



# LABOR SAFETY DOCUMENTS

FOR PEN PRODUCTION



This document will provide you with details about the standard safety measures for preparing facilities and sustainability processes to help you better understand the efforts to ensure the health and safety of workers in this creative industry.

# PART I: THE CURRENT SITUATION OF SAFETY WORK IN THE PEN MANUFACTURING INDUSTRY

#### I. General Situation

The Ministry of Labor - Invalids and Social Affairs informs the sectors and localities about the situation of labor accidents in the first six months of 2023 and some major solutions to proactively prevent incidents and labor accidents in the last six months of 2023.

According to reports from all 63 centrally-governed provinces and cities, in the first six months of 2023, there were 3,201 labor accidents nationwide (a decrease of 707 cases, equivalent to 18.09% compared to the first six months of 2022), causing 3,262 victims (a decrease of 739 victims, equivalent to 18.47% compared to the first six months of 2022) (including both labor-related areas and non-labor-related areas), in which:

- Fatal labor accidents: 345 cases, a decrease of 21 cases, equivalent to 5.74% compared to the first six months of 2022 (of which labor-related areas: 273 cases, a decrease of 19 cases, equivalent to 6.5% compared to the first six months of 2022; non-labor-related areas: 72 cases, a decrease of 02 cases, equivalent to 2.70% compared to the first six months of 2022);
- Number of fatalities due to labor accidents: 353 people, a decrease of 27 people, equivalent to 7.11% compared to the first six months of 2022 (of which labor-related areas: 281 people, a decrease of 18 people, equivalent to 6.02% compared to the first six months of 2022; non-labor-related areas: 72 people, a decrease of 09 people, equivalent to 11.11% compared to the first six months of 2022);
- Number of serious injuries: 784 people, a decrease of 23 people, equivalent to 2.85% compared to the first six months of 2022 (of which labor-related areas: 715 people, an increase of 26 people, equivalent to 3.77% compared to the first six months of 2022; non-labor-related areas: 69 people, a decrease of 49 people, equivalent to 41.53% compared to the first six months of 2022).

## **II. Some Labor Accidents in Pen Manufacturing Plants**

1. **Machinery Accidents**: In pen manufacturing plants, accidents caused by operating machinery frequently occur. These incidents can result in serious injuries to workers while they are performing production tasks.



2. **Hazardous Materials**: The use of materials in pen manufacturing can pose health risks to workers. Accidents due to exposure to hazardous materials not only have immediate effects but can also cause long-term consequences.



3. **Unsafe Work Procedures**: Unsafe work procedures in pen manufacturing are one of the main causes of labor accidents. Non-compliance with safety regulations can endanger workers' health and lives.



- 4. **Human Factors**: Personnel play a critical role in ensuring labor safety. Accidents can arise due to lack of experience, insufficient training, or lack of knowledge about safety regulations.
- 5. **Social Consequences**: In addition to directly impacting workers, labor accidents in pen manufacturing plants can also create social consequences that affect the community and the company's image.

# PART II: OCCUPATIONAL SAFETY AND HEALTH IN PEN MANUFACTURING

# I. Occupational Safety and Health for Workers Handling Pen Casings and Ink

1. Characteristics of Pen Casing and Ink Processing Work Processing pen casings and ink is a complex process requiring precision and high technical skills. Pen casings are typically made from various materials such as plastic, metal, or even wood, depending on quality and design requirements. The processing includes cutting, shaping, and decorating to create the final product with a beautiful appearance and high quality.

Meanwhile, ink also plays an important role in pen manufacturing. Ink must ensure uniformity, density, and smooth writing. The ink production process usually involves mixing chemical components to achieve the desired quality characteristics. Factors such

as viscosity, color, and adhesion are carefully controlled to ensure efficient pen performance.

2. **Types of Accidents in Pen Casing and Ink Processing** During the pen casing and ink processing, various types of accidents can occur, requiring careful risk management. Common accidents include injuries from machinery or tools used in cutting, shaping, and decorating pen casings. For the ink production process, the risk of explosion or chemical leakage during mixing and handling can pose dangers to workers.

Additionally, accidents related to quality control processes are also a concern. Using special chemicals to test and adjust ink properties can pose health risks if safety measures are not properly implemented.



To minimize accidents in pen manufacturing, training workers on occupational safety and the use of protective equipment is essential. Simultaneously, reviewing work processes and updating safety measures will help protect health and ensure safety for everyone involved in the production process.

3. Causes of Accidents in Pen Casing and Ink Processing Causes of accidents in pen casing and ink processing can stem from various factors. One primary cause is the lack of understanding and professional skills of workers when they do not follow correct work procedures and use safety equipment. Fatigue and lack of concentration can also contribute to increased accident risk.

Technical factors such as improperly maintained machinery and equipment or technical failures during production are also important causes of accidents. Furthermore,

ineffective risk management and handling of incidents, especially in the complex chemical processes in ink production, are problematic.

#### 4. Preventive Measures for Accidents in Pen Casing and Ink Processing

To prevent accidents in pen casing and ink processing, implementing preventive measures is crucial. First, training workers on occupational safety and the use of protective equipment is a key factor. This helps increase awareness of risks and safety skills, while limiting the risk of injury due to lack of knowledge.

Regular maintenance of machinery and equipment is another measure to reduce the risk of technical failures. Regular inspections and maintenance ensure that all equipment operates correctly, reducing the risk of malfunction that causes accidents.

Managing stress and workload through personnel policies can improve working mood and increase employees' vigilance. Additionally, creating a safe working environment and encouraging incident reporting will enhance the effectiveness of accident prevention. This way, attention to safety and techniques can be integrated into each stage of the production process, minimizing risk and ensuring a safe working environment.

- 5. Occupational Safety Regulations in Pen Casing and Ink Processing Occupational safety regulations in pen casing and ink processing play an important role in protecting workers' health and preventing labor accidents. These regulations often include training workers on potential risks and the correct use of protective equipment.
  - All employees involved in the production process need to be guided on how to use machinery and tools safely, as well as personal protective measures. Simultaneously, safety regulations may also address chemical control, ensuring good ventilation in the work area, and keeping equipment properly maintained.
- 6. Handling Emergency Situations in Pen Casing and Ink Processing Handling emergency situations in pen casing and ink processing requires agility and leadership skills. In case of machinery failure, immediate production stoppage and problem reporting are top priorities. Employees need to be trained on how to use safety equipment and preventive measures to reduce accident risks.

Managers and employees need to know how to react flexibly in the event of an accident, which may involve immediate notification and activation of safety plans, especially if necessary. Organizing safety drills will help reinforce emergency handling skills and improve preparedness.

### II. Occupational Safety and Health for Workers Handling Metal Parts like Pen Tips

1. Characteristics of Metal Parts Processing Work like Pen Tips Processing metal parts like pen tips requires special attention to many aspects of the work to ensure high quality

and precision. The processing often begins with selecting suitable metal materials, especially stainless steel or aluminum, to ensure the durability and beauty of the final product.

CNC (Computer Numerical Control) machines are often used to carry out cutting, drilling, and detailed processing with high precision. This requires technicians and workers in this field to have the ability to program and operate CNC machines to ensure production meets requirements.

Additionally, polishing and metal plating techniques are important to create a smooth and shiny surface. This not only enhances the aesthetic appeal of the product but also improves the user experience. Quality control processes also play a crucial role in ensuring that every product meets the set quality and technical standards.



2. **Types of Accidents in Metal Parts Processing like Pen Tips** The metal parts processing like pen tips involves unavoidable risks, and recognizing these types of accidents is crucial to enhancing labor safety and protecting human resources. Common accidents include cuts or collisions during the use of processing machinery.

Cutting accidents frequently occur when using metal cutting tools, especially during cleaning or maintaining the machines. To prevent these accidents, guidance and the implementation of safety measures, such as using hand guards and protective clothing, are very important.

Additionally, crushing accidents can occur when working near processing machines or during machine adjustments. This necessitates compliance with safety rules, setting boundaries, and limiting direct contact with moving parts of the machines.

3. Causes of Accidents in Metal Parts Processing like Pen Tips Accidents in metal parts processing like pen tips can arise from various causes. One primary cause is the lack of understanding or lack of training on occupational safety. Employees without sufficient information on how to use machinery, cutting tools, and safety rules can lead to dangerous situations.

Inefficiencies in machinery and equipment are also a potential cause. Without regular maintenance and servicing, machines can experience technical failures, increasing the risk of accidents. This underscores the importance of regular maintenance measures to ensure machines operate safely and effectively.

Lack of focus and attention can also contribute to accidents in the workplace. A noisy working environment, poor lighting, or high work pressure can reduce employees' concentration, increasing the likelihood of accidents.

4. Preventive Measures for Accidents in Metal Parts Processing like Pen Tips To ensure safety in metal parts processing like pen tips, applying preventive measures is essential. Firstly, ensuring that all employees are fully trained on occupational safety is crucial. This includes understanding work procedures, using protective equipment correctly, and adhering to basic safety rules.

Controlling machinery and equipment is an important measure. Ensuring that machines are maintained properly and regularly to avoid sudden technical failures. Additionally, using safety devices such as automatic shutdown sensors when detecting danger.

Organizing the workspace also plays a significant role in preventing accidents. Ensuring the workspace is spacious, well-lit, and ventilated to reduce the likelihood of collisions and increase flexibility during work.

Furthermore, conducting regular occupational safety training sessions and safety inspections is an effective way to maintain safety awareness among employees. This helps them stay updated on new information and aware of the latest accident prevention measures.

5. Occupational Safety Regulations in Metal Parts Processing like Pen Tips
Occupational safety regulations in metal parts processing like pen tips set specific criteria
to protect workers and minimize the risk of accidents. Employees are required to follow
basic safety measures, including wearing personal protective equipment such as helmets,
safety glasses, and gloves when working near cutting machinery or in processes with
injury risks.

Regulations also require the use of specialized protective tools depending on each processing stage. Ensuring that all machinery is installed and operated correctly is also a crucial factor. Employees are regularly trained on how to use machinery and related safety measures.

All workers regularly participate in occupational safety training sessions and emergency procedures to enhance awareness of risks and preventive measures. Regulations also propose risk control measures such as establishing safe zones and clearly defining safe working procedures.

6. **Handling Emergency Situations in Metal Parts Processing like Pen Tips** In the event of an emergency during metal parts processing like pen tips, the handling procedure requires agility and flexibility. From the outset, immediately reporting the incident and requesting

assistance from the rescue team is important. At the same time, employees need to prioritize stopping the machinery and providing first aid to the injured, including using first aid equipment and removing the victim from the hazardous area.

During this process, informing all other employees about the situation and guiding them to take safety measures is crucial to prevent further risks. Calculating and implementing evacuation measures is also an important part of the emergency plan to ensure the safety of all employees in the work area.

Additionally, preserving evidence and information related to the accident is important to support subsequent investigation processes. This can help identify the cause of the incident and implement measures to prevent similar occurrences in the future.

### III. Occupational Safety and Health for Pen Assembly Workers

1. Characteristics of Pen Assembly Work The pen assembly process is a professional job requiring finesse and high technical skills. Workers often undergo specific skills training to ensure quality and efficiency in the production process. Important characteristics of this job include accuracy in assembling small components, flexibility in handling sensitive materials, and the ability to control quality to high standards.

Assembly workers also need to understand new technologies and modern equipment used in the production process. The assembly process not only requires manual skills but also the flexible use of machinery to optimize production efficiency.



2. **Types of Accidents in Pen Assembly** During the pen assembly process, various types of accidents can occur, requiring special attention from both employees and safety management. Common accidents include injuries to workers, especially when they are handling cutting equipment and machinery. Sharp materials and work processes can cause injuries if safety rules are not properly followed.

There is also the risk of electrical accidents from machinery or electronic devices, especially when working near power sources. To prevent accidents from these energy sources, it is necessary to establish safety measures such as electrical isolation and regular inspection of electrical equipment.

3. Causes of Accidents in Pen Assembly There are many causes of accidents in pen assembly, and understanding them is important to implement preventive measures. One primary cause is inadequate safety training for employees. When they do not understand how to use machinery, tools, or safety rules, the risk of accidents increases significantly.

Fatigue and stress can also increase the likelihood of mistakes, putting workers in a state of inattention. Additionally, the assembly process may require flexibility and agility, increasing work pressure and leading to errors.

Faulty equipment or unsafe machinery is also an important cause. Regular maintenance and inspection of equipment to ensure they operate correctly is key to minimizing the risk of accidents in the pen assembly process. Organizing and maintaining a safe work environment not only protects employees but also helps maintain product quality and production efficiency.

4. **Preventive Measures for Accidents in Pen Assembly** Preventive measures for accidents in pen assembly are important to ensure occupational safety and production efficiency. Occupational safety training plays an important role in helping employees understand safety rules and techniques. Providing comprehensive information about specific risks in the pen assembly process and response methods helps increase safety awareness.

Regular inspection and maintenance of equipment is an effective remedial measure. Training employees on the correct use of personal protective equipment and applying occupational safety techniques helps minimize the risk of injury.

Organizing the workspace to be tidy and clean is also an important accident prevention measure. A safe work environment allows employees to focus while reducing the risk of collisions and disorientation.

Occupational safety training is not only the responsibility of employees but also of the business. By doing so, everyone involved in the pen assembly process can be more confident and contribute positively to a safe and efficient work environment.

5. Occupational Safety Regulations in Pen Assembly Occupational safety regulations in pen assembly play an important role in protecting the health and mental state of employees. According to occupational safety standards, employees must be trained on safety rules and techniques before participating in assembly work. This includes the correct use of personal protective equipment and adherence to safety procedures.

Regulations also need to clearly define accident prevention measures, including regular inspection and maintenance of machinery and equipment. Work areas need to be set up to be safe, minimizing collision risks, and keeping materials clean and organized.

Additionally, regulations should include emergency measures and response procedures. All employees should be guided on immediately reporting incidents and accidents so that emergency measures can be imposed and safety issues prevented from spreading.

6. **Handling Emergency Situations in Pen Assembly** Handling emergency situations in pen assembly requires agility and proactivity from both employees and the safety management team. In case of an accident, training employees on emergency response procedures is important to ensure effectiveness and safety.

Workers need to know how to use safety equipment such as first aid kits and personal protective gear. Procedures provide clear instructions on how to leave hazardous areas, immediately report accidents, and contact the rescue team if needed.

It is important to ensure that all employees know how to use safety measures and emergency equipment. Organizing regular drills helps improve understanding and natural response in emergency situations.

# IV. Occupational Safety and Health for Quality Control Workers of Finished Pens

1. Characteristics of Quality Control Work for Finished Pens In the pen production process, quality control plays an important role in ensuring the final product meets high-quality standards. Quality control work for finished pens requires special attention to many different aspects.

Firstly, checking the smoothness of the ink to ensure the pen writes smoothly and consistently. Additionally, checking the ink pressure to ensure there is no excessive or insufficient flow. The inspection process also focuses on the mechanical properties of the pen, including the durability and flexibility of the nib.

The materials used in production are also carefully inspected to ensure the pen's safety and durability. The accuracy of dimensions and weight is also a concern to ensure comfort in use.



2. **Types of Accidents in Quality Control of Finished Pens** In the quality control process of finished pens, there are many accident risks that manufacturers need

to be aware of to ensure safety for employees and the production process. Some common types of accidents include:

• Nib-related accidents can stem from using low-quality materials. If the nib is not manufactured correctly or has defects, it can cause uncontrolled ink flow, wetting the paper, and increasing the risk of work accidents.

- During mechanical inspections, technical failures such as inadequate nib strength can lead to pen breakage or damage during use.
- Material-related accidents are also a concern, such as ink reservoir explosions due to high pressure or fire hazards when using unsafe materials.
- 3. Causes of Accidents in Quality Control of Finished Pens Causes of accidents in the quality control process of finished pens can arise from various factors. One primary cause is inaccuracy in the nib production process. If the nib is not properly manufactured, it can lead to issues like unstable ink pressure or poor durability, increasing the risk of accidents during use.

Additionally, using substandard materials can contribute to unsafe products. Inconsistent, low-quality materials, or those that do not meet safety standards, can lead to accidents like ink reservoir explosions or fire hazards, posing dangers to quality control workers and the entire production process.

Technical errors and inaccuracies in setting up inspection machinery are also important causes. If machinery is not correctly set up, it may not detect quality defects in pens, leading to the release of unsafe products and potential accidents during use.

4. Preventive Measures for Accidents in Quality Control of Finished Pens To ensure safety during the quality control of finished pens, implementing preventive measures is crucial. First, training employees on safety procedures and the use of personal protective equipment is a basic step. A solid understanding of the inspection process and how to handle dangerous situations helps reduce accident risk.

Regular maintenance and inspection of testing equipment and machinery are important to ensure they operate efficiently and safely. Integrating quality control measures into the production process helps prevent unsafe products from being released.

Using high-quality materials and adhering to safety standards during production also play vital roles. This includes inspecting raw materials to ensure they meet safety and quality requirements.

5. Occupational Safety Regulations in Quality Control of Finished Pens Occupational safety regulations in the quality control of finished pens play a crucial role in protecting employees and maintaining a safe working environment. These regulations typically include wearing personal protective equipment such as helmets and gloves to reduce the risk of injury and protect the skin when handling materials.

Risk control measures such as regular maintenance of inspection machinery and equipment are also mandated to ensure they operate safely and efficiently. Employees are often required to follow safety procedures when using these devices, including adhering to rules about pressure and motor control.

Training employees on safe working practices and specific regulations in the inspection process is also a significant part of occupational safety measures. Employees need to be guided on how to safely handle defective products and how to respond to dangerous situations.

6. **Handling Emergency Situations in Quality Control of Finished Pens** In the event of an emergency during the quality control of finished pens, handling procedures are crucial to ensure employee safety and prevent the spread of danger. Initially, immediately reporting the accident and notifying management is important to prompt swift action.

Employees need to be trained on using protective equipment and first aid devices when necessary. Ensuring safety for oneself and colleagues in an emergency is the top priority. Additionally, emergency response plans should be established and all employees should be familiar with them.

The most important step is providing first aid and promptly contacting emergency services or management for timely support. When necessary, using alarm systems and making emergency calls is important to ensure quick assistance.

## V. Occupational Safety and Health for Pen Packaging Workers

1. Characteristics of Pen Packaging Work Pen packaging work is a crucial process in the stationery production industry. This requires accuracy and high focus from the worker as each packaging step directly affects the final quality of the product. Initially, employees must inspect every detail of the pen to ensure there are no manufacturing defects.

After inspection, pens are placed in specialized packaging, usually plastic boxes or nylon bags, to protect them from external environmental impacts and prevent scratches. The packaging process requires dexterity to ensure the product is not damaged during transportation.

Additionally, packaging work requires consistency in packaging design to create a uniform and professional brand image. Every small detail, from the placement of the logo to the color of the packaging, is carefully considered to ensure consistency and attract customers.



2. Types of Accidents in Pen Packaging During the pen packaging process, various risks of accidents can affect product quality and occupational safety. One common issue is accidents related to packaging machinery, such as automatic packaging machines. Technical failures, equipment malfunctions, or lack of maintenance can lead to incidents causing product loss and posing risks to employees.

Additionally, accidents can result from improper use of packaging materials. For example, using adhesive that does not ensure sufficient adhesion can cause the product to slip out of the packaging during transportation. This not only reduces product quality but also increases the risk of damage and complaints from customers.

Another important aspect is occupational safety. Employees can face dangers when working with moving machinery, cutting tools, or when working quickly to meet production demands. Ensuring that employees are fully trained in occupational safety and have sufficient protective equipment is crucial to minimizing accidents.

3. Causes of Accidents in Pen Packaging Causes of accidents in the pen packaging process can stem from various aspects. One main factor is the lack of consistent and rigorous quality control systems. Without thorough technical inspection procedures, products may contain minor defects such as scratches, bends, or smudges, increasing the likelihood of incidents during packaging.

On the other hand, using unsafe and inefficient machinery and equipment is another important cause. Equipment malfunctions, lack of regular maintenance, or incorrect settings can lead to serious incidents during packaging, posing risks to employees and affecting product quality.

Additionally, insufficient training and understanding of the process among personnel is another issue. Lack

of experience or inattention to the process increases the likelihood of errors during packaging. Awareness and thorough training on safety and quality rules can help reduce the risk of accidents in the pen manufacturing environment.

4. **Preventive Measures for Accidents in Pen Packaging** To reduce the risk of accidents in pen packaging, implementing preventive measures is crucial in the production environment. Firstly, establishing a rigorous quality control system ensures that each product meets quality standards before entering the packaging process. Regular technical inspections reduce the risk of product defects and incidents during packaging.

Machinery and equipment used in production also need regular maintenance to ensure smooth and safe operation. Regular inspection and maintenance procedures help prevent incidents due to equipment malfunctions, while also increasing the efficiency and durability of the equipment.

Training employees on safety and packaging procedures is an important part of preventive measures. Awareness of risks and the skills to correctly follow procedures help reduce the risk of workplace accidents and ensure that everyone works safely.

Finally, continuously monitoring and evaluating the packaging process along with listening to feedback from employees can help improve efficiency and safety in the working environment, while also minimizing the risk of accidents during pen packaging.

5. Occupational Safety Regulations in Pen Packaging Occupational safety regulations in pen packaging are an important part of the production environment. According to safety principles, employees must be fully trained on working procedures and the use of safety equipment. Protective gear such as helmets, gloves, and safety glasses must be used correctly to protect employees from injury risks.

Regulations also require regular inspection and maintenance of machinery and equipment to ensure they operate correctly and do not pose a hazard. Any technical issues or problems need to be reported and addressed promptly to prevent safety risks.

Additionally, occupational safety regulations focus on organizing a safe working environment, including arranging workspaces and storing products to avoid accidents. Preventive measures and emergency response plans should also be considered and trained to ensure preparedness in all situations.

6. **Handling Emergency Situations in Pen Packaging** Handling emergency situations in pen packaging requires agility and thorough preparation. In case of machinery failure, employees must immediately stop work and report the issue to management. This procedure helps prevent the situation from worsening and protects employees.

In case of workplace injuries, timely first aid is important. Employees need to know how to use personal protective equipment and safety devices, and be trained on basic first aid steps. Ensuring the quick cooperation of the team and immediately calling emergency services is crucial in any emergency situation.

Enhancing training on accident prevention and emergency response also plays an important role. Organizing regular drills helps employees become familiar with potential emergency scenarios and improves their response capabilities.

