

# **Analysis of Occupational Health and Safety at PT. Tokyu Construction Indonesia**

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## **Abstract**

This study aims to investigate and analyze the occupational health and safety (OHS) system implemented at PT. Tokyu Construction Indonesia. the approach used was qualitative with a case study design. Data were obtained through observation, interviews, and dokumentation, with a sample of four experienced informants from the Safety Health Environment (SHE) division. Data analysis was carried out with the steps of reduction, presentation, and conclusion drawing, and using triangulation techniques to ensure validity. The research findings show that the company's OHS system is well structured, including induction procedures, Contractor Safety Management System (CSMS), and Safety Plan. However, the main challenges are workers's lack of understanding of OHS and high implementation costs. The study also revealed that effective OHS implementation not only improves worker safety, but also productivity and operational efficiency. For this reason, it is recommended that companies continue to strengthen OHS policies for the welfare of employees and operational continuity. Future research is expected to explore other factors that influence OHS, such as worker motivation, environmental conditions, and corporate culture, and require a longer research time to obtain a more comprehensive picture.

**Keywords:** Occupational, Work , Indonesia

## 1. Introduction

Human resources (HR) is an important element in an organization that supports the progress and success of a company or institution. In the micro sense, HR includes individuals who work in organizations, such as employees or workers, while in the macro sense, HR includes the working-age population of a country (Wikipedia, 2024). HR needs to be managed properly, because it has a vital role in ensuring the sustainability of the organization, both as non-material potential and resources that make physical and non-physical contributions. Proper management can maximize the role of HR in achieving business goals and sustainability (Saputra et al., 2012).

Occupational health and safety is a vital element that affects workers' well-being, productivity and the sustainability of company operations. According to the ILO (2023), approximately 4.32 million workers die each year from work-related accidents or diseases (Yuli, 2024). In Indonesia, Law Number 23 of 1992 emphasizes the importance of occupational health and safety to improve the quality of human resources, extend life expectancy, and increase labor productivity (Widodo & Prabowo, 2018). Handling work safety must involve all relevant parties, not just EHS officers, foremen or directors. OHS must become part of the work culture and collective awareness, not just a banner or slogan. The key to OHS is awareness of hazard risks and safe work behavior. Unfortunately, work efficiency is often an excuse to ignore potential hazards, such as the use of faulty equipment, for example an expired light fire extinguisher (APAR) (Darmayani et al., 2023).

In this context, the author also conducted preliminary research by distributing questionnaires on occupational health and safety to 20 employees consisting of 4 staff in the safety and environmental health department, 5 employees in the service department, 4 people in the finance department, and 7 employees in the marketing department. The questionnaire was distributed to several employees at PT Tokyu Construction Indonesia. This pre-research was used by the author to understand the employees' views on occupational health and safety in the organization. From the results of pre-research shows that there are still many employees do not know the importance of understanding about health and safety and there are still many employees who feel OHS at PT. Tokyu Construction Indonesia is not optimal

Meanwhile, the novelty of this research discusses occupational health and safety issues at PT Tokyu Construction Indonesia, with qualitative research methods using data collection techniques carried out by observation, interviews, and pre-research. So this research aims to complement previous research by conducting research at PT Tokyu Construction Indonesia. Occupational health and safety analysis is very important for PT Tokyu Construction Indonesia, because it can provide insight and evaluation of the urgency of the occupational health and safety system and is also important for the company to train employees to comply with and obey company regulations, procedures, and policies. Therefore, the enforcement of occupational health and safety in the company is very important so that employees can work in accordance with the applicable regulations in the company. Based on the discussion and problems, the authors want to further examine work health and safety (K3), with the existing problems the authors take the title **“Analysis of Occupational Health and Safety (K3) at PT Tokyu Construction Indonesia”**.

## **2. Literature Review**

### **2.1. Definition of Occupational Health and Safety (OHS)**

Occupational health and safety is an effort to improve, protect, and encourage the physical, mental, and social health of workers for their welfare in all work areas. The purpose of implementing OHS is to create a work environment that is safe and clean from pollution, so as to reduce the risk of occupational accidents and work-related diseases. Efforts to create a safe and healthy workplace also help to increase efficiency and labor productivity (ILO, 1998)

### **2.2 Objectives and Benefits of Maintaining Occupational Health and Safety**

The objectives and benefits of implementing occupational health and safety according to (Mangkunegara, 2013) are:

- a. Provide optimal protection for employees physically, socially, and psychologically.
- b. Using work equipment selectively, maintaining production safety, and improving employee nutritional health.
- c. Creating a work environment that supports morale, harmony, and prevents health problems.

These goals can be achieved by creating a sense of security, but the benefits require cooperation between the workforce and company leaders.

### **2.3 Personal Protection Equipment (PPE)**

Personal protective equipment according to PER.08/MEN/VII/2010, Article 3:

- a. Head protection: Reduces the impact of impact on the head.
- b. Eye and face protection: Protects eyes from particles, sparks, and smoke.
- c. Ear protection: Muffle noise from machinery or heavy equipment.
- d. Respiratory protection: Filters inhaled air for safety.
- e. Hand protection: Protects hands from chemicals that may cause irritation.
- f. Foot protection: Protects feet from heavy materials or loads.

### **2.4 Occupational Health and Safety Management System**

Occupational health and safety management includes planning for the cost of accidents and their prevention, which has a significant impact on production costs and company profits. Many construction companies consider accidents as unexpected events, so they are not included in the management system. However, to reduce losses and improve efficiency, companies need to systematically analyze accident patterns (Moniaga & Syela Rompis, 2019).

### **2.5 Types of Occupational Health and Safety Management System Implementation**

The implementation of an occupational health and safety management system (OHSMS) aims to reduce the risk of accidents and occupational diseases. Each organization has a different level of risk, so the implementation of OHS is a must. However, even though SMK3 is implemented, work accidents often occur because the implementation is not fully integrated. Some common types of SMK3 implementation are:

- a. Virtual SMK3: Aspects of SMK3 are adopted, but risk management is not systematized.

- b. Misdirected SMK3: SMK3 elements are present, but preventive measures are not aligned.
- c. Random SMK3: Risk controls are in place, but not well organized.
- d. Comprehensive SMK3: SMK3 is implemented in an organized manner, based on proper risk identification (Ramli, 2010).

## **2.6 Identification of Occupational Hazards and Risks**

Occupational hazards are conditions or sources that have the potential to cause harm related to work or the work environment (Ilmansyah et al., 2020). These hazards arise from the interaction of production elements such as people, equipment, materials, work processes, and procedures used (Mahawati et al., 2021). The types of hazards that often occur in the workplace according to (Ita Erliana & Aziz, 2020) are:

- a. Physical Hazards: Exposure to noise, extreme temperatures, vibration, and radiation.
- b. Chemicals: Exposure to chemicals through inhalation, ingestion, or skin contact.
- c. Biological Hazards: Exposure to living organisms or creatures such as viruses, bacteria, and fungi.
- d. Psychological Hazards: Work pressure, conflict, and unfavorable social environment.

## **2.7 Occupational Accident Risk Control**

Companies need to organize and supervise activities that have the potential to cause work accidents by establishing standard policies that include designing infrastructure, procedures, and work instructions for risk control (Yuliandi & Ahman, 2019). Risk control methods include:

- a. Engineering Control: Elimination, substitution of hazardous materials, ventilation, and sanitary hygiene to prevent hazards.
- b. Education and Training: Improvement of workers' knowledge on OHS through training.
- c. Awareness Building: Providing incentives and rewards to motivate workers.
- d. Evaluation: Internal audit, incident investigation, and etiological analysis to evaluate risk control.
- e. Rule Enforcement: Implementation of regulations and sanctioning to ensure compliance with safety standards.

## **2.8 Indicators of Occupational Safety Causes**

Work safety indicators (Mangkunegara, 2002) include:

- a. Workplace Environmental Conditions
  - Arrangement of dangerous goods without safety standards.
  - Narrow workspaces that interfere with safety.
  - Disposal of waste that does not fit the place.
- b. Use of Work Equipment
  - Equipment is damaged or worn out, especially the security parts.
  - Electronic machines or devices without adequate security.

### 3. Material and Method

This research uses a qualitative approach, which according to (Chariri, 2009) aims to understand and explain phenomena in a natural context, including the reasons and processes of occurrence. This approach focuses on in-depth exploration, both in single cases and several cases. (K. Denzin & S. Lincoln, 1994) mention that qualitative research is conducted in a natural environment to interpret phenomena. This research uses a variety of methods to describe activities and their impact on the individuals involved.

#### 3.1 Design Study

The data collection methods employed in this study are categorized into the following techniques:

a. Observation

Observation is one of the main techniques in collecting data in qualitative research, especially in the field of social and human behavior. This process involves direct monitoring of the object under study, which results in an overview of the situation on the ground, including the behavior, actions, communication and interactions between individuals that take place (Mekarisce, 2020).

b. Interview

Interview is a method applied in collecting data on research. This technique involves submitting questions directly to the sample section. In simple terms, the interview can be considered as a process of interaction between the interviewer and the respondent through face-to-face communication. In other words, an interview is a direct dialogue conducted by the interviewer and the respondent to obtain information (Makbul, 2021)

c. Documentation

Documentation becomes one of the additional sources of data in research, where the collection of information is carried out through archives, documents or other written materials relevant to the research theme. The documents used can be letters, notes, books, reports, or other official documents. Documentation research helps provide insight into the historical context, events, policies, as well as developments related to the phenomenon being analyzed (Creswell, 2014).

#### 3.2 Data Analysis

The method used to analyze the data is an interactive data analysis approach as described by Miles and Huberman, which includes four steps.

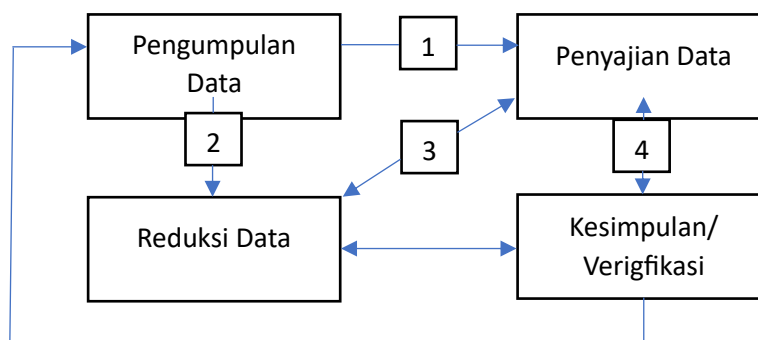


Figure 1 : Data Analysis Technique

a. Data Collection

The collection of field information in qualitative studies involves statements, behaviors, documents, images, and statistics. The main Data are obtained from interviews and observations, recorded through writing, recording or drawing. Additional Data comes from books, journals, archives and official documents. This study collected data through interviews and observations of employees of PT. Tokyu Construction Indonesia.

b. Data Reduction

Data reduction is the process of selecting, focusing, simplifying, abstracting, and transforming raw data from field notes. This process occurs continuously throughout the research, guided by the conceptual framework, data collection methods, and research questions. It involves filtering and grouping information from interviews, observations, and documentation. Reduced data is processed to enhance its meaning, provide clearer insights, facilitate subsequent data collection, and aid in future retrieval.

c. Data Presentation

Data presentation is the process of arranging data in a structured manner to facilitate conclusion and decision making. In qualitative research, data is displayed through graphs, diagrams, matrices, networks, or narratives. This presentation organizes information in a systematic way, making it easier to analyze, assess conclusions, and plan next steps.

d. Conclusion and Verification

Drawing conclusions in qualitative research takes place throughout the research process. Researchers begin to identify meanings, explain, record patterns, trace cause-and-effect relationships, and formulate propositions from the very beginning of data collection. The initial conclusions are provisional and subject to revision, but they become clearer and stronger as the research progresses.

## 4. Result

To gain a better understanding of occupational health and safety at PT Tokyu Construction Indonesia, the researcher asked four participants questions relevant to occupational health and safety issues. The following are the responses from the participants during the interview session:

### 4.1 Occupational Health and Safety (OHS) System

The results showed that the company has a structured induction program for new employees and contractors, as well as implementing a Contractor Safety Management System (CSMS). The system ensures compliance with Project safety standards, with a comprehensive safety plan covering risk identification, mitigation, and Emergency Management as per project characteristics. These findings are consistent with participant interviews.

Participant A: “we implement induction system, safety breafing, training and safety campaign”

Participant B: “the safety System has been created before the work begins such as Contractor Safety Management System( CSMC), Safety Plan, and procedures that have been agreed upon”

Participant C: “Occupational Safety and health system at PT. Tokyu Construction Indonesia is highly structured and focuses on compliance with national regulations and international standards such as ISO 45001. They have a strict policy for identifying and managing risks on construction sites, which includes K3 training for employees, strict implementation of personal protective equipment (PPE), and regular inspection of equipment and work environments. Every worker is given an understanding of the importance of safety through socialization programs and regular training sessions.”

Participant D : “from my experience, PT. Tokyu Construction Indonesia also implements good emergency response procedures, such as fire simulation and emergency evacuation periodically. In addition, they have a dedicated team that monitors compliance with K3 standards on a daily basis in the field. Any similar events in the future. The company also conducts regular health checks for workers, especially those exposed to high risks such as dust and harmful chemicals. The involvement of Management in the implementation of K3 is very strong, so the awareness of safety in the work environment is very high.”

#### **4.2 Occupational Health and Safety (OHS) Procedures**

Occupational Safety and health procedures have been carried out in accordance with existing guidelines. Based on the results of observations, employees have understood and implemented health procedures and work slackness. From the observation there are similarities in the results of interviews with participants.

Participant A: “the procedure we do is to make plans in every activity, especially those that contain high-risk jobs by making methods and Job Safety Analysis (JSA)”

Participant B: "K3 rulemaking, socialization of K3 rules and programs”

Participant C: “Occupational Safety and health procedures at PT. Tokyu Construction Indonesia starts with an in-depth risk analysis before the project starts. Each project must go through a risk assessment stage to identify the potential that may occur in the field. After that, the company draws up a risk mitigation plan that involves safety training for all workers. The established K3 procedures include the obligation to use PPE such as masks, vests, helmets, and safety shoes. Every worker should also undergo a safety briefing before starting work every day”

Participant D: “in addition, in PT. Tokyu Construction Indonesia also implements detailed emergency response procedures. They have clearly marked evacuation routes at each project site and conduct periodic emergency response simulations, such as fire summulations or other disasters. Any accidents that occur both small and large, directly reported through the incident management system. After that, a thorough investigation is carried out to determine the main cause and determine preventive measures so that it does not proceed. Any changes or additions to the K3 procedures made are immediately informed to all workers through meetings or official notifications”

### **4.3 Occupational Health and Safety (OHS) Barriers and Solutions**

Implementation of SOP at PT. Tokyu Construction Indonesia has done very well. Based on the results of observations, harmony was found with the information obtained from the interviews of the participants. However, the obstacles that still often arise are lack of understanding and concern for Occupational Health and safety.

Participant A: “constraints that occur to workers due to lack of understanding of Health and safety due to lack of adequate educators and constraints that occur to management is the cost of implementing K3 is so expensive”

Participant B: “concern about K3 and the absence of a system for implementing Occupational Safety and health”

Participant C: “one of the main barriers to the implementation of Occupational Health and safety in PT. Tokyu Construction Indonesia is the lack of awareness and discipline of workers in the field. Although training and briefings have been conducted, some workers still tend to ignore the established K3 procedures, such as not using personal protective equipment properly or violating safety procedures because they feel rushed to complete the job. In addition, another obstacle is the language barrier, especially for subcontractor workers who may not understand safety instructions well due to language differences or low levels of literacy”

Participant D: "from my point of view, other obstacles that often arise are unpredictable weather conditions and the work environment. On construction sites, especially during the season, ground conditions can become slippery and difficult to predict, increasing the risk of accidents. It becomes a challenge to maintain safety, as work often has to continue. In addition, the lack of active participation from all levels of Management in the field is also sometimes an obstacle. Although the central management fully supports the implementation of K3, not all supervisors or foremen on site are consistent in monitoring compliance with K3 procedures, which makes their implementation less than optimal in some situations”

## **5. Discussion**

### **5.1 Occupational Health and Safety (OHS) System**

PT Tokyu Construction Indonesia has implemented a highly structured OHS system, in accordance with national regulations and international standards such as ISO 45001. The company regularly conducts induction, safety briefings, training, and safety campaigns to ensure all employees understand the importance of maintaining safety in the workplace. Before starting a project, they prepare a Contractor Safety Management System (CSMS), a work safety plan, and K4 procedures have been agreed upon. The implementation of personal protective equipment (PPE) is strict, along with regular inspections of equipment and the work environment to identify and manage risks on construction sites. In addition, the company has emergency response procedures such as fire drills and emergency evacuations. All incidents, including small-scale ones, are recorded and analyzed to prevent similar incidents from occurring in the future. Regular medical check-ups are also implemented, especially for high-risk workers. The company's management plays an active role in ensuring compliance with OHS standards, which contributes to increased safety awareness in all work areas.

## **5.2 Occupational Health and Safety (OHS) Procedures**

Occupational health and safety procedures at PT Tokyu Construction Indonesia have been systematically designed. This process begins with an in-depth risk analysis prior to project implementation. Every activity, especially those with high risks, is planned through work methods and job safety analysis to identify potential hazards. The company then establishes OHS rules that are socialized through training and safety programs for all workers. The procedures implemented include the mandatory use of personal protective equipment such as safety shoes, vests, masks and helmets. Before starting activities, all workers are required to attend a daily safety briefing. In addition, the project site is equipped with clear evacuation routes, and emergency response simulations, such as fire, are conducted regularly. Every incident, whether major or minor, is recorded in the incident management system for investigation to determine the root cause. Preventive measures are then implemented based on the findings of the investigation, and any changes to procedures are immediately communicated to workers through meetings or formal notices.

## **5.3 Occupational Health and Safety (OHS) Barriers and Solutions**

The main challenge in implementing occupational health and safety at PT Tokyu Construction Indonesia is the lack of workers' understanding and awareness of the importance of OHS. Despite regular training and briefings, some workers are still negligent in using personal protective equipment and following safety rules, often due to limited education and poor work discipline. In addition, the high cost required to implement OHS according to standards is an obstacle for management. Another obstacle is the lack of awareness and the lack of integration of a comprehensive OHS system at all levels of the organization. External factors, such as weather conditions and erratic working environments, such as slippery ground during the rainy season, also increase the potential for accidents. In addition, the lack of active participation of management in the field in monitoring compliance with OHS also hindered its maximum implementation, even though support from central management was available.

## **6. Conclusion, Implication, and Recommendation**

### **6.1 Conclusion**

PT Tokyu Construction Indonesia successfully implements a well-organized OHS system, in accordance with national regulations and international standards, including ISO 45001. The company implements new employee induction, regular safety briefings, training, awareness campaigns, PPE usage, as well as a contractor safety management system (CSMS). In addition, safety planning, regular inspections, and emergency response simulations, such as fire drills, support efforts to reduce accident risks. OHS procedures are implemented in a structured manner, starting from project planning with risk analysis, JSA, training, and regular briefings. Workers are equipped with adequate knowledge and PPE, as well as emergency response procedures such as fire simulations. An incident management system supports hazard identification and mitigation, while management commitment ensures a safe, productive and sustainable work environment. Barriers to OHS implementation include lack of worker understanding, low discipline in PPE use, high costs, and weak field supervision. External factors such as weather and environmental conditions

also increase the risk of accidents. To overcome this, companies need to raise workers' awareness and strengthen supervision.

## 6.2 Implication

based on the results of the study, it refers that occupational health and safety is important to be applied in a company to support the smooth running of work activities.

## 6.3 Recommendation

To achieve more optimal results in research on the current topic, the researcher has formulated some suggestions for future research, namely:

1. This study only involves 1 (one) variable, it is hoped that future research can consider more than 1 (one) variable, so that the variation in research results can be more diverse.
2. To obtain better results, it is hoped that future research can add the necessary documentation, so that the results will be more precise.

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