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ASSESSMENT OF OCCUPATIONAL SAFETY AND HEALTH RISK AT THE WORK OF LOADING AND UNLOADING AT THE SHIPPING PORT OF HAJI-SIMEULU LABUHAN

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ABSTRACT
The background Occupational Health and Safety (K3) is a condition in a healthy and safe job both for the job, the company as well as for the community, and the environment around the workplace. Workers at the port are very vulnerable to the dangers and risks that arise in a process that causes death, loss, disaster, loss of production, decreased product quality, and danger to the environment, especially workers in the field of loading and unloading goods at the port. The purpose of the study was to determine the safety and work risks of loading and unloading at the Labuhanhaji-Simeulu shipping port.This research is descriptive and qualitative. Research subjects are people who are used as sources of data or sources of information by researchers for the research they do with a sample of 42 people.The results of this study indicate that the identified hazards are hazards in the categories of mechanical hazards, chemical hazards, and physical hazards. OHS risk analysis shows that generally, OHS hazards occur in workers who do not wear PPE and do not follow work instructions so workers are vulnerable to OHS risks. The highest level of risk and fatal is the danger of fractures. Although this risk is rare, the most common danger is the danger of shoulder pain, because workers carry goods by placing them on their shoulders. Risk management is carried out differently depending on the risks that occur. In general, risks are overcome by ordering workers to follow work instructions, use complete PPE, and provide OHS training.

Keywords: *Assessment, OHS Risk, Loading and Unloading*

Introduction

Risk assessment is a series of activities carried out in the workplace to determine occupational safety and health that can cause harm and health risks for workers. Occupational risk assessment includes an evaluation of how likely and how severe the risk is. The purpose of conducting an occupational risk assessment is to take an action on what must be done to effectively improve occupational safety and health1. The work risk assessment refers to Indonesia itself increasingly showing concern for workers related to the protection of Occupational Health and Safety (K3), especially workers at ports[1].

Workers at the port are very vulnerable to the dangers and risks that arise in a process that causes death, loss, disaster, loss of production, decreased product quality, and danger to the environment. Loading and unloading is an activity that has been going on for a long time. This activity is an activity that involves many people and activities, so the chance of work accidents is quite high[2].

To ensure the safety and health of loading and unloading work at the Labuhanhaji-Simeulu port, it is necessary to carry out an OHS risk assessment. Risk assessment on the safety and health of loading and unloading workers is an activity of assessing the possibility of threatening events regarding the safety and health of loading and unloading workers at the port. The assessment focuses on the risks that often occur in a process of loading and unloading activities or work at the port. The risks that usually threaten to load and unload workers are sprains, slips, falls, scratches, punctures, and collisions depending on the type of goods being unloaded and loaded. Other risks are various things (situations and conditions) that can cause errors or omissions during work[3].

Another problem that arises in the work of loading and unloading goods at the port is that some workers have not implemented occupational safety and health optimally. Based on observations, researchers found workers who did not care about occupational safety and health aspects such as not wearing complete Personal Protective Equipment (PPE), and not complying with Standard Operating Procedures (SOP) for the use of loading and unloading equipment. In addition, port management supervision is still lacking.

According to the author's observations, the loading and unloading of goods at the Labuhanhaji-Simeulu crossing port does not yet have adequate security equipment. The workers are not equipped with personal protective equipment, namely vests, helmets, and safety shoes. They tend to unload and load goods without any protective equipment. Of these incidents, they have a very high risk of accidents, including injuries due to exposure to sharp objects/tools. Accidents that most often occur are due to ineffective and efficient loading and unloading performance and falls while loading and unloading goods. The physical condition of the Labuhanhaji-Simuelu location when compared to the location, feels very inefficient and ineffective because the location is too narrow, there are several roads with holes, damage to the edge of the pier and there are no cliffs that block the waves when high tide. The high ground water level is a retention function causing frequent flooding, low run-off, corrosive environment, and high intrusion of seawater into groundwater. Tidal currents cause ship landing problems.

Research purposes

The explanation above shows that the health and safety risks of loading and unloading goods at ports continue to increase every year, including at the Labuhan Haji-Simeulu crossing port. Therefore, the author intends to research on "Assessment of Occupational Safety and Health Risks at the Loading and Unloading Work at the Shipping Port of Labuhan Haji-Simeulu"

Methods

This study aims to conduct a risk assessment of the health and safety of loading and unloading work at the Shipping Port of Labuhanhaji-Simeulu with a qualitative descriptive approach. In this study, the research subjects were loading and unloading workers at the Labuhanhaji-Simeulu shipping port who had a minimum of 2 years of service. The minimum age range is 16 years. So obtained samples in this study of 42 people. The location of this research is the shipping port of Labuhanhaji-Simeulu which is located in the village of Pasar Lama, Labuhanhaji District, South Aceh Regency. At the Labuhanhaji Port there are currently two services, namely crossing from Labuhanhaji Port (South Aceh Regency) to Sinabang Port (Simeulue Regency) and Fish Landing Port (PPI) which occupy a separate area but are side by side or next to each other.

The research instruments used in the information collection process were questionnaires and observation sheets to describe the work safety risk assessment and documentation tools such as cameras. To support the purposes of analyzing this research data, researchers need a number of data to carry out a risk assessment of the

loading and unloading of goods at the port. The data collection techniques carried out are adjusted to the type of data taken as follows:

1. Observation is a technique or method of collecting data by observing ongoing activities. In another sense, it is stated that the method of observation, or called observation is the activity of focusing attention on an object by using all five senses.
2. Questionnaire is a data collection technique that is done by giving a set of written questions to respondents to answer, which can be given in person or by post or the internet. There are two types of questionnaires, namely closed and open. The questionnaire used in this case is a closed questionnaire, namely a questionnaire whose answers have been provided, so that respondents just choose and answer directly.
3. Documentation is a method used to obtain data and information in the form of books, archives, documents, written numbers, and pictures in the form of reports and information that can support research. Documentation is used to collect data and then reviewed. Documentation in this study is related to the form of loading and unloading work accidents that occurred at the Labuhanhaji-Simeulu shipping port by looking at archives or records in the form of photos or other records.

Result and Discussion

1. Hazard Identification

Table 1.1 Identification of Loading and Unloading Hazards at the Port of Labuhan Haji-Simeulu

No	Hazard Type	Description
1	Mechanic	This hazard arises as a result of the tools used during loading and unloading work, for example: 1. Sliced 2. Stuck 3. stabbed
2	Chemical Hazard	This hazard arises from goods containing chemicals, for example: 1. Inhaled ash 2. Contact with liquids such as oil or adhesive glue 3. Inhaled the smell of rotting things 4. Spilled fluids on the body
3	Physical danger	Hazard is the danger of impacting the limbs, for example: 1. Fracture 2. Broken finger 3. Bruises 4. Wound

Source: *Primary Data Year 2021*

The table above shows the hazards identified as a result of loading and unloading work. Mechanical hazards are caused by objects around the work that pose a hazard to workers, such as cuts, crushes, and punctures. The next identified hazard comes from chemical hazards originating from toxic materials, for example, inhalation of ash, exposure to liquids such as oil or adhesive glue, inhalation of odors from rotting goods, and spilled liquids that hit the body. Next is the physical danger that endangers the workers' limbs, such as broken bones, broken fingers, bruises, and wounds.

Table 1.2 Percentage of Loading and Unloading Work Accident Rates at Labuhan Haji-Simeulu Port

No	Hazard Identification	Respondent (n)	Percent (%)
1	mechanic	18	42.86
2	Chemical	9	21.43
3	Physique	15	35.71
	Total	42	100

Source: *Primary Data Year 2021*

Based on the table above, it can be concluded that the hazards identified most frequently are hazards caused by mechanics at 42.86%, followed by physical hazards at 21.43%, and then chemical hazards at 35.71%. The dangers caused by these three things have different levels of risk depending on how severe it is to the workers, as well as the frequency of occurrences that occur at different times.

2. Risk Analysis

Table 1.3 OHS Risk Analysis on Loading and Unloading Works at the Shipping Port of Labuhan Haji-Simeulu

No	Statement	Yes (n)	No (n)
1	The port where I work provides work protection such as helmets, boots, gloves, masks, etc can save me from a work accident	19	23
2	All loading and unloading equipment is in good condition and suitable for use	34	8
3	All parts of dangerous loading and unloading equipment have been marked	36	6
4	Everyone who works is in a safe and clean working environment	35	7
5	The ship crew conducts more intensive supervision of the execution of my work	37	5

Source: *Primary Data Year 2021*

Based on the table above, it can be analyzed the causes of K3 risk in loading and unloading work at the Labuhanhaji-Simeulu shipping port. The results of the distribution of the questionnaire showed that 23 respondents stated that the loading and unloading of goods did not provide adequate PPE equipment to carry out loading and unloading of goods, although as many as 19 people stated that the port facilitated PPE equipment but did not complete it, for example only receiving gloves or masks instead of PPE completely. whole. based on the response of loading and unloading workers who stated that 34 people said that the condition of the equipment was suitable for use and only 8 people said it was not feasible. in general they work in unsanitary and unsafe locations, because 35 respondents stated that they work in unsafe and healthy environments. During the loading and unloading process, the ship's crew monitors their work and is ready if an accident occurs that affects the loading and unloading workers.

3. Risk Level

Table 1.4 Results of Risk Level Analysis Based on Questionnaire

No	Statement	Yes (n)	No (n)
1	Have you ever experienced a broken bone while doing loading and unloading work?	9	33
2	Do you often experience pinched hands or feet by certain objects?	24	18
3	Do you often get stabbed with sharp objects?	30	12
4	Have you ever bounced with something that made a bruise?	35	7
5	Have you ever slipped while doing loading and unloading work?	37	5

Source: *Primary Data Year 2021*

Based on the table above, it can be seen the risks experienced by workers loading and unloading goods at the shipping port of Labuhan Haji-Simeulu. Table 4.4 shows the response of workers to the level of risk they experience in carrying out loading and unloading work. The dangers of high-risk fractures are generally rare, then the dangers in the mild category, such as slipping, have been experienced by loading and unloading workers in general. The level of risk can be broken down based on the following observations:

Table 1.5 Analysis of OHS Risk Levels in Loading and Unloading Works at the Shipping Port of Labuhan Haji-Simeulu

No	Risk	Risk Level	Occurrence Frequency
1	Fracture	Fatal	Seldom
2	Fainted due to being hit by something	Fatal	Seldom
3	Fainting due to inhalation of harmful substances	Fatal	Seldom
4	Apoplexy due to exposure to high sun temperatures or inhalation of vapors produced from a liquid	Heavy	Often
8	Cough due to inhalation of dust	Intermediate	Often
9	Vomiting due to inhalation of ash or a pungent odor from an object	Intermediate	Very rarely
10	Pinched	Heavy	Often
11	Slip	Intermediate	Often
12	Foot injury	Heavy	Seldom
13	Hand injury	Heavy	Very often
14	stabbed by a sharp object	Heavy	Seldom
15	Pain in hand muscles	Intermediate	Seldom
16	Pain in the back muscles	Intermediate	Often
17	Pain in the back muscles	Intermediate	Often
18	Pain in the shoulder	Intermediate	Very often
19	Bruises	Intermediate	Often

20	Eye irritation	Heavy	Very rarely
21	Hearing disorders	Heavy	Very rarely

Source: *Primary Data Year 202*

Based on the table above, it can be seen the level of risk that occurs in loading and unloading work at the Labuhan Haji-Simeulu Shipping Port. As for the very fatal dangers, namely broken bones, fainting due to being hit by an object, and fainting due to inhalation of hazardous substances, these incidents rarely occur. Furthermore, the dangers in the heavy category such as apoplexy and pinched.

4. Risk Control

Table 4.6 Control of OHS Risk Levels in Loading and Unloading Works at the Shipping Port of Labuhan Haji-Simeulu

No	Risk	risk control
1	Fracture	Wearing PPE Follow SOP
2	Fainted due to being hit by something	Wearing PPE, especially helmets
3	Fainting due to inhalation of harmful substances	Wearing PPE, especially masks
4	Apoplexy due to exposure to high sun temperatures or inhalation of vapors produced from a liquid	Follow SOP Wearing PPE Wearing glasses
8	Cough due to inhalation of dust	Wearing a mask Follow the SOP
9	Vomiting due to inhalation of ash or a pungent odor from an object	Marking items that contain chemicals Wearing PPE
10	Pinched	Follow SOP
11	Slip	Follow SOP
12	Foot injury	Periodic maintenance of tools Follow SOP Using PPE
13	Hand injury	Periodic maintenance of tools
14	stabbed by a sharp object	Follow SOP
15	Pain in hand muscles	Follow SOP
16	Pain in the back muscles	Follow SOP
17	Pain in the back muscles	Follow SOP
18	Pain in the shoulder	Use PPE
19	Bruises	Wearing PPE
20	Eye irritation	Wearing PPE Follow SOP
21	Hearing disorders	Wearing PPE Follow SOP

Source: *Primary Data Year 2021*

Based on the data presented in the table above, OHS risk control is carried out based on the type of risk and level of risk. K3 prevention efforts are needed to avoid the risks that arise and to improve work safety performance at loading and unloading goods

The Labuhanhaji-Simeulu shipping port is a public transportation voyage, namely for passengers and goods. The goods transported are necessities and household items. The loading and unloading activities of the goods are transported from trucks and arranged in the baggage of goods. The loading and unloading process is done manually/manpower. The loading and unloading process is divided into two types, namely loading and unloading workers for baggage or warehouses and loading and unloading workers for passenger baggage. The number of loading and unloading workers at the Labunanhaj-Simeulu Port is 42 people. Of this number, there are 24 permanent workers and 18 non-permanent workers. Then in the process, it is divided again into stevedoring .

totaling 15 people, cargoding consisting of 9 people, and delivery as many as 18 people. All loading and unloading workers consist of men, meaning that they are not female workers.

After analyzing the data, the author was able to find the OHS risk in loading and unloading work at the Labuhanhaji-Simeulu shipping port. Every risk event can have an impact that results in disruption to the health and safety process of workers involved in the loading and unloading of goods. The stages of identifying the consequences of risk events are carried out by distributing questionnaires to respondents, direct observation in the field when the loading and unloading process is carried out and analysis of documents obtained from port officials containing accident data. In this study, the identification of the impact of risk is based on the report of the risk profile due to work, so that the impact on the workers can be known. The identified work risks consist of mechanical hazards, chemical hazards, and physical hazards.

Conclusion

After conducting an assessment of the occupational health and safety risks of loading and unloading participants at the Labuhanhaji-Simeulu shipping port, it can be concluded as follows, Hazards identified are hazards in the categories of mechanical hazards, chemical hazards, and physical hazards. These three hazards have different risks, the most fatal of which are chemical hazards. An analysis of occupational health and safety risks shows that generally, OHS hazards occur in workers who do not wear PPE and do not follow work instructions so workers are vulnerable to OHS risks.The highest and most fatal risk level is the danger of fractures. Although this risk is rare, the most common danger is the danger of shoulder pain, because workers carry goods by placing them on their shoulders. Risk management is carried out differently depending on the risks that occur. In general, risks are overcome by ordering workers to follow work instructions, use complete PPE, and provide OHS training.

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