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Implementation of Construction Safety Management System (SMKK) In Lubuk Sahung-Pondok Baru; SIMP. PUSKESMAS AUR CINA PROJECT

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Abstract

This study aims to determine the state of completeness of facilities related to the implementation of the Construction Safety Management System (SMKK) and its application to the Lubuk Sahung – Pondok Baru; Simp. Puskesmas – Aur Cina Project. The results showed that the completeness of K3 facilities available in the Lubuk Sahung-Pondok Baru; Simp. Puskesmas – Aur Cina Project has a value of 68%. This value is categorized as medium. Application of SMKK in the Lubuk Sahung-Pondok Baru Road Reconstruction/Improvement project; Simp Street. Puskesmas – Aur China is good enough, only the awareness of workers in using PPE is still low.

Keywords: Construction Safety Management System (SMKK), Completeness of K3 Facilities, PPE Awareness

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INTRODUCTION

Construction work has inherent characteristics, including the fact that the workplace is in open spaces affected by weather conditions, the limited duration of work, the use of untrained workers, the use of work equipment that poses risks to safety and health, and physically demanding tasks. Based on these unique characteristics, the construction service sector faces the risk of fatal accident costs (Pangkey et al., 2012).

To illustrate, according to the Workers Social Security Agency (BPJS Ketenagakerjaan), in 2015, there were 110,285 recorded workplace accidents in the construction sector, resulting in 2,375 fatalities. In 2016, there were 101,367 cases with 2,382 fatalities. These figures indicate that the implementation of Occupational Health and Safety Management System (K3) in construction companies is still relatively low.

The government has long been addressing labor protection issues through laws such as Law No. 1 of 1970 on Occupational Safety. In line with the changing times, in 2003, the government enacted Law 13/2003 concerning Manpower. This law covers various aspects of worker protection, including wages, welfare, social security for workers, and occupational safety and health.

In terms of occupational safety and health (K3) in the construction sector, it is regulated by the Minister of Manpower and Transmigration Regulation No. PER-01/MEN/1980 concerning Occupational Safety and Health in Building Construction. This regulation includes provisions related to safety and health in general as well as in each part of building construction. As a follow-up to the

issuance of this regulation, the government issued a Joint Ministerial Decree of the Minister of Public Works and the Minister of Manpower No. Kep.174/MEN/1986-104/KPTS/1986 on Safety and Health Guidelines at Construction Sites. This guideline, also known as the "Construction K3 Guidelines," can be considered a standard for K3 in construction in Indonesia. However, it is no longer in line with current needs and was replaced by the Minister of Public Works Regulation No. 21/PRT/M/2019 on Construction Safety Management System Guidelines.

The Construction Safety Management System (SMKK) is a systematic approach implemented in the workplace, distributing responsibilities for K3-related actions, establishing work standards and frameworks to achieve those standards, emphasizing K3 regulations, and facilitating enforcement. SMKK is an integral part of the labor protection system for construction services, minimizing the risks of moral and material losses, work hours lost, human safety, and environmental impact, ultimately supporting effective and efficient performance in the construction process (Pangkey, 2012).

The Lubuk Sahung – Pondok Baru Road Reconstruction/Improvement project; Simp. Puskesmas – Aur Cina Street is a county road improvement project located in Mukomuko Regency, implemented in the 2023 fiscal year, specifically in Selagan Raya Subdistrict. The project is carried out by CV. Nata Konstruksi with a contract value of IDR 7,768,919,000. The project's duration is 150 calendar days, financed through the Special Allocation Fund (DAK) for the Physical Road Sector. The road improvement work includes drainage, earth and geosynthetic work, granular and cement concrete pavement, asphalt pavement, structures, daily work, and other miscellaneous tasks. The complexity of constructing such a project with specific and modern equipment poses a high risk of accidents. Therefore, the implementation of Occupational Health and Safety (K3) on the project must be carried out properly and in accordance with legal regulations.

Occupational Health and Safety (K3) is a complex issue in a construction project. Workplace accidents and work-related illnesses are generally caused by management factors, in addition to human and technical factors. The level of knowledge, understanding, awareness, attitude, and actions of workers in addressing safety issues is still very low and has not been treated as a fundamental need for overall well-being, including increased work productivity.

RESEARCH METHOD

The data processing method used in this technical report is a qualitative descriptive method, involving the organization, discussion, and evaluation of data and observation results related to the Construction Safety Management System (SMKK) at the worksite. The data collection technique employed in this report is documentation method, which entails gathering data and information through supporting documents related to the project under investigation. The data used in the preparation of this report consist of both primary and secondary data. Primary data are obtained through direct observation at the worksite, while secondary data are acquired from the company to be investigated, including general project data, organizational structure, documents regarding guidelines/standards on the

implemented Construction Safety Management System (SMKK) at the project site, as well as relevant literature and media related to the object of study.

RESULTS AND DISCUSSION

Results of the Assessment of Occupational Health and Safety (K3) Facilities

Based on the observations in the Lubuk Sahung – Pondok Baru Road Reconstruction/Improvement Project; Simp. Puskesmas – Aur Cina Street, data on the completeness of K3 facilities were obtained and are presented in the following table:

Table 1. Results of the Assessment of Occupational Health and Safety (K3) Facilities

No	Evaluated Indicators	Score					Total
		1	2	3	4	5	
1	Personal Protective Equipment						
	Protective Helmet					√	5
	Safety Shoes					√	5
	Gloves			√			3
	Safety Vest					√	5
	Mask			√			3
2	Project Safety Facilities						
	Signs					√	5
	Hydrant	√					1
	K3 Warning Banners					√	5
	Warning Alarms	√					1
	Warning Lights	√					1
	Total	**3**	**0**	**6**	**0**	**25**	**34**
	Percentage = Total/Total Ideal Score x 100%	**6**	**0**	**12**	**0**	**50**	**68**

Explanation:
1: Not available
2: Available, not suitable, and incomplete
3: Available, suitable, and incomplete
4: Available, not suitable, and complete
5: Available, suitable, and complete

The five scores above are assessed based on the availability of Occupational Safety and Health (OSH) facilities in the Lubuk Sahung – Pondok Baru Road Reconstruction/Improvement project and the Simpang Puskesmas – Aur Cina Road project. Scores are deemed inadequate if the specified items are damaged. Scores are considered incomplete if the quantity of items does not meet the number of workers on the respective projects.

From the table above, it can be observed that the completeness of OSH facilities available in the project has a value of 68%. This value is categorized as moderate. Performance assessment of the Implementation of the Construction Safety Management System (CSMS) is conducted to evaluate the level of CSMS implementation in meeting the requirements of safety, health, and occupational safety conditions at the construction site. The assessment is carried out for the project owner (PPK), the Public Works and Spatial Planning Agency of Mukomuko District, and the service provider.

Assessment of the Project Owner (PPK):

1. The PPK has identified construction safety hazards, referring to design documents or consulting Construction OSH Experts and/or Safety Officers.
2. The PPK has assigned a service provider to implement CSMS according to the Construction OSH Plan (RK3K) and requested a review of the RK3K in relevant sections.
3. The PPK has explained construction safety risks during the project briefing, including conditions and hazards that may arise during work.
4. The PPK and the service provider determine the level of risk and discuss OSH risk levels, consulting with construction OSH experts.
5. The PPK understands and implements CSMS within the framework of its duties, responsibilities, and authorities in construction OSH management.

Assessment of the Project Owner (Public Works and Spatial Planning Agency of Mukomuko District):

1. The agency fully implements Construction CSMS for Public Works according to Regulation No. 21/PRT/M/2019 on the Guidelines for Construction Safety Management Systems.
2. OSH requirements are included in the Service Provider Selection Document by the Working Group.

Assessment of the Service Provider:

1. The service provider compiles a construction safety plan in accordance with the OSH implementation guidelines for road and bridge construction.
2. The service provider has conducted hazard identification, risk assessment, and OSH risk control.
3. The RK3K contract is an integral part of the contract document. During observation, the validated RK3K serves as an interaction tool between service users and providers in OSH project management.
4. The service provider has established a construction safety organizational structure consisting of a responsible person and a chairperson.
5. The service provider conducts socialization and promotion through banners, posters, and OSH information boards.
6. The service provider has completed insurance and permits, including occupational insurance, operating permits for equipment and materials, and work competency certificates for operators issued by authorized institutions/agencies.
7. The service provider prepares construction safety personnel consisting of construction OSH experts or safety officers and traffic controllers.

8. The service provider prepares facilities, infrastructure, and health equipment, including first aid kits, wound care supplies, and others.
9. The service provider prepares necessary traffic signs and equipment for traffic management, such as directional signs, prohibition signs, warning signs, and information signs.

Challenges in CSMS Implementation:

There are several challenges in implementing CSMS in the Lubuk Sahung – Pondok Baru Road Reconstruction/Improvement project and the Simpang Puskesmas – Aur Cina Road project. These challenges may involve human, technical, legal, and environmental factors. The following are some common challenges faced in OSH implementation in the construction sector:

1. Worker Awareness and Compliance:
   - Lack of Awareness: Workers may not fully realize the risks of accidents and health impacts that can occur at the construction site.
   - Non-Compliance: Some workers may ignore safety procedures or improperly use personal protective equipment.
2. Lack of Education and Training:
   - Limited Skills and Knowledge: Untrained or insufficiently knowledgeable workers may be more vulnerable to accidents.
   - Lack of Regular Training: Workers may not receive regular training to refresh their knowledge of safe OSH practices.
3. Ineffective Safety Management:
   - Lack of Supervision: Inadequate supervision can lead to violations of OSH policies and indirectly increase the risk of accidents.
   - Weak Policy Implementation: Unclear or poorly implemented safety policies can hinder the effective implementation of OSH practices.
4. High Risk in Construction Projects:
   - Complex Project Nature: Construction projects often involve multiple parties and various activities, increasing the complexity of safety management.
   - Changing Work Conditions: Frequently changing work conditions, such as bad weather or design changes, can increase the risk of accidents.
5. Financial Constraints:
   - Safety Equipment Costs: Some contractors may be reluctant to invest in safety equipment.
   - Production Downtime: Implementing specific safety measures may slow down the construction process, seen as a financial loss.
6. Regulations and Legal Compliance:
   - Lack of Compliance with Regulations: OSH implementation is often associated with government regulations, and non-compliance can result in legal sanctions.
   - Changing Regulations: Changes in regulations or lack of harmonization between regulations can make it challenging for companies to comply with safety standards.

To overcome these challenges, construction companies need to involve all relevant parties, provide adequate training, raise awareness, implement effective safety management, and ensure compliance with safety regulations.

Understanding Construction OSH for Providers:

Providers or contractors in the construction industry play a crucial role in implementing Occupational Safety and Health (OSH). A good understanding of construction OSH aims not only to comply with regulations but also to protect workers, enhance productivity, and reduce the risk of accidents. Here are some aspects of understanding construction OSH for providers:

1. Understanding OSH Risks:
   - Risk Identification: Providers need to understand OSH risks related to construction projects, including accident risks, occupational diseases, and long-term health impacts.
2. Compliance with Regulations:
   - Understanding Regulations: Providers must have a strong understanding of OSH regulations and standards applicable in the project area.
   - Implementation of Safety Policies: Establishing and ensuring the implementation of safety policies in line with regulations and industry standards.
3. Training and Education:
   - Worker Training: Providing adequate OSH training to all workers to ensure they understand risks and necessary preventive actions.
   - Managerial Knowledge: Managers and supervisors need to understand OSH governance and provide guidance to workers.
4. Risk Management:
   - Risk Evaluation: Regularly evaluating risks to identify and manage potential hazards in the workplace.
   - Implementation of Safety Controls: Implementing effective control measures to reduce risks, including the use of personal protective equipment and other safety equipment.
5. Worker Involvement:
   - Worker Participation: Encouraging active participation of workers in identifying risks, formulating OSH policies, and providing feedback on OSH practices.
   - Effective Communication: Establishing effective communication channels to address OSH issues and convey important information to workers.
6. Leader Commitment and Safety Culture:
   - Leader Commitment: Demonstrating high-level commitment from management to support OSH practices and allocate sufficient resources.
   - Safety Culture: Building a safety culture within the organization, where every team member prioritizes safety as a core value.
7. Monitoring and Reporting OSH:
   - Performance Monitoring: Regularly monitoring OSH performance to ensure compliance and identify areas requiring improvement.
   - Accident Reporting: Mandating immediate reporting of every OSH incident or accident and investigating the causes, followed by corrective actions.

CONCLUSION

From the observations, the following conclusions can be drawn:

1) The completeness of K3 facilities available in the Lubuk Sahung-Pondok Baru Road Reconstruction/Improvement project; Simp. Puskesmas – Aur Cina Street has a value of 68%. This value is categorized as moderate.
2) The implementation of the Construction Safety Management System (SMKK) in the Lubuk Sahung-Pondok Baru Road Reconstruction/Improvement project; Simp Street. Puskesmas – Aur China is quite good, but the awareness of workers in using Personal Protective Equipment (PPE) is still low.

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