

---

## **Analysis of The Level of Compliance With Employee Safety Behavior at PT. X Uses The Behavior-Based Safety (BBS) Method**

**Rahul Ibrahim Sangkala, Reza Atilansyah Saputra, Arya Dwi Saputra, Rayzhan Aditya, Friber, Alessandro Natanael Iroth, Irsyad Hauzan, Anis Rohmana Malik**

Institut Teknologi Kalimantan

Email: 18221002@student.itk.ac.id, 18221036@student.itk.ac.id,  
18221046@student.itk.ac.id, 18221062@student.itk.ac.id,  
18221067@student.itk.ac.id, 18221072@student.itk.ac.id,  
18221079@student.itk.ac.id.

---

### **ABSTRACT**

Behavior-based safety (BBS) programs are a safety approach based on human behavior and social relationships in the work environment. This approach aims to increase employee awareness, commitment and responsibility to create a safer and healthier work environment. A behavior-based safety (BBS) approach focuses on human behavior to reduce the risk of workplace accidents and injuries. This research uses a qualitative approach that combines observation and interview methods. This approach was chosen to gain a deeper understanding of the safety behavior of PT employees. X and the factors that influence it are observed directly in the PT work environment. X observes employee safety behavior in real-life situations. Dangerous behavior is the behavior of an individual or group of workers that can create a dangerous situation in a work process. Implementation of security in the PT environment. X has been around since the company's inception, but safety was only documented around 2022. work without complete PPE. Employees in the company already understand SMK3. Strengthen safety training, implementation and monitoring of safety procedures, safety culture, risk assessment, effective incident reporting systems, regulatory enforcement and discipline

**Keywords:** BBS, Unsafe Act, Implementation of Safety

---

*Corresponding Author: Rahul Ibrahim Sangkala  
E-mail: 18221002@student.itk.ac.id*



### **INTRODUCTION**

Data from the International Labour Organization (ILO) shows that globally 2 million workers die each year due to work (Organization 2021). The number of fatal accidents is more than 300 thousand, and occupational accidents account for 270 million workers. And as many as 160 million workers are affected by occupational diseases (PAK) (Stevianingrum, 2022). Based on data from the Ministry of Manpower (Kemenaker), in 2021, there were 234,370 victims of work accidents that occurred throughout Indonesia (Kemnaker, 2022). There was an increase from the previous year of 5.6%. The five business sectors with the largest contributors to work accident victims in 2021 are trade and services, various industries, consumer goods, agriculture, fisheries, plantations, forestry, and basic and chemical industries. Some of the five business fields tend to increase during the 2019-2021. The basic industry and chemical business sector ranks 5th with 12.1% during the 2019-2021, with 80,607 work accident cases. During

2019-2021, 64.4% of accidents occurred at work, 27% in traffic, 8.2% outside the workplace, and 0.3% in other places (Kemnaker, 2022).

Behavior-based safety (BBS) program is a safety approach based on human behavior and social relationships in the work environment. This approach aims to increase employee awareness, engagement, and responsibility in creating a safer and healthier work environment. The characteristics of the Behavior Safety (BBS) approach include a focus on human behavior in reducing the risk of accidents and work injuries, emphasizing the importance of social relationships in the work environment, engaging employees in the identification and elimination of risky behavior in the work environment; and utilize direct observation to identify risky behaviors and provide constructive feedback (Annamalai & D. Senthilkumar, 2022).

Work safety is an inseparable aspect of employee productivity and welfare in an organization (Anyango and Muathe 2017). PT. X as a company engaged in remanufacturing, understands the importance of maintaining a safe and healthy work environment for all its team members. However, achieving optimal levels of compliance and awareness of safety practices is often a complex challenge.

To increase the level of compliance with occupational safety behavior, PT. X introduced the Behavior Based Safety (BBS) Method as a structured and holistic approach. BBS is more about implementing safety rules rather than understanding individual behavior and effecting positive changes in how employees interact with the work environment (Moon 2024).

The importance of analyzing the compliance level of PT. X to occupational safety behavior, considering the various hazards and risks that can occur as variables. In addition to providing an overview of the status of work safety at PT. X, but also provides recommendations for developing more effective safety strategies and programs in the future.

## **METHOD**

This study used a qualitative approach with observation and interview methods. This approach was chosen to gain a deep understanding of employee safety behavior at PT. X and the factors that influence it, where observations are carried out directly in the work environment of PT. X will observe the safety behavior of employees in actual situations. Observations are carried out systematically by recording various work safety measures carried out by employees, such as using personal protective equipment (PPE), using equipment according to procedures, and interactions between employees related to work safety.

## **RESULTS AND DISCUSSION**

### **HSE Interview Results**

#### **a. Unsafe Act**

*Unsafe Behavior* is behavior carried out by individuals or in groups by workers that can result in unsafe conditions in the work process. Unsafe actions can be actions that violate work procedures that cannot be ascertained as safe, such as working without wearing PPE that is in accordance with the dangers and risks of workers.

#### **b. Safety Application**

The application of safety in the company PT. X has been done since the company was founded. Still, the documentation of safety was only carried out around 2022. *"The implementation of new basic safety is carried out, such as TBM, safety talk and accident reporting. Around 2022 in the form of a written policy. Such as quality policies and liquor prohibitions"*, (Rini. HSE PT. X). Continue to say (Rini. HSE PT. X), *"P2K3 formed from 2021"*. In addition to the implementation of safety that has not been carried out optimally, worker certification is still a problem because some workers have not received a certificate but have received training.

Occupational safety and health, or K3, is contained in labor laws and regulations. Each company and its employees must understand each other about the applicable standard safety procedures regarding the use of personal protective equipment or PPE by their standards. If the proper use of PPE does not accompany workers, it can cause incidents such as those of PT. X i.e.

Incident: Finger pinched during material transfer to truck caused by unbalanced position of workers, lack of coordination among fellow workers and non-compliance of workers with the use of PPE.

In addition, workers found unsafe behavior while working during observation. Unsafe behaviors found in workers while working include:

1. Doing work using milling machines But not using complete PPE Such as *safety helmets, goggles, and wearpacks* are not worn properly. According to the Regulation of the Minister of Manpower and Transmigration of the Republic of Indonesia Number PER.08 / MEN / VII / 2010 concerning Personal Protective Equipment, Article 2 paragraph (1), Employers must provide PPE for workers/laborers at work. Article 6 paragraph (1) Workers/laborers and other people who enter the workplace must wear or use PPE by potential hazards and risks. PT. X has provided PPE by the occupational risks that exist in the workplace. However, the worker did not use the PPE provided.
- 2.



**Figure 1.1 Milling Machine Work**

3. Doing work using lathes where workers here also do not use complete PPE such as *Safety helmets, goggles and masks*. Besides that, workers also do work while smoking, which can potentially cause fires in the workplace of PT. X has provided a special smoking area and installed no-smoking signs in the workplace, by GOVERNMENT REGULATION OF THE REPUBLIC OF INDONESIA NUMBER 109 OF 2012 article 1 paragraph 11, which states that a non-smoking place is a space in which smoking activities are prohibited and so on.



**Figure 1.2 Lathe Work**

4. The condition of the floor in the workplace is still in the completion stage. The area around the work floor is not equipped with warning signs or barriers, so the wire mesh (reinforcing iron) is still visible and can cause falls or tripping when passing through it, leading to accidents.



**Figure 1.3 Floor Condition**

### **Results of interviews with workers**

The interview was conducted with Pak Siswo Suroso, a worker who had worked for three years at PT. X and has approximately 20 years of work experience. Before the interview, Mr. Siswo Suroso made an overhead crane.

Mr. Siswo's response to the interviewer's question, "Do you understand the safety procedures required for this task?" was that he already understood the safety procedures needed to carry out his duties. He explained that before carrying out a task, he always consults with

his colleagues to evaluate potential risks. This shows that there is good communication among workers regarding risk assessment and preventive measures to be taken.

Pak Siswo also feels very comfortable when giving feedback to colleagues about their safety behavior. This shows a positive safety culture in the workplace, where workers support each other and remind each other to always adhere to safety procedures.

When asked if he felt any pressure to complete the work in a way that might come at the expense of safety, Pak Siswo confirmed that *he had never felt such pressure so far*. This shows that the company he works for has a high priority on work safety. However, Pak Siswo noted that although there is no safety training provided at the company today, he has received on-the-job training before. This indicates that his previous experience and training are helpful in ensuring he understands and adheres to the necessary safety procedures.

Finally, Pak Siswo explained that *if there is an incident or accident at work, always make a report*. This shows that he has a high awareness of the importance of reporting incidents to prevent similar incidents in the future and improve work safety conditions.

Overall, Pak Siswo showed a good understanding of safety procedures and actively participated in maintaining a safe working environment, although there were some areas that could be improved, such as the provision of safety training by the company.

After conducting an interview with Mr. Siswo Suroso, we got several answers that illustrate the understanding and practice of occupational safety in his workplace. However, observations in the field show a discrepancy between Mr. Siswo's statement and reality. Here is a discussion regarding the discrepancy:

- **Understanding Safety Procedures:**

Interview: Mr. Siswo stated that he already understood the necessary safety procedures.

Observation: In the field, we saw that although workers understood safety procedures, they did not always adhere to them. Many workers are seen not wearing mandatory personal protective equipment (PPE), such as protective goggles and gloves when working with high-risk machinery.

- **Risk Evaluation:**

Interview: Pak Siswo explained that he evaluated the risk in consultation with other workers.

Observation: Despite attempts to consult, many workers go straight to work without conducting adequate risk evaluations. This increases the potential for accidents to occur.

- **Providing Safety Feedback:**

Interview: Mr. Siswo feels comfortable giving feedback to colleagues on safety behavior.

Observation: In the field, the culture of providing feedback on safety has not been fully internalized. Some workers were seen smoking while on the job, which shows a lack of discipline in implementing a safety culture.

- **Pressure to Sacrifice Safety for Productivity:**

Interview: Pak Siswo stated there was no pressure to complete the work at the expense of safety.

Observation: There is no explicit pressure, but there are indications that workers feel rushed to complete their tasks, especially closer to deadlines. As a result, they ignored some safety procedures.

- **Safety Training:**

Interview: Mr. Siswo noted that there is no safety training in the company at the moment, but there was on-the-job training before.

Observation: The lack of safety training is evident in the field. Many workers seem to lack an understanding of basic safety procedures, and the company does not organize periodic training programs.

- **Incident Reporting:**

Interview: Pak Siswo explained that he always reports incidents or accidents.

Observation: Incident reporting systems appear to be less effective. Some minor incidents are not well reported, and there is no follow-up action to analyze the cause and prevent the recurrence of the incident.

## **CONCLUSION**

From the results of identification through the interview and observation process, it can be concluded that many workers still do not comply with existing safety procedures in the company, workers who immediately work without conducting risk evaluations that can increase the potential for accidents, lack of implementation of safety culture and ignore safety procedures when rushing to complete tasks, lack of safety training from companies that are clearly visible in the field. Due to a lack of understanding of existing safety procedures, and the reporting system for minor incidents is poorly reported and there is no follow-up action.

Recommendations From the results of interviews and observations, it can be seen that there is a difference between workers' perceptions of work safety and real practices in the field. To improve work safety, here are some recommendations: Enhanced Safety Training: Companies should provide regular and comprehensive safety training for all workers, including regular refreshment training. Implementation and Supervision of Safety Procedures: Companies must ensure that all safety procedures are strictly followed and conduct stricter supervision in the field. The implementation of discipline for workers who violate the rules, such as not using PPE or smoking while working, needs to be improved. Safety Culture: Build a strong safety culture where workers feel comfortable providing feedback on safety behaviors and encourage open communication regarding risks and incidents. Risk Evaluation: Ensure that risk evaluations are conducted before each task begins, involving all workers involved. Effective Incident Reporting System: Develop a more effective incident reporting system where every incident is recorded, analyzed, and acted upon with appropriate preventive measures. Enforcement of Rules and Discipline: Implement stricter enforcement and discipline against workers who do not comply with safety procedures, including the use of PPE and smoking bans in work areas. With the implementation of these measures, it is hoped that on-site work safety can be improved, thereby reducing the risk of accidents and ensuring a safer and healthier working environment for all workers.

## **BIBLIOGRAPHY**

- Anyango, Opondo Jacinta, and S. M. A. Muathe. 2017. "Towards a Theoretical Model for Work Reorganization, Employees Welfare and Organization Performance: A Research Agenda." *The International Journal of Business & Management*.
- Moon, Kwangsu. 2024. "The Effect of Safety Leadership Training Including Coaching Program on Safety Performance and Climate in Wood Processing Companies." *Safety and Health at Work*.
- Organization, World Health. 2021. "WHO/ILO Joint Estimates of the Work-Related Burden of Disease and Injury, 2000-2016: Technical Report with Data Sources and Methods."
- Al, Fajar Siti & Heru Tri. (2015). *Human Resource Management*. Yogyakarta: UP STIM YKPN
- Annamalai, T., & D. Senthilkumar. (2022). Behavior-based safety (BBS): A systematic review of the literature. *Journal of Health & Safety Research and Practice*, 4(1), 22-35.

Department of Occupational Safety and Health. 2008. Hazard Guidelines for Identification, Risk Assessment and Risk Control, Malaysia.

Fatimah, M. Sayuti., Ritonga, M. F. (2018), Hazard Identification and Risk Assessment in Heat Exchanger Cleaning with Risk Assessment Method at PT. X. *Industrial Engineering Journal* Vol.7 No.2 (2018) 38-43

ILO. (2013). *Occupational Safety and Health in the Workplace*. Jakarta: ILO.

Kemnaker. (2022). *Indonesia's National Occupational Safety and Health Profile 2022*. Jakarta: Ministry of Manpower of the Republic of Indonesia.

REGULATION OF THE MINISTER OF MANPOWER AND TRANSMIGRATION OF THE REPUBLIC OF INDONESIA NUMBER PER.08/MEN/VII/2010 CONCERNING PERSONAL PROTECTIVE EQUIPMENT

GOVERNMENT REGULATION OF THE REPUBLIC OF INDONESIA NUMBER 109 OF 2012

Pesa, F. A., & Taufik, H. (2017). Review of the Implementation of Occupational Safety and Health Management System (SMK3) (Case study: Construction of Living World Pekanbaru Building). Students of the Department of Civil Engineering, 2) Lecturer of the Department of Civil Engineering, Faculty of Engineering, University of Riau, Pekanbaru 28293 Pek. 4(1), 1–11

Safitri, D., Perdana, R., Marlina, A. R., Rahayu, S. M. (2023), DEFINITION, CAUSES, PREVENTION AND CONTROL OF OCCUPATIONAL DISEASES. *Nusadaya Journal of Multidisciplinary Studies*, Volume 1 No. 5, Pages 8-10.