIONS, AND THE USE OF SAFETY EQUIPMENT AND PERSONAL PROTECTIVE GEAR; OCCUPATIONAL FIRST AID

PROCEDURES AND SKILLS, AND OCCUPATIONAL DISEASE PREVENTION

a. Regulations on Occupational Safety and Health, Safety Signs, and Instructions in Law No. 84/2015/QH13:

Article 15. Regulations and Procedures for Ensuring Occupational Safety and Health

Employers shall, based on the law, national technical standards, local technical standards on occupational safety and health, and production, business, and labor operating conditions, develop, issue, and organize the implementation of regulations and procedures to ensure occupational safety and health.

Article 16. Employer's Responsibilities in Ensuring Occupational Safety and Health at the Workplace.

1. Ensure that the workplace meets the requirements for space, ventilation, dust, fumes, toxic gases, radiation, electromagnetic fields, heat, humidity, noise, vibration, and other hazardous and harmful factors as prescribed in relevant technical regulations, and periodically inspect and measure these factors; ensure adequate and appropriate shower and toilet facilities at the workplace as prescribed by the Minister of Health.
2. Ensure that machines, equipment, materials, and substances used, operated, maintained, and stored at the workplace comply with technical regulations on occupational safety and health, or meet published and applied technical standards on occupational safety and health, and follow the regulations and procedures for ensuring occupational safety and health at the workplace.
3. Provide employees with adequate personal protective equipment when performing work with hazardous or harmful factors; equip the workplace with safety and health equipment.
4. Annually or when necessary, organize inspections and assessments of hazardous and harmful factors at the workplace to implement technological and technical measures to eliminate and minimize hazardous and harmful factors at the workplace, improve working conditions, and take care of employees' health.
5. Periodically inspect and maintain machines, equipment, materials, substances, workshops, and warehouses.
6. Have warning signs and instructions in Vietnamese and the common language of employees regarding occupational safety and health for machines, equipment, materials, and substances that have strict requirements for occupational safety and health at the workplace, storage, preservation, and use, and place them in easy-to-read and visible locations.
7. Disseminate, publicize, or train employees on regulations, rules, and procedures on occupational safety and health, measures to prevent and combat hazardous and harmful factors at the workplace related to the assigned work and tasks.
8. Develop and issue plans for incident handling and emergency response at the workplace; organize incident handling, emergency response, and rescue forces, and promptly report to the responsible person when detecting risks or when occupational accidents or technical incidents causing loss of occupational safety and health at the workplace occur beyond the employer's control.

Article 17. Employee's Responsibilities in Ensuring Occupational Safety and Health at the Workplace

1. Comply with regulations, rules, procedures, and requirements on occupational safety and health issued by the employer or competent state agency related to the assigned work and tasks.
2. Comply with the law and master knowledge and skills on measures to ensure occupational safety and health at the workplace; use and maintain provided personal protective equipment and safety and health equipment at the workplace during the performance of assigned work and tasks.
3. Participate in occupational safety training before using machines, equipment, materials, and substances that have strict requirements for occupational safety and health.
4. Prevent direct risks causing loss of occupational safety and health, acts of violating safety and health regulations at the workplace; promptly report to the responsible person when aware of occupational accidents, incidents, or detecting risks of incidents, occupational accidents, or occupational diseases; actively participate in rescue and khắc phục sự cố, tai nạn lao động according to the incident handling and emergency response plan or when ordered by the employer or competent state agency.

Article 18. Control of Hazardous and Harmful Factors at the Workplace

1. Employers must organize the assessment and control of hazardous and harmful factors at the workplace to propose technical measures for occupational safety and health and healthcare for employees; implement detoxification and disinfection measures for employees working in places with factors causing poisoning and infection.
2. For harmful factors for which the Minister of Health prescribes permissible exposure limits to control the harmful effects on workers' health, employers must organize environmental monitoring of the workplace to assess harmful factors at least once a year. The unit organizing environmental monitoring of the workplace must have sufficient facilities, equipment, and personnel.
3. For hazardous factors, employers must regularly monitor and manage them in accordance with technical requirements to ensure occupational safety and health at the workplace, and at least once a year, organize inspections and assessments of these factors as prescribed by law.
4. Immediately after obtaining the results of workplace environmental monitoring to assess harmful factors and the results of inspection, assessment, and management of hazardous factors at the workplace, employers must:
    - a) Publicly announce to employees at the location of environmental monitoring and the location where hazardous factors were inspected, assessed, and managed;
    - b) Provide information when requested by trade unions, agencies, or competent organizations;
    - c) Take measures to khắc phục and control hazardous and harmful factors at the workplace to ensure occupational safety and health and healthcare for employees.
5. The Government shall detail the control of hazardous and harmful factors at the workplace and the operating conditions of environmental monitoring organizations to ensure compliance with the Law on Investment and the Law on Enterprises.

Article 19. Measures to Handle Technical Incidents Causing Serious Occupational Safety and Health Problems and Emergency Response

1. Employers must have a plan to handle technical incidents causing serious occupational safety and health problems and emergency response, and periodically organize drills as prescribed by law; equip technical and medical facilities to ensure timely rescue and first aid when technical incidents causing serious occupational safety and health problems or occupational accidents occur.
2. Responsibilities for handling technical incidents causing serious occupational safety and health problems and emergency response:
    - a) Employers must immediately order the shutdown of machines, equipment, the use of materials, substances, and work activities at workplaces with risks of occupational accidents or technical incidents causing serious occupational safety and health problems; not force employees to continue working or return to the workplace if the risks of occupational accidents that seriously threaten the lives or health of employees have not been khắc phục; implement khắc phục measures and measures according to the plan for handling technical incidents causing serious occupational safety and health problems and emergency response to organize rescue of people and property, ensure occupational safety and health for employees, people around the workplace, property, and the environment; promptly notify local authorities where the incident or emergency occurs;
    - b) Technical incidents causing serious occupational safety and health problems occurring at production and business establishments or localities, the employers and localities are responsible for urgently mobilizing human resources, materials, and means to promptly respond to the incident in accordance with specialized legal regulations;
    - c) Technical incidents causing serious occupational safety and health problems occurring in relation to multiple production and business establishments or localities, the employers and local authorities where the incident occurs are responsible for responding and reporting to their immediate superiors in accordance with specialized legal regulations.

In cases where the response capacity of production and business establishments or localities is exceeded, an urgent report must be made to the immediate superiors to promptly mobilize other production and business establishments or localities to participate in the rescue; the production and business establishments or localities requested to mobilize must implement and cooperate in implementing emergency response measures within their scope and capacity.

3. The Government shall detail this Article.

Article 20. Improving Working Conditions and Building a Safety Culture

1. Employers must regularly coordinate with the Executive Board of the grassroots trade union to organize employee participation in activities to improve working conditions and build a safety culture at the workplace.
2. Employers are encouraged to apply advanced and modern technical standards and management systems, and to apply advanced technology, high technology, and environmentally friendly technology in production and business activities to improve working conditions and ensure occupational safety and health for employees.

b. Usage and Instructions for Common Personal Protective Equipment.

- Purpose.
    - Personal protective equipment (PPE) is essential tools in the labor and production process to reduce health risks for workers, prevent occupational accidents and diseases, and improve labor productivity.
- Instructions for Using Common Personal Protective Equipment.
    - Employers, based on the requirements of each specific profession or job at their facility, after consulting with the grassroots trade union organization, shall decide the usage duration suitable for the nature of the work and the quality of the personal protective equipment.
    - Employers must organize training for workers to proficiently use appropriate personal protective equipment before issuance and must strictly inspect its use.
    - For specialized personal protective equipment with high technical requirements such as electrical insulating gloves, electrical insulating boots, gas masks, safety harnesses, life jackets, etc., employers must inspect them together with workers to ensure quality standards before issuance, and periodically inspect them during use and record them in a logbook.
    - For personal protective equipment used in dirty places prone to poisoning, infection, or radiation, after use, employers must take measures to detoxify, disinfect, and decontaminate to ensure hygiene standards and periodically inspect them.
    - When provided with personal protective equipment, workers are obligated to use it in accordance with regulations during work and not for personal purposes. If workers intentionally violate this, they shall be subject to appropriate disciplinary actions according to the internal labor regulations of their facility or as prescribed by law.
    - Workers do not have to pay for the use of personal protective equipment; in case of loss or damage, the employer is responsible for replacing it for the worker, but if the worker loses or damages it without justifiable reasons, they must compensate according to the internal labor regulations of the facility. When the usage period expires or when transferring to another job, workers must return the personal protective equipment if requested by the employer.

c. Maintenance Methods for Common Personal Protective Equipment.

- Work Clothes.
    - Work clothes are made of thick fabric, cotton fibers, and when working, sleeves should be rolled down and buttoned carefully..
    - Work clothes can produce an electric arc in the event of a short circuit, which can burn workers standing too close or create an insulating layer when accidentally touching low-voltage wires…
- Safety Helmets.
    - Help protect the head in case of impact, such as falling from a height or objects falling from above, and can also provide good insulation when accidentally touching equipment or live low-voltage wires.
    - Safety helmets must have an inner mesh lining to reduce impact force, and the chin strap must be fastened carefully when worn to prevent the helmet from falling off in case of a fall.
    - After use, safety helmets must be stored carefully on a sturdy rack, not dropped, and must be labeled according to current regulations.
- Personal Self-Rescuers (commonly used in underground mining).

  - Personal self-rescuers are used to filter smoke, dust, and toxic gases before air enters the worker's lungs in the event of a gas or dust explosion in underground mines..
  - Storing personal self-rescuers:
  - Bình phải để nơi khô dáo, thoáng mát.
    - Keep the device in a dry, well-ventilated place.
    - Do not remove the trigger clip before use.
    - Do not allow oil or grease to come into contact with the device.
    - Avoid strong impacts or collisions that can deform the device.
    - Storage time from the date of manufacture: 3 years.
    - Annual periodic inspection: check for leaks and chemical quality using specialized equipment.
- Safety Shoes.
  - Used to protect feet from sharp objects, broken porcelain, and various materials and equipment with sharp edges. They also help enhance insulation from the body to electrical objects in case of accidental contact.
  - When wearing shoes, choose the correct size and tie the laces carefully and securely when working on the ground or climbing.
  - When not in use, shoes should be stored neatly in the correct location, and if dirty, they should be washed clean.
- Electrical Insulating Gloves, Boots, and Chairs.
  - Electrical insulating gloves, boots, and chairs help enhance insulation for workers during tasks. They are specially manufactured with insulation levels suitable for each voltage level.
  - Before use, gloves and boots should be checked by rolling them from the cuff to the fingertips or boot tips, or using a glove/boot tester to pump air in to check for leaks.
  - Never use them for the wrong voltage level or purpose. For example, using electrical insulating gloves for carrying materials, electrical insulating boots for wading through mud, or electrical insulating chairs for placing objects.
  - All types of electrical insulating gloves, boots, and chairs must be tested periodically and must meet the allowable insulation level for each voltage level before being used.
  - After use, electrical insulating gloves, boots, and chairs should be wiped clean and stored in a dry place, away from high temperatures that can deform them.
- Safety Harnesses.
  - The main function of safety harnesses is to protect workers from falls when working at height, and they are widely used in industries such as electricity, construction, and the environment.
  - Safety harnesses must be tested periodically according to regulations.
  - Before going to the worksite, each worker must self-inspect their safety harness to check if the hooks are still in good condition, if the D-ring for the hook is still in good condition, and if the strap is frayed or has any broken stitches. Only when the harness is confirmed to be in good condition and safe can it be used. Self-inspection of the harness can be done by wearing it and attaching it to a secure object on the ground, then bending the legs and leaning backward 3 times to see if there are any issues with the harness. Never use a safety harness that is no longer safe or has failed periodic testing.
  - After use, the harness should be rolled up and stored in a dry place, away from dust and oil, and not near high temperatures. High heat can cause the leather to sag and harden, making the strap prone to cracking.

d. Occupational accident first aid methods.

- Methods of rescuing victims from electrical circuits.

When a person is electrocuted, the electric current will pass through the person to the ground, or go from one phase to the other, so the first thing is to quickly get the person out of the circuit. Rescuers also need to remember that if they touch someone who has been electrocuted, their life will be in danger. Therefore, the healer must pay attention to the following points:

  - In case the circuit is cut off:
    - It is best to cut the power with the nearest cutting equipment such as switches, circuit breakers, circuit breakers, but when cutting the power, pay attention to:
    - If the electrical circuit goes to the light, you must immediately prepare another light to replace it.
    - If the victim is at a high place, there must be a method to catch the person when he or she falls. In this case, you can also use a hammer, wooden-handled ax, etc. to cut the electrical circuit to lay the electrical wire.
  - In case the circuit cannot be cut off:
    - It is necessary to distinguish between victims due to low voltage or high voltage electricity and use the following measures:
      - a) If the electrical circuit is low voltage: the rescuer must take good personal safety measures such as standing on a dry wooden table or chair, wearing rubber sandals or boots and insulated gloves... using high gloves on his hands. rubber to rescue the victim from the electric wire or use a bamboo or wooden stick to push the electric wire away from the victim or grab the victim's clothes to pull it out and absolutely do not hold the wire or touch the victim because So the electric current will pass to the rescuer..
      - b) If in a high-voltage circuit: It is best for the rescuer to have rubber boots and gloves or an insulated pole to push the victim out of the circuit. If there is no safety equipment, the short circuit must be short-circuited. Take copper wire or aluminum wire or steel wire, connect it at one end and throw it onto the line to short circuit the phases. If the victim comes into contact with one phase, just ground it and throw the wire onto that phase. Be careful not to throw the rope at the victim.
- Rescue methods immediately after the victim escapes the electrical circuit.
  - Immediately after the victim exits the electrical circuit, appropriate actions must be taken based on the victim's condition. We classify the following cases :
  - The victim has not lost consciousness:
    - When the victim has not yet lost consciousness, just fainted for a moment, and is still breathing weakly... then you must place the victim in a well-ventilated, quiet place and immediately call a doctor or nurse, if you do not invite a doctor. , the doctor must immediately transfer the victim to the nearest medical facility.
  - The victim lost consciousness:
    - When the victim is losing consciousness but is still breathing lightly and has a weak heartbeat, the victim must be placed in a quiet, ventilated place (if it is cold, place it in a well-ventilated room)

- The victim was unable to breathe:
  - If the victim has stopped breathing, the heart has stopped beating, and the whole body is convulsing as if dead, then the victim must be taken to a fresh, flat place, loosen their clothes and belt, open their mouth to see if there is anything stuck, and then quickly do CPR. Artificial respiration or rescue breathing combined with chest compressions (cardiac massage) until the doctor or nurse arrives and makes a decision..
  - If the victim's mouth is tightly closed, you must open the victim's mouth by using the fingers of both hands. If that way cannot open the victim's mouth, you must use a clean piece of plastic (or hard object) to pry the mouth open. , pay attention to avoid breaking teeth.

- Methods of artificial respiration, rescue breathing or rescue breathing combined with chest compressions.
  - There are two methods of doing artificial respiration:
    - Method of placing the victim prone:
      - Place the victim face down with one arm under the head, one arm stretched out, face tilted toward the outstretched hand to remove saliva from the mouth and pull the tongue out if the tongue recedes.
      - The person performing the respiration sits on the victim's back, kneeling down with both knees clasped on both sides, hands placed next to the ribs, thumbs close to the spine, pressing the hands down and lifting the entire body of the person doing the resuscitation. Breathe forward, count 1, 2, 3, then slowly bring your hand back, keep your hand on your back, count 4, 5, 6, and do so 12 times in 1 minute evenly following your breathing until the patient gets sick. If the patient can breathe or only have the opinion of a doctor or nurse.
      - This method requires one person to perform.
      - Artificial respiration method in prone position. The method requires one person to perform it
    - Method of placing the victim on his back:
      - Place the victim on his back, place a pillow or balled-up clothes under his back, head slightly tilted up, use a clean towel to pull out the tongue and one person sits and shakes the tongue. The rescuer sits above the head, with both knees kneeling in front about 20-30 cm from the head, both hands holding the arms near the elbows, slowly raising them above the head, after 2 to 3 seconds, gently gently lift the victim's hands. The victim goes down, meets again and uses the rescuer's strength to press the victim's elbow into their chest, then after 2 or 3 seconds brings it back up to the head. Need to do this 16-18 times per minute. Do this evenly and count 1, 2, 3 when inhaling and 4, 5, 6 when exhaling until the victim can slowly breathe or there is a decision from the doctor or nurse.
      - This method requires two people to perform, one person holding the tongue and one person doing the breathing. In case there are two more helpers, we will do as shown, then one person will pull the tongue, while the two helpers will hold near the victim's elbows and perform as above.

        - Treating with this method the volume of air entering the lungs is 6 to 15 times greater than the two methods mentioned above and this is a more effective method than artificial respiration.
- Method of rescue breathing
    - In front of a victim who has stopped breathing or is barely alive, the first thing to do is to breathe immediately.
    - We lay the victim on his back, the rescuer sits next to him, shoulder-to-shoulder, looking at the victim's face. Use your hand to completely tilt the victim's head forward so that the tongue does not block the airway. Sometimes, at first using this movement, the victim can begin to breathe.
    - With both hands, hold the victim's head down so that the throat is straightened and the person giving rescue breaths inhales and exhales.
    - After the person giving rescue breaths has taken a full breath, he or she will close his or her mouth to the victim's mouth and blow forcefully.
    - If the victim is not breathing, the rescuer will still keep the victim's head in the upper position, with one hand opening the mouth, the other hand inserting a finger with a clean cloth to check the victim, wipe off all phlegm, and remove dentures (if necessary). yes)... is blocking my throat. The rescuer inhales strongly, keeps the mouth open with one hand, the other hand tilts the victim's head down, then closes his mouth to the victim's mouth and blows hard (for children, blow a little softer).
    - The victim's chest inflates, the rescuer raises his head to take a second breath, then the victim will breathe out on his own due to the elasticity of the chest.
    - Continue doing so at a rate of 14 times/minute continuously until the victim regains breathing. The eyes are rosy or until the victim shows signs of complete death, expressed by dilated pupils in the eyes (usually one to two hours later) and only after the opinion of a doctor or nurse.
- Breathing with combined chest compressions (external chest massage).
    - If we encounter a victim who is unconscious, does not move, is pale, has stopped breathing, and cannot hear the heartbeat, we must immediately perform chest compressions combined with rescue breathing: then.
    - One person gives rescue breaths from above.
    - The second person does chest compressions.
    - The person's two hands press the heart against each other, press down on the lower 1/3 of the victim's sternum, and press hard with all the body's strength on the sternum (do not press on the ribs to prevent the victim from breaking bones).
    - The rhythm of coordination between the two people is as follows: For every 4 to 5 compressions on the heart, 1 breath is given, which means 50 to 60 compressions/minute.
    - Breathing combined with chest compressions is the most effective method, but it should be noted that when the victim has spinal damage, we should not do chest compressions.

In short, rescuing people from electrical accidents is an urgent job, done as quickly as possible. Depending on the situation, apply appropriate treatment methods. Must be very calm and patient in handling. The victim is only allowed to be considered dead when there is clear evidence such as a skull fracture, whole body burns, or a decision from a doctor or nurse, otherwise they must persevere in treatment until the end.

- Wound dressing method
  - Purpose:
    - Cover the wound, keep it from getting infected, keep it clean.
    - Hemostasis: Apply pressure bandage to stop bleeding
  - Principle:
    - Bandage to cover the wound, do not miss the wound.
    - The bandage is tight enough; loose: falling, tight: blood not flowing.
    - Do not contaminate (NT) the wound due to incorrect technique.
    - Bandage early: (do not apply medicine to the wound except red medicine, hydrogen peroxide for washing) do not apply alcohol, iodine...
    - In case of minor injuries: Disinfect and bandage.
    - Do not apply cotton wool directly to the wound but must cover it with clean (steamed) gauze.
  - Types of bandages:
    - Roll tape: common, easy to find.
    - Triangle tape
    - Tie tape
    - Tail tape (4 wires, 6 wires)
    - Tape.
  - Roll tape: using roll tape has 3 steps:
    - Ice anchor:
      - To prevent the tape from slipping off after applying: hold the roll of tape in your right hand, hold the end of the tape in your left hand and wrap it around once, then fold the triangular end of the tape protruding above the tape and then wrap it again, wrapping 2 dead rounds.
      - Often anchors the bandage in the smallest area (eg, forearm wound, bandage anchor on the wrist).
    - form:
      - Spiral line: Used for parts of equal size (Forearm, thigh), the back loop overlaps 2/3 of the front loop.
      - Cross bandage: Bandage No. 8, bandage
      - Fan ice.
      - Tape flip.
    - Lock tape:
      - After covering the wound, lock the bandage.
      - Wrap 2 dead rounds above the wound (2 overlapping rounds then use a safety pin, sewing needle, tape or tear the bandage in half into 2 strips to tie)
    - Triangle tape:
      - Belt:

- The triangular bandage is a fabric bandage in the shape of an isosceles right triangle with a wire size of 1m and a height of 95cm. Often use square towels to fold red towels.

- Apply:
  - Head bandage: The bottom of the scarf lies across the forehead (the top of the scarf lies at the back of the neck). The ends of the scarf are tied horizontally, pulled behind the neck, around the front of the forehead to tie, flip the ends of the scarf over the head to the front and tuck in the scarf rim or pin.
  - Bandaging the lower leg, forearm, thigh: Place the towel parallel to the edge and wrap it around to cover the wound, tying the two diagonally together.
  - Hand and foot bandages:
  - Turn the towel over on a flat surface, place your hand (foot) face down on the towel (top of the towel and fingertips) and bottom behind.
  - Turn the towel over to cover your arms and legs.
  - Pull the two towels diagonally and tie the ankles.