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Implementation of the Occupational Safety and Health Management System in the Automotive Light Vehicle Engineering Workshop of Cokroaminoto Vocational School, Kotamobagu

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ABSTRACT

This research aims to determine the implementation of the Occupational Safety and Health (K3) management system in the Light Vehicle Engineering Automotive Workshop at Cokroaminoto Vocational School, Kotamonagu, which is based on the Occupational Safety and Health Management System. This research is a quantitative descriptive research. The research subjects were 3 respondents, namely 1 Head of Department, 1 Workshop Coordinator, and 1 Technician. Data was collected using a questionnaire and cross-checked with documentation and interviews. Testing the validity of the instrument is carried out through expert judgment. Data analysis is presented in the form of block graphs and presented briefly in tables in the form of percentages of achievement scores which are then categorized and described based on the sub-indicators. Based on the research results, the achievement of indicators in the implementation of the Occupational Health and Safety Management System in the Automotive Workshop for Light Vehicle Engineering at Cokroaminoto Vocational School, Kotamonagu, namely 73.57% achieved, falls into the sufficient category, because the implementation of K3 has been achieved sufficiently, so it is necessary to increase the implementation of K3 following the K3 management system. The obstacles that influence the implementation of SMK3 are the lack of awareness among students about the importance of K3, the absence of a special team that handles K3

at the Light Vehicle Engineering Automotive Workshop at SMK Cokroaminoto Kotamonagu and the lack of documentation at the Light Vehicle Engineering Automotive Workshop at SMK Cokroaminoto Kotamonagu. Efforts made to overcome obstacles are by providing direction and advice to students about the importance of K3 and students are advised to always use PPE when practicing. The need for a special team that handles K3 and documentation related to K3 must be improved so that the implementation of K3 in Automotive Workshops is run by regulations and legislation. When using tools, students must take part in maintaining and maintaining them so that the tools are not easily damaged and it is necessary to replace tools if one is damaged and add additional tools so that students do not have to take turns using the tools.

Keywords: Accident prevention efforts, K3 Management System, vocational school

INTRODUCTION

Occupational Safety and Health (K3) is an important part of work in laboratories, companies, and workshops. The risk of failure will always exist in a work activity due to imperfect planning, inaccurate implementation, or unintended consequences. One of the occupational risks that can occur is a work accident. Work accidents will result in losses regardless of the amount. Therefore, wherever possible, work accidents must be prevented, if possible they can be eliminated, or at least their impact reduced. The number of work accidents in Indonesia continues to increase from year to year, this has become one of the main focuses on occupational safety and health in Indonesia. Occupational Safety and Health will create the realization of good workforce maintenance. Occupational safety and health will be instilled in each employee through good counseling and coaching so that they realize the importance of occupational safety for themselves and the company. If many accidents occur, many workers suffer, absenteeism in the company increases, production results decrease, and medical costs increase. All of this will cause losses for the workforce and the company concerned, because the workforce may be forced to stop working due to temporary illness or permanent disability caused by unsafe work processes or work equipment that is incorrectly operated.

The education system in Indonesia explains that vocational high schools (SMK) are a means of producing workers who are required to be able to form skilled human resources and have abilities according to industry needs. Mastery of skills and knowledge about occupational safety and health (K3) is an important thing to have in supporting the production process in an industry. Knowledge and understanding of K3 is mandatory for everyone who works. Students as one of the components in Vocational Schools must have good knowledge and understanding regarding K3, therefore, to be able to carry out work safely and productively, students must try to always be safe and healthy when working. School as a place of learning is the key to implementing understanding and mastery of K3. Knowledge about K3 taught by teachers in schools aims to maintain occupational safety and health when students work in school workshops or in the industrial world and also to prevent students from the risk of work accidents that may occur. Therefore, practical learning in workshops at vocational

schools should apply K3 as is the standard applied in the industrial world because, in practical learning, students are faced with materials, equipment, and work equipment that have potential dangers.

Cokroaminoto Vocational School Kotamobagu is a vocational school for the technology and industry group. Graduates from Cokroaminoto Vocational School, Kotamobagu, especially those majoring in Automotive Light Vehicle Engineering, are expected to be maximally absorbed in the world of work, so the school needs to introduce and optimize occupational safety and health. The Department of Automotive Light Vehicle Engineering has introduced an introduction to K3, including K3 material in the Basic Automotive Engineering subject, holding counseling about fires with speakers from BASARNAS, and at every practicum session the instructor or teacher always guides K3, this activity is very important carried out before carrying out teaching and learning activities in the workshop. This will have an impact on increasing students' knowledge about K3. K3 management in the Cokroaminoto Vocational School Kotamobagu practical workshop is still less effective, this can be seen from the unclear workshop rules. The negative impact if K3 is ignored by students during practicum, students will have a high accident rate during practicum. If you do not use personal protective equipment such as a wear pack, this will result in clothing that is not suitable being easily torn due to contact with liquid fuel or oil. For environmental cleanliness, if you don't pay attention and there is liquid fuel or oil on the floor, it will create a higher risk of slipping and resulting in injury due to work accidents.

Several things show that K3 management at the Automotive Light Vehicle Engineering Workshop at Cokroaåminoto Vocational School, Kotamobagu is not running as expected. The successful implementation of an occupational safety and health management system is very important, however, the level of success in implementing the occupational safety and health management system at Cokroaminoto Vocational School, Kotamobagu is not yet known. It is also important to know the obstacles in implementing the occupational safety and health management system at Cokroaminoto Vocational School, Kotamobagu to find solutions to resolve these obstacles so that the implementation of the occupational safety and health management system can run well. So concerning this, the aim of this research is 1) To find out the success of the automotive light vehicle engineering workshop at Cokroaminoto Vocational School, Kotamobagu in implementing the Occupational Safety and Health Management System (SMK3) as an effort to prevent work accidents. 2) Knowing the obstacles in implementing the K3 management system available at the automotive light vehicle engineering workshop at Cokroaminoto Vocational School, Kotamobagu. 3) To find out what efforts have been made to overcome obstacles in implementing the K3 management system in the automotive light vehicle engineering workshop at Cokroaminoto Vocational School, Kotamobagu.

LITERATURE REVIEW

Work safety

Work safety is a means of preventing accidents, disability, and death as a result of work accidents. Good work safety is the gateway to workforce security. Apart from being a direct obstacle, accidents

are also indirectly detrimental, namely damage to machines and work equipment, stopping the production process for a while, damage to the work environment, and so on.

Occupational Health

Health is a condition where humans are in good health, goods are in good condition without defects, work tools are in good condition with no deficiencies or damage, and the surrounding environment is in a healthy condition and does not lack anything(Erinda, 2018). Meanwhile, believes that Occupational health is a specialization of health or medical science and its practices which aim to ensure that workers or the community obtain the highest possible level of health, both physical, mental, and social, with efforts preventive and curative against occupational factors, work environment and common diseases(Erinda, 2018).

From the definition of occupational safety and occupational health above, occupational safety and health can be interpreted as an effort made to prevent the emergence of occupational accidents and occupational diseases in any work carried out.

Work Safety Requirements

Based on Law No.1 of 1970 in Article 3 paragraph 1 concerning Work Safety, work safety requirements are stipulated for:

1) Prevent and reduce accidents
2) Prevent, reduce, and extinguish fires
3) Prevent and reduce explosions
4) Providing agreement or a way to save oneself during fires and other dangerous incidents
5) Assist in accidents
6) Provide personal protective equipment
7) Prevent and control the emergence and spread of temperature, humidity, dust, dirt, gas vapor, gusts of weather, light and radiation, sound and vibration
8) Prevent and control the emergence of work-related diseases, both physical and psychological, poisoning, infection, and transmission
9) Obtain sufficient and appropriate implementation
10) Maintain good temperature and humidity
11) Provide good air
12) Maintain health and order
13) Obtain harmony between workforce, work tools, environment, work methods, and processes
14) Secure and facilitate the transportation of people, animals, plants, or goods
15) Secure and maintain all types of buildings
16) Secure and expedite loading and unloading, handling and deviation of goods
17) Prevent exposure to dangerous electrical currents
18) Adjusting and improving safety measures for workers whose risk of accidents is increasing(Mercubuana, 2023).

Work Safety Goals

The main objectives of implementing K3 are twofold. First, create a safe work environment by conducting qualitative and quantitative assessments. Second, creating healthy conditions for employees, families, and the surrounding community through promotive, preventive, curative, and rehabilitative efforts. (Abdurrozaq, et al, 2020)

The main objective in implementing K3 based on Law No. 1 of 1970 concerning Work Safety, namely:

1) Protect and ensure the safety of every worker and other people in the workplace.
2) Ensure that every production source can be used safely and efficiently.
3) Increasing national welfare and productivity (Abdurrozaq, et al, 2020)

Understanding Work Accidents

A work accident is an undesirable and unexpected event that can cause loss of life and property (Minister of Manpower Regulation Number: 03/Men/1998). The World Health Organization (WHO) defines an accident as an event that cannot be prepared for beforehand, resulting in real injury. Meanwhile, according to (OHSAS 18001, 1999), a work accident is a sudden, unwanted event that results in death, injury, property damage, or loss of time.

Work Accident Prevention

To prevent work accidents, it is necessary to pay attention to work safety. Work safety is a human effort to protect their lives by taking preventive and security measures against the occurrence of work accidents when we are working.

Understanding Personal Protective Equipment

Personal Protective Equipment, abbreviated as PPE, is a tool that can protect a person whose function is to isolate part or all of the body from potential dangers in the workplace.

Meanwhile, Anizar (2009) said that personal protective equipment is an obligation where usually construction workers or laborers who work in a building are required to use it. This obligation has been agreed upon by the government through the Department of Manpower of the Republic of Indonesia. Such tools must meet the requirements of not interfering with work and providing effective protection against this type of hazard.

Understanding Occupational Safety and Health Management Systems

The Occupational Safety and Health Management System (SMK3) is part of the overall management system which includes the organizational structure of planning, responsibility, implementation, process procedures, and resources required for the development of achievement, review, and maintenance of occupational safety and health policies in the context of risk control. relating to work activities to create a safe workplace (PERMENAKER NO: PER.05/MEN/1996).

Benefits of Implementing SMK3

The benefits of implementing an occupational safety and health management system for industry are:

1) Reduce working hours lost due to work accidents.
2) Avoid material and life losses due to work accidents.
3) Creating an efficient and productive workplace because the workforce feels safe at work.
4) Improve the market image of the company.
5) Creating harmonious relationships between employees and the company. Maintenance of machines and equipment is getting better, resulting in longer tool life.

Research conducted by Erinda Sulistyanto with the title Implementation of an Occupational Safety and Health Management System in the Automotive Light Vehicle Engineering Workshop at Cokroaminoto Vocational School, Kotamobagu. The research results show: 1) The implementation of the Occupational Safety and Health management system in the Light Vehicle Engineering Workshop at SMK N 2 Yogyakarta has achieved 47.81% so it is included in the poor criteria; 2) Obstacles faced in implementing the Occupational Safety and Health Management System at the SMK N 2 Yogyakarta Light Vehicle Engineering Workshop include the lack of existing documentation and the absence of a special organization that handles K3 at the SMK N 2 Yogyakarta Light Vehicle Engineering Workshop; 3) Efforts made to overcome obstacles to the implementation of the Occupational Safety and Health Management System are by forming a special organization to handle the implementation of K3 in the Light Vehicle Engineering Workshop of SMK N 2 Yogyakarta, making written policies about K3, making written goals and programs about K3, create data about work accidents, and conduct evaluations about the implementation of K3 so that the implementation of K3 will be well coordinated and documentation in the workshop can be completed which will have a maximum impact on K3 evaluation and K3 will always improve for the better.

Research conducted by Agung Prabowo, and Nurhening Yuniarti with the title Evaluation of the Implementation of the Occupational Safety and Health Management System in the Practical Workshop of SMK Negeri 1 Sedayu 2016. The results of the research show that: (1) the implementation of the K3 management system in the practical workshop of SMK Negeri 1 Sedayu with the Countenance model Stake: a) Antecedents- are in a good category; b) Transaction - is in a good category; c) Output- at SMK Negeri 1 Sedayu an occupational safety and health system has been established in each practical workshop; (2) supporting factors are K3 commitment and policies, and K3 coaching/training; Inhibiting factors are obstacles in providing PPE and the absence of special personnel/organizations who have clear responsibility, authority and obligations in handling K3.

Occupational safety and health an important factors in a company organization or the world of education. Therefore, there is a need for a system that regulates K3, namely a K3 management system. The K3 management system exists and is implemented at Cokroaminoto Vocational School, Kotamobagu, but there are still obstacles and shortcomings in its implementation which make this system not run optimally. In implementing activities, occupational safety and health practices must be carefully considered because if this is not properly observed, it will cause various risks and can be detrimental to both students and the school. In practical activities in automotive workshops, it is best to implement a good K3 program to avoid the risk of work accidents by implementing the K3

Law/Regulation, socializing about K3, and discipline in the use of personal protective equipment (ADP). By implementing this, it is hoped that a good K3 program can be created so that the work environment can be created safely and efficiently so that accidents can be prevented. The Multi Gas Analyzer measuring tool uses units of percent (%) and ppm

METHODS

Data collection technique

This research will use several data collection techniques including questionnaires, interviews, and documentation.

1) Questionnaire or Questionnaire

A questionnaire is a data collection technique that is carried out by giving a set of questions or written statements to respondents to answer (Sugiyono, 2014). Meanwhile, Arikunto (1995) said that a closed questionnaire is a questionnaire that is presented in such a form that the respondent just has to tick (√) in the appropriate column or place. An open questionnaire is a questionnaire that is presented in such a form that respondents can provide information according to their wishes and circumstances. Meanwhile, a mixed questionnaire is a combination of open and closed questionnaires. The questionnaire used in this research is an open questionnaire. The questionnaire was used to reveal data regarding the implementation of occupational safety and health with respondents from Department Heads, Workshop Coordinators, and Technicians using Guttman scale measurements with 2 alternative answers: Yes, worth 1 (one), and no, worth 0 (zero) (Sugiyono, 2014).

The guidelines for collecting data using a questionnaire are each indicator and sub-indicator which is explained in Table 1 as follows

Table 1. Data Collection Techniques Using Questionnaires

2) Interview

In this research, interviews were conducted to collect data about the implementation of SMK3 in the Cokroaminoto Kotamobagu Vocational School Automotive workshop. The interview technique used is a free guided interview, namely asking questions that are asked freely. This free guided

Variable	Indicators	Sub Indicators
Occupational Safety and Health Management System (SMK3)	Constitution	a. Applicable Laws and Regulations
	Commitments and Policies	a. Leadership and Commitment
		b. K3 Policy
	Planning	a. Identify hazards
		b. Goals and Programs
	Application	a. Resources and Responsibilities
		b. Communication and Recording of Work Accidents
		c. Reporting and Recording Work Accidents
		d. documentation
		f. Purchase of Goods and Services
		g. Facility Maintenance and Repair
		h. Health Monitoring
		i. Supervision
		j. P3K
		k. Emergency or Disaster Preparedness
	Evaluation	a. Evaluation of K3 Policy

interview was conducted to reveal how SMK3 is implemented to prevent work accidents during practice at the Cokroaminoto Vocational School Automotive workshop, Kotamobagu, what obstacles are faced, and what efforts have been made to prevent work accidents among students who are practicing.

3) Documentation

Documentation is used to obtain information related to the implementation of SMK3 at the Cokroaminoto Kotamobagu Vocational School Automotive workshop. Technique data collection with documentation shown to research subjects in the form of books, documents, photographs, and other relevant data. Documentation in this research is the collection of supporting documentation for the average research required.

Data analysis technique

In analyzing, researchers use steps to calculate the total score from data that has been matched between questionnaire data with documentation and interviews, then determine the percentage of implementation of each sub-indicator. The percentage data results for each sub-indicator of achievement of K3 implementation following the K3 management system at the Cokroaminoto Kotamobagu Vocational School Automotive workshop are then depicted in the form of a block graph and the data is presented briefly in a table.

To determine the level of achievement of implementing the K3 management system at the Cokroaminoto Vocational School Automotive workshop, Kotamobagu, the total percentage of sub-indicator data obtained was then divided by the number of sub-indicators. Then the data was classified into 4 predicates, namely: Good, Enough, Poor, and No. So that in application qualifications, the data can be classified as:

1. OK, if (76%-100%)
2. Sufficient, if (51%-75%)
3. Less, if (26%-50%)
4. No, if (0%-25%)

Place and time of research

The research location will be carried out at Cokroaminoto Vocational School, Kotamobagu, from 23 October until completion.

RESULTS AND DISCUSSION

The data above was obtained from questionnaire data along with interviews, and observations that have been matched and checked with documentation data per sub-indicator and then the data is presented. The achievement of implementing the occupational safety and health management system (SMK3) is based on the results obtained from Table 2.

Table 2. result of occupational safety and health management system

Variable	Indicators	Sub Indicators	∑(%)	Criteria
Occupational Safety and Health Management System (SMK3)	Constitution	a. Applicable Laws and Regulations	100	
	Commitments and Policies	a. Leadership and Commitment	66,6	
		b. K3 Policy	100	
	Planning	a. Identify hazards	44,4	
		b. Goals and Programs	44,4	
	Application	a. Resources and Responsibilities	86,6	

	b. Communication and Recording of Work Accidents	77,7
	c. Reporting and Recording Work Accidents	55,5
	d. documentation	88,8
	e. Purchase of Goods and Services	83,3
	f. Work environment	95,2
	g. Facility Maintenance and Repair	100
	h. Health Monitoring	44,4
	i. Supervision	100
	j. P3K	55,5
	k. Emergency or Disaster Preparedness	83,3
Evaluation	a. Evaluation of K3 Policy	25

Obstacles in implementing SMK3 at the Cokroaminoto Kotamobagu Vocational School Automotive Workshop

1. Barriers from students, namely that there are students who are not yet aware of the importance of K3, for example when carrying out welding practice they should use welding glasses but do not use them.
2. Barriers related to the minimal availability of documentation regarding the K3 management system. So that it influences the implementation of SMK3 at the Cokroaminoto Kotamobagu Vocational School Automotive workshop.
3. There is practice equipment that is old or even damaged.

So the implementation of practice can disrupt the course of practical activities and may even result in work accidents.

Efforts Made to Overcome Obstacles

a. Efforts made to overcome students who do not realize the importance of K3 are by requiring students to always use personal protective equipment to prevent work accidents. In this case, the instructor (Teacher) provides direction and guidance about the importance of K3 equipment when carrying out practice.

b. Efforts are made to overcome obstacles related to documentation, it is necessary to establish an organization related to the K3 management system, so that the requirements for implementing the K3 management system can be documented.
c. Efforts that need to be made to anticipate training equipment that is old or damaged are by replacing and adding more equipment for practice. So that students do not experience difficulties in using the tools and do not have to wait for each other to take turns.

This research aims to find out how the occupational safety and health management system is implemented in the Cokroaminoto Vocational School Automotive workshop, Kotamobagu. So the variable studied in this research is the occupational safety and health management system. The results of the research show that the implementation of the K3 management system in the Cokroaminoto Vocational School Automotive workshop in Kotamobagu has achieved 73.57% so it is in the quite good category.

Based on the research results following the research indicators and sub-indicators for the implementation of the occupational safety and health management system, the following is the discussion:

1. Applicable Laws and Regulations

The laws and regulations used in implementing the occupational safety and health management system are the regulations that apply in Indonesia in implementing occupational safety and health and implementing the occupational safety and health management system. In this case, the Cokroaminoto Kotamobagu Vocational School automotive repair shop as part of education in Indonesia, needs to be aware of the laws and regulations that apply in implementing the K3 program in the K3 management system.

The research results show that in the Cokroaminoto Vocational School Kotamobagu automotive repair shop, in implementing the K3 management system, they are aware of the use of applicable laws and regulations. These laws and regulations are used in teaching K3 competencies. When carrying out verbal practices, we are always reminded of the priority of occupational safety and health. The Cokroaminoto Kotamobagu Vocational School automotive repair shop has used law no. 1 of 1970 concerning work safety. This was conveyed by the Head of the Automotive Department, Drs. Idris Mokoagow said that the automotive workshop at Cokroaminoto Vocational School, Kotamobagu, had implemented this law in implementing K3.

2. *Commitment and Policy*

Commitment and policy are achieved only by providing training and coaching regarding occupational safety and health contained in the K3 course. However, in carrying out practical activities at the Automotive Workshop at Cokroaminoto Vocational School, Kotamobagu, we always prioritize and are based on a commitment to K3. However, there is no special K3 unit available, which means that K3 commitments and policies have not been documented.

3. Planning

In the K3 management system, planning is a follow-up to K3 commitments and policies. The results obtained from all items in the goals and programs sub-indicator are 44.44% of the results obtained from identifying hazards and goals and programs. This identification of potential dangers proves that commitment to K3 has not been maximized. This is because there is no documentation of hazard identification procedures as well as objectives and program documents, following the guidelines for implementing the K3 management system.

a. Identify hazards

In identifying dangers, the Cokroaminoto Kotamobagu Vocational School Automotive workshop must create an effective plan to achieve success in implementing the K3 management system with clear and measurable targets. Planning must contain objectives, targets, and performance indicators that are implemented by considering the identification of sources of danger, risk assessment, and control following applicable statutory requirements.

The results of the research show that hazard identification in the Cokroaminoto Vocational School Automotive workshop, Kotamobagu has achieved 44.44%. In planning a safe environmental learning process, the risk of work accidents can be identified because there are no clear written procedures for identifying hazards at the Cokroaminoto Vocational School Automotive Workshop, Kotamobagu. This means that it cannot be mapped out the dangers that exist in the automotive workshop at Cokroaminoto Vocational School, Kotamobagu. Having clear, well-documented, and procedural hazard identification can be useful for mapping the environment according to the level of potential danger so that everyone in the Cokroaminoto Vocational School Kotamobagu Automotive workshop can know it, as an effort to improve K3 implementation.

b. Goals and programs

Determining K3 goals and programs is a follow-up to the established K3 policy, which is considered from the results of hazard identification. The results of this research show that the K3 objectives and programs in automotive workshops have been achieved at 44.44%. This is because there is no effort to identify hazards at the Cokroaminoto Kotamobagu Vocational School Automotive workshop, and there is no clear and documented K3 policy following the K3 management system guidelines. This implements K3 at the Cokroaminoto Vocational School Automotive Workshop, Kotamobagu run less focused. So the K3 programs set by the government cannot be followed by the Cokroaminoto Kotamobagu Vocational School Automotive workshop.

4. Implementation

Of all the sub-indicators in the implementation indicators, generally 86.32% was achieved. The results of this application are in a good category. This can prove that there is little chance of a work accident occurring or even a work accident having never occurred while practicing at the Cokroaminoto Vocational School Automotive workshop, Kotamobagu. Each sub-indicator in the implementation indicator is explained in the discussion below.

a. Resources and Responsibilities

Improving occupational safety and health will be more effective if all parties are included in implementing the K3 management system, and have a culture that supports and contributes to the K3 management system. The results of the research show that the resources and responsibilities at the

Cokroaminoto Kotamobagu Vocational School Automotive workshop have achieved 86.6%. This figure shows that every instructor/teacher, technician, and workshop coordinator has the same responsibility toward students in handling every work accident. However, even though each instructor/teacher, technician, and workshop coordinator is given the same responsibility, it would be better if all of them were given K3 training so that the implementation of K3 runs better.

b. Communication and participation with students

The success of a K3 management system depends on how the information is provided, this is by Suma'mur's statement (1985: 9) that the efficacy of a system to a certain extent depends on the quality of communication between various elements. The existence of effective communication and routine reporting is an important source in implementing the K3 management system, this is because providing appropriate information for students and all parties in the Cokroaminoto Vocational School Automotive workshop, Kotamobagu can be a motivation and driver of acceptance and understanding in efforts to improve safety performance. and occupational health.

The results of communication research and student participation reached 77.7% in the implementation of K3 at the Cokroaminoto Vocational School Automotive workshop, Kotamobagu. This was obtained from disseminating K3 information to students using K3 posters. There is no special K3 training for students yet, this is because the time for K3 courses is relatively short, so there is no special time provided for K3 lessons. However, instructors are still advised to increase awareness of the dangers of work accidents before or while carrying out practical activities in the workshop.

c. Reporting and recording work accidents

Work reporting and recording aims to determine the statistical number of students who experience work accidents, this is used as a basis for evaluating the implementation of K3, as well as to record the provision of insurance compensation to students. Reporting can also be useful for identifying potential dangers from accidents that occur, to prevent the same thing from happening in the future.

The results of research on reporting and recording work accidents have achieved 55.5%. Even though the automotive repair shop has never experienced a work accident, if there are students who experience a work accident, it will be specially recorded. If someone has an accident, the automotive repair shop will be responsible and will provide care and treatment, if necessary they will be referred to the university health department or a hospital outside the university.

d. Documentation

Documentation functions to support the implementation of K3, as a record of K3 guidelines and programs that will be achieved and what has been achieved about the evaluation of K3 implementation. Documentation can be in the form of soft files or hard files. From the research results, documentation has an achievement of 88.8%. This result was obtained because documentation was kept following existing regulations. So that with documentation the implementation of K3 can run well.

e. Purchase of goods and services

In the goods and services purchasing system there must be a guarantee that the goods and services products and work partners meet occupational safety and health requirements when the goods and services are received at the workplace. The results obtained from research on purchasing goods and services have achieved 83.3%. In the procurement of dangerous and toxic materials, no special

identification has been carried out, however, to anticipate the occurrence of danger, the materials are kept away from possible danger.

According to Suma'mur (1985), hazardous materials are materials that during their manufacture, processing, transportation, storage, and use may generate or release dust, mist, steam, gas, and ionizing radiation which may cause irritation, fire, explosion, corrosion, suffocation, poisoning, and other hazards in amounts that may harm the health of the person concerned with or cause damage to goods or property. Items that have the potential to cause danger should be stored in a special area that is not mixed with tools that are frequently used. In this case, the technician must explain to all parties who will use the goods that they must recognize the identification of hazards and control the risk of accidents and work-related diseases.

f. Work environment

According to Suma'mur (1985: 9), one of the causes of work accidents is the failure of an unsafe work environment. So the work environment has quite an important role. The results of the research show that the work environment in the Cokroaminoto Vocational School Automotive workshop, Kotamobagu, has an achievement level of 95.2%. This result was obtained because the Cokroaminoto Vocational School, Kotamobagu Automotive workshop always maintains cleanliness, there are signs or signs in the workshop area and the workshop is always opened before the training time starts so that students can enter the workshop. With a clean environment when practicing, it will be comfortable. Apart from that, in the automotive workshop, there is also a workshop layout, the machines, and practical equipment have been arranged in such a way that carrying out the practice feels comfortable, safe, and smooth.

At the Cokroaminoto Vocational School Kotamobagu Automotive workshop, there are also clean water facilities, toilets, and a light fire extinguisher (APAR). This anticipation is provided to avoid undesirable things if there is a danger of rooting. Unused items have been placed in an area that does not interfere with practical activities in the workshop so that this makes the practice area comfortable and safe.

g. Maintenance and repair of facilities

At the Cokroaminoto Vocational School Automotive workshop, Kotamobagu, maintenance, and repair of facilities have been carried out by every technician. Schedules for maintenance and repairs are also available at the Cokroaminoto Kotamobagu Vocational School Automotive workshop so that there are regular checks if a lack of components or something that is not suitable could cause risks. Because it can cause problems with facilities that initially had no problems and were working well.

The results of the research show that maintenance and repair of facilities at the Cokroaminoto Vocational School Automotive workshop, Kotamobagu has been achieved 100% and this figure is in the good category. According to Suma'mur (1985: 203), rejuvenation is carried out by providing new facilities and infrastructure, but if there is no regular maintenance it can cause potential danger. Even though the number of accidents caused by machines is 15-25% of all accidents, the severity of accidents is usually high. So it is necessary to increase the maintenance and repair of facilities. Equipment maintenance must be thorough and there must be cooperation from all parties to be able to help in this matter.

h. Health monitoring

PP RI No. 50 of 2012 explains the assessment of guidelines for implementing occupational safety and health management systems, and companies providing occupational health services following statutory regulations. It was also stated that the examination was carried out by an examining doctor who had been appointed following the law.

The results of the research show that health monitoring has achieved 44.4%. The Cokroaminoto Vocational School Kotamobagu Automotive Workshop does not yet have health services, so this lack of achievement is due to health services not being up to standard. However, first aid kits are available at several automotive workshops. If a student experiences a work accident, they will be referred to the health service at the university. Apart from that, in the Automotive Department, there is also accident insurance. This insurance can make students feel calm because there is a guarantee of maximum health services if a work accident occurs.

i. Supervision

Supervision is carried out to ensure that each work is carried out safely and follows the specified procedures and work instructions. The results of the research showed that supervision at the Cokroaminoto Vocational School Automotive workshop, Kotamobagu, had 100% achievement. This is because students carrying out practical training activities are always supervised according to the level of risk when carrying out the practice. So that work accidents such as moving objects, electric shock, inhaling thick smoke, and exposure to dangerous materials do not occur when practicing.

j. First Aid

To reduce the effects that may arise due to work accidents, the implementation of an occupational safety and health management system must provide sufficient first aid facilities to obtain medical assistance.

The results of the research show that first aid for accidents at the Cokroaminoto Vocational School Automotive workshop, Kotamobagu has achieved 55.5%. Even though the Cokroaminoto Vocational School Automotive workshop, Kotamobagu, does not have a special team to handle first aid, in every part of the workshop there is a first aid kit. Following the Regulation of the Minister of Manpower and Transmigration of the Republic of Indonesia No. PER.15/MEN/8/2008 concerning first aid for accidents at work, article 1, first aid at work is an effort to provide first aid quickly and precisely to workers/other people in the workplace.

k. Emergency or disaster preparedness

In PP RI No. 50 of 2012 concerning guidelines for assessing the implementation of SMK3, emergency procedures, and emergency relations must be considered and known to all workers in the company. Most work accidents occur in students who are not used to working safely. Where students do not know about dangers or prevention even though they know there are dangers. Students must be ready to handle emergencies so that students know the dangers and can take precautions when practicing in the workshop.

The results of the research show that emergency or disaster preparedness at the Cokroaminoto Vocational School Automotive Workshop, Kotamobagu has achieved 83.3%. This achievement was achieved because the Cokroaminoto Vocational School Kotamobagu Automotive workshop already had clear emergency handling procedures. Handling emergencies such as having APAR available if a fire occurs. At a certain time, fire extinguishers are always updated according to regular maintenance.

The absence of simulation training in the event of an emergency can result in students at the Cokroaminoto Kotamobagu Vocational School Automotive workshop not knowing the appropriate treatment in the event of an emergency. However, signs for evacuation routes are available at automotive workshops, but they are not yet available for gathering places in case of an emergency. Not having emergency markings can also make things difficult if something dangerous happens. This needs to be considered because when a disaster occurs, evacuation will be difficult considering that Yogyakarta is an earthquake-prone area.

5. *Evaluation of K3 Policy*

In the explanation in PP RI No. 50 of 2012 concerning guidelines for implementing occupational safety and health management systems to ensure suitability and effectiveness to achieve the objectives of SMK3, it is necessary to review or evaluate K3 policies. K3 policy evaluation is used to determine the implementation of evaluations related to K3 policies, such as revisions to K3 policy letters. The revision aims to evaluate previously established policies.

At the automotive workshop at Cokroaminoto Vocational School, Kotamobagu, there is no detailed written K3 policy yet. This is to evaluate written K3 policies following the non-existent K3 management system guidelines. Ideally, K3 is implemented in a management system that is integrated with the company's management system, so that its implementation can be controlled. Achievement of good results in the implementation of K3 implementation based on the K3 management system at the Cokroaminoto Vocational School Automotive workshop, Kotamobagu. Currently, there are no regulations that explicitly and clearly state that educational institutions are required to implement a K3 management system. However, if you consider the large number of people in the Automotive workshop environment at Cokroaminoto Vocational School, Kotamobagu, and the potential dangers that could arise from carrying out practical activities, then the implementation of the K3 management system needs to be considered. Following the Minister of Manpower Regulation 05/MEN/1996 article 3, every company that employs a workforce of one hundred or more people and/or contains potential dangers posed by the characteristics of the production process or materials which can result in work accidents such as explosions, fires, pollution. and occupational diseases are required to implement a K3 management system. Therefore, the Cokroaminoto Kotamobagu Vocational School Automotive workshop needs to implement a K3 management system to prevent work accidents.

CONCLUSION

Based on the results of the research, several things can be concluded, namely as follows:

Based on data processing and discussion regarding the implementation of occupational safety and health in the Cokroaminoto Vocational School Automotive workshop, Kotamobagu, this research can be concluded as follows: 1). The implementation of the occupational safety and health management system in the Cokroaminoto Vocational School Kotamobagu Automotive workshop has achieved 73.57% so that the implementation of SMK3 in the Cokroaminoto Kotamobagu Vocational School

Automotive workshop is included in the sufficient criteria. With the results of the implementation of SMK3 in the Cokroaminoto Kotamobagu Vocational School Automotive workshop being sufficient, of course, it still requires improvement and improvement. Improvements are carried out following applicable standards and regulations for each sub-indicator that still has achievement below 100% following applicable laws and regulations in the implementation of K3 that the K3 management system requires improvements in policy, planning, and evaluation indicators following the K3 management system guidelines so that the implementation of K3 at the Cokroaminoto Vocational School Kotamobagu Automotive workshop can be improved. 2). Obstacles that influence the implementation of SMK3 in automotive workshops include a lack of awareness among students about the importance of K3, the lack of existing documentation in automotive workshops, and the absence of a special team that handles the implementation of K3 in automotive workshops. 3). Efforts made to overcome obstacles to the implementation of OSHMS are by guiding the importance of implementing K3 within oneself and an appeal to always use personal protective equipment when carrying out practice, creating a special organization/team that handles K3 so that the implementation of K3 will be more coordinated with Apart from that, the existing documentation in automotive workshops regarding K3 can be increased. In every practice, students are encouraged to use tools according to procedures and always maintain the tools so that they remain durable. Apart from that, it is necessary to replace old or damaged tools by buying new ones. and increasing the number of tools so that they don't have to be used interchangeably.

Implications

Based on the research results and conclusions, the implementation of the occupational safety and health management system in the Cokroaminoto Kotamobagu Vocational School Automotive workshop is in the quite good category. With these results, for K3 implementation to be in a good category, improvements need to be made. So that the implementation of K3 follows the K3 management system guidelines that have been established based on applicable laws and regulations.

Research Limitations

Several research limitations that need to be addressed in this study are as follows:

1. Research regarding the application of occupational safety and health in the Cokroaminoto Vocational School Automotive workshop, Kotamobagu as an effort to prevent work accidents is only limited to application to K3 management and does not carry out overall research.
2. The research carried out regarding the implementation of the occupational safety and health management system in the Cokroaminoto Vocational School Automotive workshop, Kotamobagu was not carried out optimally because the respondents were only the Head of the Department, Workshop Coordinator, and Technicians, all of which were not comprehensive, such as students and employees. The research was only guided by system regulations. K3 management that has been determined by the government.

Suggestions

Based on the conclusions, discussion, and limitations of the author in interpreting the research results, suggestions can be put forward to improve the implementation of K3 in the Cokroaminoto Vocational School Automotive workshop, Kotamobagu, and in the world of education in general, namely as follows:

1. Based on the results of the achievement of each sub-indicator which has not reached 100%, it is necessary to increase understanding of K3 to all people in educational institutions, especially those in the Cokroaminoto Vocational School Automotive workshop, Kotamobagu.
2. K3 management needs to be stated in educational institutions so that the implementation of K3 can be well controlled, implementing K3 guidelines is carried out as soon as possible and has a firm attitude, especially in implementing K3 policies, creating K3 teams, and reporting work accidents and then always evaluating policies in the implementation of K3 if there are still deficiencies in the implementation of K3.
3. All elements of the Automotive department community must participate in determining K3 policies. Apart from that, the highest leadership must participate in implementing K3, the aim of which is to find out what mistakes have been made so that it is possible to make improvements or evaluate the implementation of K3 so that it can run well.
4. In implementing K3 in the world of education, the government must play a role by making K3 management system regulations that are necessary and appropriate to the conditions in educational institutions.
5. There is a need to create and organize K3 documents and a K3 management system

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