

# Job Safety Management with Personal Protective Equipment Training Methods at PLN Gresik

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**Abstract.** This study aims to obtain an overview of the understanding, use, and proper care of Personal Protective Equipment (PPE) in order to maintain safety levels. This study is expected to improve the understanding and competence of PLN Gresik employees in the implementation of occupational safety, particularly regarding the effective and standard-compliant use of Personal Protective Equipment (PPE). Through action research, the desire for employees to become more knowledgeable and competent in occupational safety is for the company to conduct training related to the Personal Protective Equipment used in the workplace.

**Keyword:** Job Safety Management, Personal Protective Equipment (PPE), Training Methods.

## 1. Introduction

The State Electricity Company (PLN) is a State-Owned Enterprise (BUMN) in the electricity sector that serves communities throughout the archipelago, determined to provide the best electricity services and meet internationally acceptable electricity standards [1]. State-Owned Enterprises (BUMN) are one of the associations provided by the government. Because PLN's work involves electricity, PLN is a high-risk job. To achieve the goal of zero accidents, PLN must implement Occupational Safety and Health or commonly called K3 at PLN Gresik. To realize this target, PLN has implemented various types of activities and programs to implement a management system that prioritizes occupational safety and health aspects, such as carrying out training on K3. If there are problems with Occupational Safety and Health (K3) for work implementers who are carrying out work related to electricity, this is called a work accident in the company.

The risk of work accidents will cause losses to the company or its shareholders, both financially and non-financially. Therefore, safety in the work environment is a top priority for PLN, so that various government rules and regulations relating to K3 are implemented by PLN. This aims to prevent potential work accidents occurring at PLN. If the Occupational Safety and Health

program is implemented effectively and carefully, the risk of accidents in the workplace related to electricity will be reduced and even accidents (no accidents will occur). Therefore, the achievements of the K3 program within PLN must be closely coordinated to ensure work activities run smoothly to increase productivity related to electricity without sacrificing lives. For this reason, PT. PLN often provides regular training on the K3 program to minimize work accidents. For this reason, it is hoped that employees or stakeholders within PT. PLN will create an K3 program culture to minimize work accidents and then it is hoped that the number of work accident cases will be close to zero. Occupational safety is protection carried out by an institution, company or manufacturer to protect its employees due to accidents when they carry out their work within the company's environment.

## **2. Literature Review**

Work safety, in general, has a correlation with a person's work activities /activities, whether employees who work in state or private institutions (industrial companies involving machines, equipment, handling of materials, work tools and also in the management process, manufacturing; apart from that also concerns the workplace environment, employee work environment, as well as operational techniques in carrying out work. Likewise, work involving high-tech equipment, such as facilities for using escalators, elevators, mechanical equipment for cleaning glass buildings that have multi-storey floors, transportation facilities, and so on. others. Based on the statutory law regarding Work Safety which is regulated in Law No. 1 of 1970, this covers and covers all aspects of dangerous work from the environment where employees work, whether in the environment on land or at sea, in the soil, in the water, on the surface of the water, or in the air environment within the legal jurisdiction of the Republic of Indonesia.

In relation to this matter [2], states that: Work safety is a condition or condition in which employees carry out work in a work environment, the situation and conditions of which are free from the possibility of accidents, so that employees do not feel anxious and worried about experiencing an accident while carrying out their work. Furthermore, [3] stated that regarding work safety, it is the right to protect employees from physical injury and psychological impacts caused by accidents related to the work that employees are carrying out in their work environment. Furthermore, according to [4], work safety shows the company's attention to the protection of its employees, including both physical and psychological well-being with the aim of preventing accidents or injuries related to the work they are doing. Meanwhile, the opinion [5], states that: Work safety shows a state and condition that is prosperous, safe or safe from events that bring suffering, damage or loss in the work environment. In line with this [6] stated that work safety conditions are conditions where workers/employees experience safe conditions.

## **3. Research Method**

The research approach method used in this research is a qualitative approach, namely research carried out by describing, describing the condition of the subject or object of research at the time the research is carried out based on visible facts or as they are. Bogdan and Taylor's opinion in [7] regarding the meaning of qualitative research is that this qualitative method is used as a research procedure to produce descriptive data, in the form of sentences, written or spoken words from research subjects (people's behavior can be observed). So it is emphasized that research using this qualitative descriptive method approach is a research step and procedure that produces descriptive data in the form of spoken words/sentences as well as from the people being researched and whose behavior can be observed. The qualitative research approach method is generally referred to as a naturalistic research method, this is because the research is carried out naturally, without engineering [8]. Furthermore [9], stated that qualitative research has the aim of describing and describing phenomena that exist in the field, both natural and engineered, and this research focuses more on the characteristics, quality of the phenomena, and the relationship between the activities involved. is being observed. Apart from that, it is said that qualitative research does not provide engineered treatment.

#### **4. Result and Discussion**

This research was carried out in the company area under the authority of PLN Gresik which is located at Jl. Majjend Sungkono no.4, Gresik, East Java. Occupational safety and health (K3) is an important program in the world of employment and human resources at work. Occupational safety and health is a priority for workers in carrying out their work, this is one of the main determinants of work productivity. Occupational safety and health will have a positive influence on safe work in its implementation. For this reason, the K3 Program is a worker's right as part of welfare services that must be fulfilled and it is the company's obligation to accommodate these needs. In other words, the K3 program is a priority obligation that needs to be facilitated by the company for the essential needs of workers in their work environment. Companies need to implement an K3 program which is estimated and expected to reduce the level of work accidents. Furthermor [10], stated that from a scientific perspective, Occupational Safety and Health can be philosophized as an effort to ensure the welfare needs, both physical and spiritual, of workers towards a just, prosperous and prosperous society. Personal Protective Equipment (PPE) is equipment used to protect oneself from dangers or risks that can threaten the safety and health of workers.

PPE is used to reduce the risk of injury, poisoning, or disease due to exposure to chemicals, radiation, noise, and other factors in the workplace. Personal Protective Equipment (PPE) or Personal Protective Equipment are tools or equipment that must be used to protect and maintain the safety of workers when carrying out work that has potential danger or risk of work accidents. The Personal Protective Equipment used must be appropriate to the potential hazards and risks of the job so that it effectively protects workers as users. The use of PPE is very important in various situations to protect the safety and health of the user. In the work environment, the use

of PPE is an important step in the K3 (Occupational Health and Safety) program to prevent injury or illness due to exposure to hazardous materials. In the medical field, the use of PPE by health workers is very important to protect themselves from infection and prevent disease transmission to patients or other people.

In daily activities, using PPE such as a helmet when driving, a mask when in a dusty environment, or gloves when cleaning the house can also protect against the risk of injury or disease. Apart from protecting the user, the use of PPE can also help minimize the risk of environmental pollution and the spread of disease. By using appropriate PPE, the risk of exposure to hazardous materials or infection can be reduced so that the surrounding environment can also be protected. Therefore, it is important for each individual to understand the importance of using PPE and use PPE according to their needs and the type of risk they face. Republic of Indonesia Law no. 1 of 1970 concerning work safety regulates the company's obligations to maintain worker safety. In this study, the term training can be interpreted as a translation from English of the word "training". In basic terms the word "training" is "train", which can be interpreted as: (1) providing teaching and practice (give teaching and practice), (2) providing development in accordance with the desired direction (cause to grow in a required direction), (3) preparation and practice activities are required [11].

There are several definitions of training put forward by experts, including the following [12] states that training is a teaching process that provides assistance/ guidance, while the assistance provided in this case can be in the form of guidance on related knowledge, assistance in the form of supporting tools and facilities, delivery information on rules and regulations for skills training, conditions of a conducive learning environment/work environment. In general, training participants who already have experience and potential have strong motivation to implement their abilities in these training activities, this is to improve and increase their own potential, so that they have the skilled ability to develop themselves. The term providing assistance and guidance is an activity that is naturalistic and humanistic (humane) and is not coercive. Furthermore [13] states that: Training is a learning process to develop knowledge, attitudes and skills. Further activities need to socialize and disseminate information with the aim of updating behavior and helping individuals or groups in an organization/ institution to be more effective and efficient in carrying out their work duties.

#### 1. Types of Personal Protective Equipment (PPE)

- a. Safety helmet: protects the head from objects that can hit the head directly.
- b. Safety belt: personal protection when working at heights or in dangerous positions.
- c. Protective clothing: protects the body from heat, cold, fire, chemicals, or radiation.
- d. Protective shoes (safety shoes) or rubber shoes: protect feet from sharp, slippery, electric or hot objects.
- e. Gloves: protect hands from sharp objects, heat, cold or chemicals.

#### Benefits and Functions of PPE

- a. Protect and maintain worker safety when carrying out work that has potential danger or risk of work accidents.
- b. Prevent falling heavy objects, injuries from production machines, or exposure to chemicals in the work environment.
- c. Reducing contact or exposure to danger, although it cannot completely eliminate the danger.

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Furthermore [16] states that: Training is a learning process to develop knowledge, attitudes and skills. Further activities need to socialize and disseminate information with the aim of updating behavior and helping individuals or groups in an organization/institution to be more effective and efficient in carrying out their work duties. From the definition above, it can be translated that training is a process carried out by an organization/institution to achieve the expected goals. This is done because there is a problem that needs to be corrected to achieve the desired ideal situation and goals. In this case, it can be socialized that training can be held by an institution/organization, be it a BUMN agency, government, private institution, company and so on) this is to achieve the goals of the organization/institution. A training is considered to have achieved success in its objectives if the results can bring true reality. Regarding human resources involved in the organization/institution, it must be a real human resource performance that should be desired to achieve the goals of the organization or institution. Training can be organized by any organization, institution or agency, whether related to the needs of the world of work or in the wider community environment [17].

According [18] stated, "The objective of training is to achieve a change in the behavior of those trained". This means that: Training aims to obtain a change in the behavior of those being trained. Next, Edwin B. Flippo, stated he purpose of training is more visible, namely the purpose of training is to improve a person's knowledge, attitudes and skills. Apart from that [19], states that training is an activity process designed to further improve a person's performance. Training or

training can be carried out in short-term stages ranging from two to three days to a period of two to three months. Training or training is carried out systemically, systematically, with techniques or learning methods that are appropriate to the material, so that it is hoped that they can achieve significant success in achieving their goals. From the several opinions above regarding the meaning of training, it can be concluded that training is a learning process activity organized by a government or private organization/institution, which aims to improve the knowledge, attitudes and skills of the participants; This training activity is designed in a planned manner in the form of a series of material activities both theoretical and practical, systematically and systemically in accordance with the objectives, while the training participants can participate in certain fields according to their job job, so that they can implement their knowledge and skills in the world of work or develop its performance.

The training or training related to this research is job training to improve the knowledge, attitudes and skills of employees in carrying out their work more effectively and efficiently by implementing Work Safety Management with Training Methods on Personal Protective Equipment at PLN Gresik. In the training referred to in this research, it was carried out by PLN Gresik employees, internally carrying out training to implement the K3 program according to their field of work. The informant chosen in this research is someone who understands and comprehends safety factors at work. The informants in this research are presented below.

**Table 1.** Informant List

No	Infoman's name	Title
1	Hisyam Istahril Mu'az	Head of Health and Safety At PLN Gresik
2	Imam Rachmad	PLN Gresik, health and safety senior staff
3	Luthfi Hamid Setyabudi	PLN Gresik, health and safety implementation staff

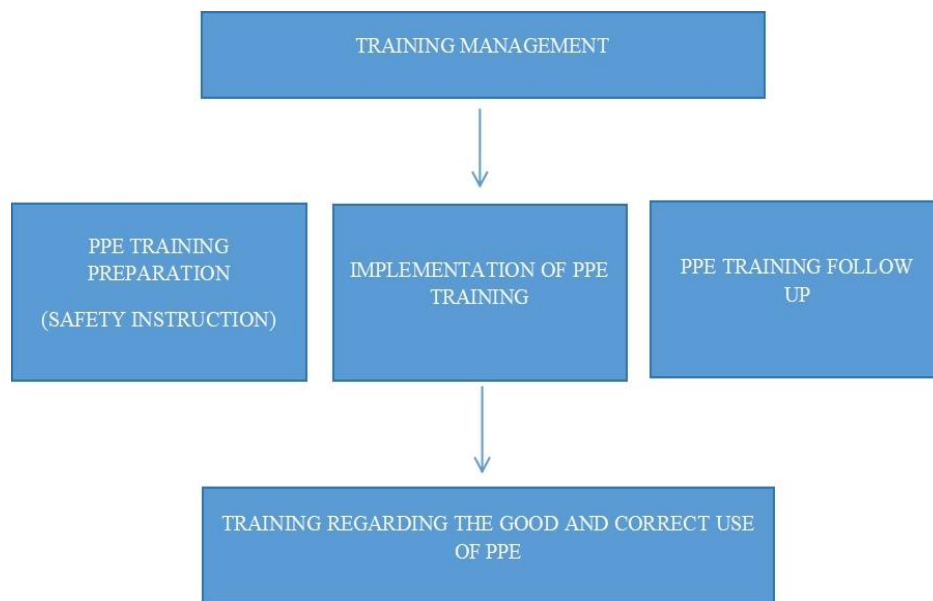
Source: 2024 Research Data Analysis

## 5. Conclusion

Based on the results of the research that has been carried out, there are several conclusions, including:

1. The proposals for repairing contamination defects in an effort to improve the quality of work protective equipment are as follows:
  - a. Proposals related to Human Resources (HR) training, namely carrying out human resource training management related to personal protective equipment.
  - b. Proposals to improve the quality of personal protective equipment by replacing personal protective equipment that has not kept up with current developments regarding its safety level.
  - c. Proposed maintenance or checks related to personal protective equipment that are carried out routinely before being used for work.
2. Based on the 5W+1H analysis in improving the quality of personal protective equipment, the following results were obtained:

- a. Proposal to improve the use of less competent Human Resources (HR) by conducting human resource training management by the PLN Gresik K3 section with the aim of increasing HR competency in carrying out work.
- b. Proposed quality improvement by replacing old models of PPE with the latest models in accordance with current developments with the aim of increasing safety in carrying out work and reducing the risk of work accidents.
- c. Proposed improvements by regularly checking and maintaining personal protective equipment before using it for work in order to maintain the level of safety at work.



**Figure 1.** Personal Protective Equipment Training Management Flow

**Tabel 2.** Factors, Improvements, and Efforts to Enhance Work Safety in the Use of Personal Protective Equipment

No	Component	Remarks
1	Factors that cause defects in PPE work safety.	1. The age quality of PPE equipment has a maximum usable limit of 5 years according to the manufacturer from the time the PPE was purchased. 2. Defects in PPE products arise from the quality of the PPE material and the frequency of use of the PPE.
2	Repairs are carried out if products are found that do not comply with standards.	1. Replace PPE that has reached the time limit suitable for use according to factory standards that have been determined by replacing it with new, higher quality PPE.

No	Component	Remarks
		2.Improvements are made by routinely checking the PPE scale before the PPE is used in order to determine the quality of the PPE even though it has not reached the usage time limit set by the factory.
3	Efforts that can be made for work safety PPE in the future.	1. Buy new PPE equipment with better quality and price by following developments in the era where the quality of PPE will always increase in maintaining the quality of work safety 2. Hold training related to PPE and provide certificates for employees who have successfully participated in the training.

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