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Analysis of the Implementation of the Occupational Safety and Health Management System (SMK3) at the Initial Level at PT X and Y

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ABSTRACT

Occupational safety and health contain the value of protecting workers from accidents or occupational diseases. The garment industry is generally a safe workplace compared to other sectors. The primary health risks come from minor but ongoing hazards whose effects persist over time and can potentially cause work accidents or occupational diseases. This study aimed to describe the implementation of the Occupational Safety and Health Management System (SMK3) at the initial level in the garment industry in Central Java. The type and design of the study used a quantitative descriptive method with a purposive sampling method. Data collection methods were interviews, observations, and documentation studies. The instrument used was a questionnaire on implementing the Occupational Safety and Health Management System (SMK3) at the initial level based on PP No. 50 of 2012 belonging to the Central Java Provincial Occupational Safety Center. The validity test of the data used source triangulation and technique triangulation techniques, and then the data was analyzed using univariate analysis. The study results showed that the implementation of the SMK3 at the initial level in international companies was more comprehensive compared to national companies that needed improvements to increase the level of SMK3 implementation. The initial level of SMK3 implementation in international garment companies is 93.6%, which is a satisfactory category, while in national companies, it is 70.9%, which is a good category.

Keywords: Implementation, SMK3, Garment Industry

INTRODUCTION

According to the International Labor Organization (ILO), around 2.3 million people worldwide experience Work Accidents (KK) or Work-Related Diseases (PAK) each year. According to data

on KK and PAK cases reported to the Ministry of Manpower through the Provincial Manpower Office in 2021, the number of KK and PAK cases was 7,298, with 9,224 workers as victims.[1]. The Central Java Provincial Manpower Office also reported that in 2021 there were 262 KK cases, while according to the recapitulation of the number of cases and health service costs for National PAK cases for the period January 1, 2015 to June 30, 2022, the nominal value was IDR 39,523,111,971.[2].

According to the results of a preliminary study based on the 2022 sustainability report at a national garment company, there were 163 work accidents in 2022, 110 of which were moderate to severe accidents, while PAK cases in the company reached 12,104 sufferers, with 81% of them experiencing ARI.

The large number of work accidents and work-related diseases cannot be separated from the potential dangers and risks that come from the workplace. Every work process in an industry has potential dangers, including in the garment industry. Possible hazards that can cause work accidents can come from various activities carried out during or from sources outside the work process. [3].

The hazards inherent in each work process can pose mild and severe risks. Compared to other sectors, the garment industry is generally a safe workplace. The main health risks come from mild but ongoing hazards that have chronic effects over time and cause fatigue, pain, and musculoskeletal disorders. Garment workers are also known to face health problems related to fatigue, pollution, poor lighting and ventilation, unergonomic workplaces, excessive noise, vibration, and failure to use Personal Protective Equipment (PPE).[4].

To run a safe business and prevent work accidents and occupational diseases, workers' protection programs must be carried out consistently and continuously by implementing the Occupational Safety and Health System. This is by Law No. 1 of 1970 concerning Occupational Safety and Health and Law No. 13 of 2003 concerning employment, which states the obligation of employers to protect workers from potential dangers they face.[5].

The garment industry is the mainstay of the sector in generating foreign exchange earnings. The garment industry in Central Java, in particular, is growing bigger. In 2019, according to the Central Java Central Statistics Agency, there were 569 garment companies (in large and medium classifications) and 276,211 workers in the garment industry. The number of workers in the garment industry is one of the largest in Central Java[6].

Based on a survey conducted by the Central Java Provincial Occupational Safety Center on 44 garment companies throughout Central Java in 2019-2023, the average implementation of SMK3 at the initial level in the garment industry in Central Java is in the Good category with an implementation percentage of 84.6%. However, in its implementation, 38% of companies still have not met all the criteria in the initial SMK3 level, namely in the suitable and sufficient categories.

The development of the garment industry in Central Java has not been accompanied by the fulfillment of all aspects of SMK3 to control potential hazards and risks in the garment work process, as evidenced by the still high number of KK and PAK. The problems described above are taken into consideration in researching the level of implementation of the Occupational Safety and Health Management System referring to PP No. 50 of 2012 to determine the level of implementation of the Occupational Safety and Health Management System (SMK3) at the initial level in the garment industry in Central Java.

METHOD

The type and design of the research used a quantitative descriptive method with a purposive sampling method. The criteria in this study were formal garment companies on a national and international scale. Data collection methods were interviews, observations, and documentation studies. The instrument used was a questionnaire on implementing the Occupational Safety and Health Management System (SMK3) at the initial level based on PP No. 50 of 2012 belonging to the Central Java Provincial Occupational Safety Center. The validity test of the data used source triangulation and technique triangulation techniques; then, the data was analyzed using univariate analysis. The calculation of univariate analysis is as follows:

$$\text{PS} = \frac{ST}{SM} \text{x} 100\%$$

Information:

PS = Percentage score

ST = Total score generated

SM = Maximum score that should be obtained

RESULTS

PT X is one of the international garment companies included in the Foreign Investment (PMA) company originating from a Joint Venture between Thai and Singaporean companies with a parent company in Indonesia. This company is located in Semarang City with a total workforce in one of its factories of 1600 workers. PT X is engaged in the production of ready-to-wear clothing such as t-shirts, pants, jackets, and others. This company exports its products to several countries in Europe and America, with buyers from famous sportswear brands worldwide.

PT Y is a national garment company in the Domestic Investment Company (PMDN). The capital owner is an Indonesian Citizen (WNI). This company is located in Semarang Regency and has a total workforce of 1642 workers. PT Y produces ready-to-wear clothing such as woven tops and bottoms, pants, uniforms, blouses, skirts, T-shirts, jackets, denim, and dresses. Most of its production is exported to the Americas, Europe, and Asia.

The following are the results of the initial level SMK3 element assessment based on Government Regulation No. 50 of 2012 at PT X and PT Y.

Table1. Results of the assessment of the implementation of SMK3 at PT X and PT Y

No	SMK3 Elements	Company X			PT Y		
		Max.	**Implemented**	**Success (%)**	**Max.**	**Implemented**	**Success (%)**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	Developing and Maintaining Commitment	45	44	**97.9**	45	39	**71.9**
2	Preparation and Documentation of K3 Plans	6	5	**83.3**	6	5	**83.3**
3	Contract Control, Design, and Review	6	6	**100.0**	6	2	**33.3**
4	Document Control	3	3	**100.0**	3	3	**100.0**

5	Product Purchasing and Control	9	9	**100.0**	9	4	**33.3**
6	Occupational Safety Based on SMK3	63	62	**98.8**	63	46	**70.2**
7	Monitoring Standards	24	23	**88.9**	24	20	**80.6**
8	Reporting and Correcting Deficiencies	3	3	**100.0**	3	3	**100.0**
9	Material Management and Movement	21	21	**100.0**	21	18	**75.0**
12	Skills and Abilities Development	12	7	**66.7**	12	6	**61.1**
	Implementation Achievement Level	**192**	**183**	**93.6**	**192**	**146**	**70.9**
	Category			**Satisfying**			**Good**

The Commitment Development and Maintenance Element has four sub-elements: K3 Policy, Responsibility and Authority to Act, Review and Evaluation, and Employee Involvement and Consultation. This element's implementation percentage is 7.9% at PT X and 71.9% at PT Y.

The K3 Plan Creation and Documentation element has one sub-element containing two criteria: the K3 Strategy Plan and K3 Information. The implementation percentage in both companies is 83.4%.

The Design and Contract Review element has two sub-elements, each consisting of 1 criterion, including Design Control and Contract Review. This element's implementation percentage is

100% in PT X and 33.3% in PT Y.

Document Control Element has only one sub-element consisting of 1 criterion. The criteria in the elements in both companies have been met with a total score of 3 and an average implementation percentage of 100%.

The purchasing element has two sub-elements: the Specification and Purchase of Goods and Services and the Verification System for Goods and Services Purchased. This element's implementation percentage is 100% in PT X and 33.3% in PT Y.

Work Safety Elements Based on SMK3 consist of 7 sub-elements: Work System, Supervision, Selection and Placement of Personnel, Limited Area, Maintenance, Repair and Change of Production Facilities, Readiness to Handle Emergency Situations, and First Aid for Accidents. The implementation percentage of this element is 98.8% at PT X, while it is 70.2% at PT Y.

The Monitoring Standard Element has three sub-elements: Inspection, Work Environment Monitoring/Measurement, and Health Monitoring. This element's implementation percentage is 9% at PT X and 80.6% at PT Y.

The Reporting and Improvement element has only one sub-element consisting of 1 criterion: Accident Inspection and Assessment. Both companies have fulfilled this element with an implementation percentage of 100%.

The Material Management and Movement Element comprises 3 sub-elements: Manual and Mechanical Handling, Measurement, Storage, Disposal Systems, and Hazardous Chemical Control (BKB). The percentage of implementation at PT X is 100%, while PT Y is 75%.

The last element in the assessment is Skills and Ability Development, which consists of three sub-elements: Training for Management and Supervisors, Training for the Workforce, and Special Skills Training. The percentage of implementation of this element is 66.7% at PT X, while it is 61.1% at PT Y.

DISCUSSION

Building and Maintaining Commitment

K3 policies and commitments are the basis for implementing SMK3 in the company. A strong commitment to implementing SMK3 impacts workforce power and productivity. [7]. The effective implementation of K3 policies and commitments is also very important in reducing work accidents, injuries, damage, and occupational diseases. [8].

In the OHS Policy sub-element, PT X has a more comprehensive and structured OHS policy, with effective communication to all stakeholders through information boards. Meanwhile, PT Y still needs to improve policy formulation and expand communication to ensure all parties understand and implement the policy. In the Responsibility and Authority to Act sub-element, PT X and PT Y have similarities in the division of responsibilities and handling of emergencies. However, the appointment of the person in charge of OHS in both companies has not fully met the requirements. Namely, it has not been included in the job description. Implementing the Review and Evaluation sub-element at PT X has been carried out by carrying out periodic and systematic OHSMS reviews, which are carried out twice a year, while PT Y only conducts reviews through the company management WhatsApp group, which is less formal and systematic. In the Involvement and Consultation sub-element, both companies have involved employees in OHS activities by forming the Occupational Safety and Health Development Committee (P2K3) and consultation activities through the Bipartite LKS. P2K3 was formed according to PT X and PT Y regulations, and routine meetings were held. PT X has also implemented socialization of the P2K3 structure to workers through safety briefings and LKS Bipartite meetings. However, PT Y needs to improve the socialization of the P2K3 structure to ensure that all members understand their roles and responsibilities.

Preparation and Documentation of K3 Plans

Based on the data presented, PT X and PT Y show similarities in the elements of documentation strategy, primarily related to planning and management of OHS risks. Both have reasonable formal procedures, but there are minor differences in the methods used: PT X uses the Integrated Risk Register (IRR), and PT Y uses Hazard Identification, Risk Assessment, and Determinant Control (HIRADC). Another similarity is in the less-than-optimal dissemination of OHS information to external parties, in this case, guests. This contradicts PP Number 50 of 2012 Article 13, paragraph 1, which states that companies must ensure that OHS information is conveyed to all internal and external parties. (PP NO. 50, 2012). K3 information in both companies has not been appropriately communicated to guests due to the lack of safety induction. K3 information must be disseminated to all parties using appropriate K3 communication media because it will affect the company's K3 behavior and culture.[10].

Contract Control, Planning, and Review

Based on the data presented, there are significant differences in the implementation of design and contract review elements between PT X and PT Y. This difference mainly lies in the extent to which the two companies implement IBPR in the design, modification, and contract review process. PT X has implemented IBPR comprehensively at the design, modification, and contract review stages and involved competent officers. IBPR at the design and modification stages is included in the Integrated Risk Register, while in the contract review, the K3 department collaborates with the Operational Excellence department. However, PT Y has shortcomings in compiling written IBPR procedures at the design and modification stages, and there is no evidence of PT Y's implementation of contract reviews. Although some IBPR activities have been carried out without a straightforward procedure, implementing IBPR is inconsistent and difficult to monitor. The lack of a formal IBPR procedure at PT Y can increase the risk of work accidents because potential hazards and risks are not systematically identified, so appropriate preventive measures cannot be taken[11]

Document Control

Based on the data presented, PT X and PT Y show striking similarities in K3 document control. Both companies meet the only criteria with the same score and percentage of implementation. This proves that both companies have complied with this element well. Government Regulation Number 50 of 2012 has regulated the management of K3 documents from creation, review, approval, distribution, storage, and destruction. The purpose of managing these K3 documents is to ensure that K3 documents in the company are always relevant, accurate, complete, and easily accessible to interested parties.[12].

Product Purchasing and Control

In the sub-element of specification and purchasing of goods and services, PT X has a more comprehensive system covering all types of goods and services. PT X has a straightforward purchasing procedure and includes K3 specifications in it. This shows a strong commitment to ensuring that all purchases meet K3 requirements. PT Y's system is still partial and only focuses on chemicals. There is a purchasing procedure that includes K3 specifications but only for chemicals. This indicates a lack of understanding of the importance of K3 specifications for all types of goods and services.

Meanwhile, there is a transparent verification system for the verification system of goods and services at PT X, ensuring that the goods and services received follow the specifications set with a specification checklist and the provision of identification labels and machine validation. At the same time, at PT Y, there is no evidence that the company has a verification system, which increases the risk of using goods or services that do not meet K3 standards. The significant difference between PT X and PT Y shows that implementing the purchasing element in SMK3 is greatly influenced by the commitment of management, resources, knowledge, and the company's safety culture. PT Y needs to make comprehensive improvements to achieve the same level of compliance as PT X.[13].

Occupational Safety Based on SMK3

In the work system sub-element, PT X has well-documented procedures and a safe work permit form, while PT Y does not have a formal work permit procedure. In the supervision sub-element, PT X has conducted periodic inspections following established procedures. PT X performs several inspections, including safety patrol, machinery safety, electrical patrol, general patrol, PPE monitoring, fire & equipment checklist, and health monitoring. Meanwhile, PT Y does not have a straightforward inspection procedure and no documented inspection records. Regarding access restrictions, PT X has implemented restrictions by installing warning signs, while PT Y does not have clear access restrictions. Meanwhile, PT Y also has the same facilities as PT X, but the installation of K3 signs at PT Y is still not following the provisions, one of which is installing a gathering point sign that is too close to the factory building and generator room. However, PT Y has not implemented the area safety procedure that PT X has implemented to ensure area safety during maintenance.

Monitoring Standards

PT X has conducted inspections of the hazard inspection sub-element. However, despite conducting inspections, PT X does not yet have a written procedure. This can be an obstacle to ensuring the consistency and effectiveness of inspections. Meanwhile, PT Y relies only on 5S patrols, which may not be enough to identify all potential hazards. In the health monitoring sub-element, PT X has met all the criteria, including periodic health checks for all categories of workers. Meanwhile, PT Y has not conducted periodic health checks for high-risk workers, which can increase the risk of work accidents or occupational diseases. This must be considered because

employee health monitoring aims to ensure that workplace hazard prevention measures are effective by implementing a medical surveillance program to detect adverse health impacts. [14].

Reporting and Correction

Quantitatively, there is no significant difference between PT X and PT Y in terms of fulfilling the inspection and accident assessment criteria. Both companies have shown the same commitment to fulfilling the basic requirements in SMK3. Implementing this element is an effort to reduce work accidents by reporting work accidents or hazards in the workplace. Workers also have an important role in implementing this reporting system, and this can increase workers' awareness of potential hazards in the workplace. [15].

Material Management and Movement

In the manual and mechanical handling sub-elements, PT X has clear standard operating procedures (SOPs) for each material handling activity, both manually and mechanically. This provides consistent guidance for workers, reduces the risk of error, and facilitates supervision. Without written procedures, material handling at PT Y tends to be carried out inconsistently, depending on the knowledge and experience of individual workers, even though some workers have used tools for loading and loading goods. Clear procedures can improve work efficiency by minimizing unnecessary movements and wasted time.

Skills and Abilities Development

Based on existing data, PT X and PT Y show similarities in skills and abilities development, especially regarding non-conformity to specific standards. In the sub-element of training for management and supervisors, neither company has fully involved executive management in training and has no evidence of special training for supervisors. According to the interview results, both companies stated that executive management only attended several trainings, such as emergency response simulations at PT X and safety briefings at PT Y, which are held once a month. The absence of executive management in training and the lack of special training for supervisors indicate a gap in leadership development in both companies. This can impact the quality of leadership, innovation, and the organization's ability to adapt to change.

Neither company has fully provided K3 training to all workers in the training sub-element for workers. Only a few workers received first aid, fire, and PPE training. In addition, training has not

been provided to all workers because it would disrupt the company's production process. This shows both companies' lack of priority for occupational safety and health. This can increase the risk of work accidents, reduce productivity, and damage the company's image. [16].

CONCLUSION

The assessment of the implementation of SMK3 in the garment industry in Central Java based on PP No. 50 of 2012 includes 12 elements, namely Development and Maintenance of Commitment, Preparation and Documentation of K3 Plans, Control, Design, and Review of Contracts, Document Control, Product Purchase and Control, Work Safety Based on SMK3, Monitoring Standards, Reporting and Correction of Deficiencies, Management of Materials and Their Movement, and Development of Skills and Abilities. The comparison of the level of achievement of implementation between international garment companies (PT X) and national garment companies (PT Y) is respectively 93.6% with a satisfactory category and 70.9% with a good category.

1. The level of achievement of implementing the Development and Maintenance of Commitment elements at PT X was 97.9% with a satisfactory category, and at PT Y, it was 71.9% with a good category.
2. The level of achievement in implementing the elements of Making and Documenting K3 Plans at PT X and PT Y is 83.3%, which is a good category.
3. The level of achievement of implementing Control, Design, and Contract Review elements at PT X was 100% with a satisfactory category, and at PT Y, only 33.3% had a less-than-satisfactory category.
4. The level of achievement of implementing Document Control elements at PT X and PT Y is the same, namely 100% with a satisfactory category.
5. The level of achievement of the implementation of Purchasing and Product Control elements at PT X is 100% with a satisfactory category, while at PT Y, it is only 33.3% with a sufficient category.
6. The level of achievement of the implementation of Occupational Safety elements based on SMK3 at PT X is 98.8% with a satisfactory category, and PT Y is 70.2% with a good category.
7. The level of achievement of implementing Monitoring Standard elements at PT X was 88.9% with a satisfactory category, and PT Y was 80.6% with a good category.

8. The level of achievement of implementing the Reporting and Correction of Deficiencies elements at PT X and PT Y is 100% with a satisfactory category.
9. The level of achievement of implementing the Material Management and Movement elements at PT X is 100% with a satisfactory category, while at PT Y, it is 75% with a good category.
10. The level of achievement of implementing the Skills and Ability Development elements at PT X was 66.7% with a good category, and PT Y was 61.1% with a good category.

SUGGESTION

1. For PT X

a. In order to fulfill the Commitment Development and Maintenance element, the K3 department needs to collaborate with the HRD department to include K3 responsibilities and authorities in the job descriptions of safety representative personnel.
b. The OHS department needs to disseminate OHS information to external parties

to fulfill the elements of creating and documenting an OHS plan.

c. To fulfill the Occupational Safety elements based on SMK3, the K3 department needs to identify hazards, determine restricted areas, and restrict access.
d. To fulfill the Monitoring Standard elements, the K3 department creates documented procedures related to hazard inspections.
e. To fulfill the Skills and Ability Development element, company leaders and executive management need to be involved in K3 training. In addition, the K3 department, in collaboration with the HRD department, needs to create special training for supervisors and provide comprehensive training for the entire workforce.

2. For PT Y

a. To fulfill the Commitment Development and Maintenance elements, the management of PT Y needs to create an OHS policy document following PP No. 50 of 2012 and expand communication to all stakeholders. P2K3 also needs to work with HRD and company management to create a decree appointing an OHS person in charge and including OHS responsibilities and authorities in the OHS personnel job description. In addition, P2K3 and company management need to conduct a systematic, periodic, and documented review and evaluation of the OHSMS, and P2K3 needs to expand the socialization of the P2K3 structure to all stakeholders.

b. To fulfill the elements of Making and Documenting an OHS Plan, P2K3 needs to disseminate OHS information to external parties.
c. To fulfill the Control, Design, and Contract Review elements, P2K3 needs to create hazard identification and risk assessment procedures at the design, modification, and contract review stages.
d. P2K3 needs to work with the Purchasing department to create a system and procedure for purchasing specifications for goods and services, including K3 requirements for all types of goods and services other than chemicals to fulfill the Purchasing and Product Control elements. In addition, P2K3 needs to establish an apparent goods and services verification system to ensure compliance with specifications.
e. To fulfill the Work Safety elements based on SMK3, P2K3 needs to create work permit procedures for high-risk work, create K3 inspection procedures and implement them periodically, identify hazards to determine restricted areas and restrict access, redesign the determination of gathering points to comply with regulations and create area security procedures to ensure safety in the area during maintenance.
f. P2K3 needs to create a written hazard inspection system and conduct it periodically to fulfill the Monitoring Standard elements. In addition, P2K3 needs to conduct health monitoring for high-risk jobs.
g. P2K3 needs to create manual and mechanical handling procedures
h. to fulfill the elements of Material Management and Movement.
i. Company leaders and executive management must be involved in K3 training to fulfill the Skills and Ability Development element. In addition, P2K3, in collaboration with the HRD department, needs to create special training for supervisors and provide comprehensive training for all workers.

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