



## Risk Management of Occupational Health and Safety Program (Case Study at PT. X)

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### ARTICLE INFO

#### Article History

Received : 10.06.2024

Revised : 30.06.2024

Accepted : 05.07.2024

Article Type: Research

Article

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### ABSTRACT

The aim of this study is to comprehend PT. X's management of Occupational Health and Safety (OHS) risk, the execution of OHS programs, and the challenges encountered by the organization. This study utilizes a qualitative approach. It employs three methods for data collection: documentation, interviews, and observations. The Miles and Huberman interactive model is utilized for data analysis in this research. The research results reveal that OHS risk management at PT. X involves the identification, analysis, evaluation, and control of OHS risks. The implementation of OHS at PT. X involves the establishment of OHS policies and the provision of health assurances and safety equipment. The hindrances to the OHS program at PT. X include the attitudes and behaviors of workers who are hesitant to wear personal protective equipment and the company's failure to conduct socialization on the importance of OHS.

Keywords: Occupational Health and Safety, Risk Management, OHS Program

### 1. Introduction

Labor is one of the most significant and powerful sources of human capital for a company, and is a very valuable organizational asset. Another valuable resource that supports business operations is talent. Therefore, the business world needs to maintain and manage its human resources effectively. In this case, health and safety in the workplace is very important for the business world because it helps reduce the possibility of workplace accidents. Occupational safety and health relate to the physical, mental and physiological conditions of employees as a consequence of the work environment provided by the organization (Rivai, 2004).

The annual report of the Social Security Administration (BPJS) states that there were 221,740 work accidents in 2020 and employment tends to increase from 2020 to 2022. Furthermore, in January to November 2022 there were 265,334 cases, and in 2021 there were 234,370 cases. Data from the Annual Report on the Implementation of Social Security (BPJS) shows a significant and sustainable increase in the number of jobs (Kompas, 2023). Law Number 1 of 1970 concerning Work Safety came into effect on January 12 1970. This law regulates a number of tasks related to work safety and the implementation of all initiatives carried out by the business world to reduce the incidence of work accidents.

Law no. 1 of 1970 concerning Work Safety considering; For the sake of personal welfare and the advancement of national productivity and output, all workers have the right to safety protection while working. Everyone in the workplace is guaranteed safety. This law sets out work safety rules that must be obeyed by the business world, as well as the duties and rights of employers and workers. Due to legal

requirements, organizations must comply with occupational safety standards. Therefore, risk management is implemented to detect potential dangers that employees may face. And through risk management, businesses can identify potential internal dangers such as K3 risks.

According to OHSAS 18001: 2007, risk in K3 is the combined result of the possibility of a dangerous event or exposure occurring with the seriousness of injury or health problems that may arise as a result of that event or exposure. K3 risk is the possibility of loss arising from contact with a source of danger or failure of operational activities. Businesses that ignore the importance of implementing worker health and safety practices risk experiencing more accidents and greater losses.

PT. X is a company that operates in the field of providing basic materials for shoes and sandals and market-oriented industries such as shoes and bags. Participation of each employee in the PT K3 Program. X is essential to fulfilling their obligations and ensuring their health and safety while at the property. By implementing PT K3 SOP. Dr. Therefore, PT. X covers subjects related to the implementation of safety and health in the workplace.

Based on the background above, researchers are interested in further research regarding: "Risk Management of Occupational Health and Safety (K3) Programs (Case Study at PT. X). How is occupational health and safety (K3) risk management implemented at PT. X ?

## **2. Literature Review**

### **2.1. Risk management**

According to Hubbard (2009), risk management is the process of detecting, evaluating, and determining risk priorities, followed by coordination and use of financial resources to reduce, supervise, and monitor the possibility of unfavorable events occurring.

### **2.2. Risk Management Process**

The procedures a business needs to take to develop appropriate plans to mitigate the risks it faces are part of the risk management process. Risk management standards according to AS/NZS 4360 are as follows:

- a. Context Management : To ensure that the risk management process achieves the right goals and does not go in the wrong direction, it is first necessary to determine the risk management context.
- b. Risk Identification: risk identification attempts to identify all possible dangers associated with a particular activity or work process.
- c. Risk Analysis: The risk analysis method includes finding out how likely a hazard is to occur as well as analyzing its possible impact.
- d. Risk Evaluation: According to Ramli (2010), the purpose of risk assessment is to compare the degree of risk calculated at the risk analysis stage with the standards used to support decision making in order to evaluate whether the risk assessed is acceptable.
- e. Risk Control: Planning, directing and controlling product and service activities that pose a risk of accident or danger is known as risk management.

### **2.3. K3 Risk**

According to OHSAS 18001:2007, risk in K3 is the combined result of the possibility of a dangerous event or exposure occurring and the seriousness of injury or health problems that may arise as a result of that event or exposure. K3 risk is the potential for loss due to contact with hazardous materials or errors in carrying out tasks.

### **2.4. K3 Category**

K3 hazards are possible losses that can occur due to contact with potentially dangerous materials or due to errors. The product of the risk severity value and the risk frequency value determines the risk assessment category.

		KEPARAHAN				
		Sangat Ringan	Ringan	Sedang	Berat	Sangat Berat
FREKUENSI	Sangat Sering	Sedang	Tinggi	Tinggi	Ekstrim	Ekstrim
	Sering	Sedang	Sedang	Tinggi	Tinggi	Ekstrim
	Sedang	Rendah	Sedang	Sedang	Tinggi	Ekstrim
	Jarang	Rendah	Sedang	Sedang	Tinggi	Tinggi
	Sangat Jarang	Rendah	Rendah	Sedang	Sedang	Tinggi

**Figure 1. K3 Category**  
Source: AS/NZS 4360, (2004).

**2.5. Occupational Health and Safety Program**

According to Batjo (2018), occupational health and safety is a commercial effort that seeks to maintain employee physiological functions in dealing with work situations that arise throughout work procedures. Strong occupational health and safety regulations are associated with a reduction in work-related acute and chronic illnesses and workplace accidents among workers in companies.

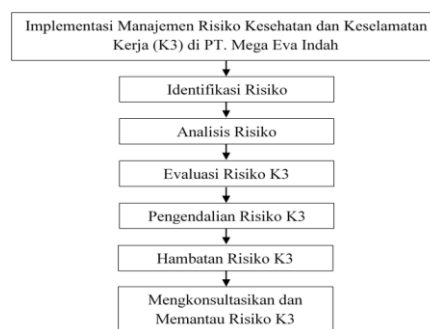
**2.6. K3 Factors**

- a. Human Factors: Humans are the most unproductive "means of production" in terms of labor, output, and resistance to the physical and mental aspects of work, Silalahi (2018).
- b. Equipment and Supplies Factors: From an K3 point of view, several important factors that need to be considered are as follows: a) Adequate lighting, b) Vibration and noise measurements, c) Controlling temperature
- c. First Aid Facilities (First Aid for Accidents): Efforts to provide first aid in the workplace are known as first aid. Providing fast and accurate information to workers, employees and other office workers who are sick or injured at work (Permenakertrans No. Per 15/men/2008).

**2.7. Barriers to K3 Implementation**

Konradus (2006) mentions the following errors that can occur when implementing K3:

- a. Companies are not aware of K3 and are not proactive in implementing it in the workplace.
- b. Companies that do not follow the government's K3 criteria will not be subject to heavy legal sanctions.
- c. Human resources personnel who do not have the necessary certification to operate machinery, chemicals, or other electronic devices.
- d. The mindset or actions of employees who do not use work safety equipment provided by the company.
- e. Insufficient work space, volume of tasks and atmosphere.
- f. Inadequate K3 facilities.
- g. The work safety equipment or equipment currently used is unsafe, outdated, or does not meet national K3 standards.
- h. OSH laws are not well implemented, and internal company oversight is weak
- i. Corporate managers are still operating with the wrong mental model.



**Figure 2. Framework of thinking**  
Source: Source: Data Processed by Researchers, (2023)

### **3. Methodology**

The nature of this research is qualitative. Which produces a factually correct, methodical and descriptive description or picture of the relationship between facts, characteristics and phenomena that are the object of study. This research focuses on 1) risk identification, 2) Hazard assessment process, 3) Risk assessment 4) Risk control, 5) Obstacles faced. The place where this research was conducted was in Pasuruan district. In this research, primary data was obtained from observations and interviews conducted by researchers. Secondary data was obtained from various pre-existing sources, including reports, publications, photos, videos and the internet. This research's secondary data comes from various documents, web pages, images and videos related to PT. X. Miles & Hubermas' interactive model is applied to the process of data reduction, data presentation, and drawing conclusions in this research. Researchers use source triangulation, method triangulation, technique triangulation to test the validity of the data.

### **4. Results and Discussion**

Discussion of research results is included in this chapter. Using the ideas outlined in the previous chapter, the researcher explains the findings in this debate. Research findings data were collected through observation, interviews, and recording the problems studied. Information obtained from interviews regarding the implementation of PT's K3 program. X.

#### **4.1. K3 Risk Management Process at PT. X (Risk Identification, Risk Analysis, Risk Evaluation, Risk Control)**

##### **a. Risk Identification**

Risk identification includes determining each risk associated with a particular task or procedure. This is done as an effort to identify dangers that often occur in the field of worker protection in the business world. PT K3 risk assessment. X found a number of risks or dangers at PT. X as follows:

- a) Equipment scratches: The source of danger comes from tools/machines and targets exposed to humans or employees
- b) Equipment Cuts: The source of danger comes from tools/machines and the target is exposed to humans or employees
- c) Sprains: Dangerous sources originating from work methods and work processes for targets that may be exposed to humans.
- d) Entrapment : Sources of risk are people and objects that can be impacted: workers and customers, disrupted equipment and machines, and work procedures.
- e) Being struck by a work object: the risk of being impacted, by an individual or employee, by material, work methods or work processes.
- f) Exposed to Dust and Glue Smell: Source of danger from materials/materials and the work environment for targets that may be exposed, namely humans or employees and the work environment.
- g) Fatigue: A source of danger from work methods and work methods for targets that may be affected, namely humans or employees.
- h) Noise: Sources of danger from machines and target work environments that may be exposed to them, namely humans/employees and the work environment.
- i) Injuries due to cutting tools: Humans and employees are a source of danger due to tools and machines as well as individual work habits.
- j) Machine Collision: Danger posed by equipment and working conditions.

##### **b. Risk Analysis**

Risk Assessment The process of evaluating risks by estimating the likelihood of a risk occurring and the magnitude of the impact that may occur. The risks that arise can be assessed from the level of occurrence and risk categories for K3 risk assessment at PT. X as follows:

- a) Equipment Scratch: Once a month, an injury of moderate severity may occur and require first aid or treatment. Risk assessment requires a moderate and rapid response, and loss of work time not to exceed one 24-hour period.

- b) **Equipment Cuts:** This may occur once a year with moderate frequency and requires minor or emergency treatment. Risk assessment requires a moderate and rapid response, and loss of work time not to exceed one 24-hour period.
- c) **Sprains:** May occur once a year with moderate frequency, minor injury severity, immediate return to work, moderate risk assessment, and need for rapid action.
- d) **Stuck:** Moderate injuries may occur once a month, requiring emergency care or treatment, but a moderate risk assessment indicates that the amount of time away from work should not exceed 24 hours times one hour.
- e) **Workpiece Hits:** This level of frequency is very rare, perhaps once a year or more. The severity is so severe that it requires further medical treatment or referral for disability; however, the risk assessment is moderate, meaning immediate action is required, and loss of work time occurs once every 24 hours. Take action.
- f) **Exposure to Dust and Glue Odor:** Frequency rate is often weekly, risk assessment is simple, workers can return to work immediately, severity is mild, and immediate treatment is required.
- g) **Fatigue:** The injury is minor, the worker can return to work quickly, the risk assessment is moderate, the frequency is rare, may occur once a year, and immediate attention is required.
- h) **Noise:** A worker can return to work immediately, the injury is minor and of moderate frequency (once per month), the risk is moderate, and requires prompt attention.
- i) **Injuries Due to Cutting Tools:** This severity is very rare, perhaps occurring once a year or more. The risk assessment is moderate, requiring immediate action, but lost work time occurs once every 24 hours and the severity is severe, requiring extra medical attention or disability referral. Take action.
- j) **Machine Impact:** The damage is minor, the worker can return to work immediately, the risk assessment is low, the frequency is very rare, occurs once a year or more, and regulations, procedures, or signs are required.

**c. Risk Evaluation**

The researchers' results are intended to support decision making in risk assessment by enabling comparison of risk levels and determination of whether the risks analyzed are acceptable, Based on risk analysis at PT. X can help make decisions by evaluating risks to establish priority levels for addressing risks. Risk evaluation as follows:

**Table 1. Risk Evaluation**

No	Risk	Frequency	Severity	Risk Category
1	Scratched by equipment	Moderate	Moderate	Moderate
2	Cut by equipment	Rare	Moderate	Moderate
3	Sprain	Rare	Mild	Moderate
4	Pinched	Moderate	Moderate	Moderate
5	Struck by falling object	Very Rare	Serious	Moderate
6	Dust and odor exposure	Frequent	Mild	Moderate
7	Fatigue	Rare	Mild	Moderate
8	Noise	Moderate	Mild	Low
9	Injury from cutting tool	Very Rare	Serious	Moderate
10	Bumped by machine	Very Rare	Mild	Low

Based on the table above, evaluate the risks at PT. X can be seen that the risks that need to be prioritized can be seen from the level of frequency and severity, then the risk categories that are assessed are the risks that often occur, namely being exposed to dust and the strong smell of glue making employees feel less comfortable at work.

#### **d. Risk control**

According to ANSI (American National Standards Institute) Z10: 2005 and OSHS (Occupational Safety and Health Administration), the action taken is to manage K3 (management layer) hazards (Rahman, 2019). specifically, replacement, disposal, administrative control, noise engineering, and personal protective equipment.

Based on the results of interviews and observations of K3 risk control carried out by PT. X as follows:

- a) Supervision and Reporting: All incidents and accidents are reported to their respective superiors
- b) Work Handling Efforts: Assembling personal protective equipment (PPE), such as safety shoes, hard helmets, gloves, masks and earplugs.
- c) Installation of Signs: The Supervisor (K3 Specialist) will determine the area for placing posters and slogans related to K3
- d) Provision of Safety and Health Equipment

#### **4.2. Implementation/Implementation of K3 PT. X**

According to Batjo (2018), occupational health and safety refers to company programs for employees to protect their physiological functions due to the work environment that occurs during the work process. Implementation of K3 at PT. X as follows:

- a. To be more productive at work, I like K3.
- b. Comply with and implement K3 regulatory requirements.
- c. Give permission to K3 leaders and staff from each department to supervise the implementation of K3 protocols.
- d. Rearrangement of work spaces and facilities to reduce the risk of accidents and illnesses in the workplace.
- e. Adopt a reflective mindset towards workplace circumstances or environments.

#### **4.3. First Aid Facilities (First Aid for Accidents)**

PT. X has first aid facilities as first aid to provide emergency treatment to victims. First aid facilities as intended in article 2 paragraph (1) Permenakertrans no. as of 15/men/2008 includes:

- a. First aid room is not yet available at PT. X causes a lack of existing facilities in the company,
- b. The first aid box found at PT. X is made of wood that is placed on the wall
- c. Implementation of Medical Equipment: Masks distributed twice a month to employees, Employee Health Insurance, First Aid checked once a month
- d. Evacuation equipment and transportation equipment: Stretcher equipment to move victims is still not available, there are no ambulances yet
- e. Additional Facilities: In providing PPE, the company has provided complete PPE such as masks, gloves, helmets, safety shoes and ear protectors.

#### **4.4. Obstacle in the Implementation of K3 at PT. X**

- a. There are still many workers who ignore the safety protocols implemented to avoid workplace accidents
- b. Does not consider the importance of K3 in the organization as a top priority.
- c. The occupational health and safety (K3) system is not well understood by workers, and there is a culture of ignoring these problems.

#### **4.5. Effectiveness Implementation of the Occupational Health and Safety (K3) Program**

Effective implementation of K3 requires managing K3 risks with a process of managing the activities carried out, namely by:

- a. Identify risks. In other words, determine the potential risks that exist in work process activities.
- b. Risk analysis divides risks into small, medium and large risks to determine the probability of occurrence and the level of impact.
- c. Risk assessments aid decision making, ensure that risks are acceptable, and identify which risks need to be addressed more thoroughly.

- d. Risk management is the planning, management and control of commodity product activities that can cause work risks and accidents.

## **5. Conclusion**

The K3 risk management carried out by PT. X in implementing the K3 program in the company includes several steps. First, identifying K3 risks at PT. X, where there are several risks of work accidents that can inhibit production activities, such as scratched equipment, cutting equipment, sprains, pinches, being crushed by workpieces, exposure to dust and glue odors, fatigue, noise, wounds from cutting tools, and machine collisions. Second, conducting a K3 risk analysis at PT. X involves analyzing the identified risks and determining their severity. Frequently occurring risks include dust and glue odor, while rare risks include being hit by the engine. Third, evaluating K3 risks at PT. X involves making decisions on which risks need to be prioritized based on their level, with dust and glue odor exposure being the highest priority due to its frequent occurrence. Fourth, risk control at PT. X involves measures such as supervision and reporting, work management efforts, installing signs, and providing health and safety equipment for employees.

The implementation of K3 Occupational Health and Safety at PT. X includes establishing a K3 policy, preparing health insurance and medical equipment, and providing occupational safety and health equipment such as masks, helmets, gloves, safety shoes, earplugs, and fire prevention tools. However, the research found several issues regarding the implementation of K3 in first aid facilities, including the absence of a first aid room, stretcher, and ambulance. The implementation at PT. X lacks direct monitoring and evaluation from K3 experts, but PT. X has appointed an external K3 expert. Barriers to the Health and Safety program at PT. X include the attitude and behavior of workers who are reluctant to use personal protective equipment and the company's failure to continue socializing the importance of health and safety under K3.

Researchers have several recommendations based on the findings above. For PT. X, it is recommended to re-implement K3 socialization to remind staff of the importance of K3, provide more adequate facilities such as first aid kits, stretchers, and ambulances, and ensure the availability of competent K3 professionals. For academics, it is hoped that readers will find this research useful and that the Islamic University of Malang Library can use it as a resource. For future researchers, this investigation will serve as a base of information and knowledge that will be beneficial for future studies.

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