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Research Paper

Implementation of ISM Code (International Safety Management) Code for the Safety of Crew and Passengers on Km Sinabung

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Abstract

ISM (International Safety Management) Code is a rule that regulates safety on board ships. The ISM Code is useful for improving safety on board ships, especially for passenger ships which have the main priority of maintaining the safety of the lives of passengers in particular and the ship's crew in general. However, in its application, several factors hinder the implementation of the ISM Code. This study aims to determine the implementation, inhibiting factors, and steps that can be taken to improve the implementation of the ISM Code in KM Sinabung.

The research method used in this research is the descriptive qualitative method. Data sources were taken from primary and secondary data. Data collection techniques through observation, interviews, and documentation studies during researchers carrying out sea practice at KM. Sinabung. Data analysis techniques used are data collection, data reduction, data presentation, and conclusion drawing. Testing the validity of data using the source triangulation method.

The results showed that the implementation of the ISM Code on board KM. Sinabung has been implemented but is not yet optimal. Lack of knowledge, awareness, and supervision of the crew related to safety is a factor inhibiting implementation on board KM. Sinabung is not optimal. So that efforts that can be made to improve the implementation of the ISM Code are to carry out safety induction, maximize training and competence, and install safety posters to provide strict sanctions against violators so that the implementation of the ISM Code can be carried out optimally.

Keyword *implementation, ISM Code, safety*

INTRODUCTION

To improve safety on board, especially for passenger ships which have the main priority to maintain the safety of the lives of passengers in particular and the ship's crew in general. PT PELNI (Pelayaran Nasional Indonesia) as well as related stakeholders here the government and the IMO (International Maritime Organization) organization must participate in supervising, providing input, and educating regarding crew safety at work and life safety passengers on board.

Safety is a top priority for professional seafarers when working on board. All shipping companies must ensure that the crew works by following safety procedures and following the rules on board. The company certainly hopes that a ship can operate and make a profit while still paying attention to the safety of the crew and passengers on board. To create a safe and comfortable work

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environment, without forgetting the duties and responsibilities at work, one of them is by carrying out work activities according to procedures or according to SOP, being careful, not careless, and creating a zero accident environment. (Andi Hendrawan, 2021: 10).

International Maritim Organization (IMO) has the slogan safe, secure, efficient shipping on clean ocean. This means that shipping must pay attention to safety, security, efficiency, and a clean marine environment. One of the rules related to ship safety is the ISM (International Safety Management) Code. (IMO, 2019:5)

When researchers carried out sea practice on KM SINABUNG from August 09, 2021, to August 12, 2022, researchers found that there were crew members who worked who were less concerned about the safety of themselves, the environment, and others. The crew consciously and deliberately ignores the existing SOP (Standard Operating Procedure). such as Researchers found crews who did not use several personal protective equipment such as safety wearpacks, safety masks, safety helmets, and safety goggles.

Researchers still find many passengers sitting on the railing or outside the railing, precisely on May 07, 2021, at 11:43 local time when the ship docked at Sorong Harbor, precisely at position 00''51,185 S / 131''11,093 E there was a MOB (Man Over Board) on a passenger who after identifying the problem was known to be the result of sitting on the left railing on deck 4. After the incident, it was not enough to make other passengers aware of safety.

Based on the description that has been described above, the problems can be formulated, namely:
1. How is the implementation of the ISM Code in KM SINABUNG?
2. What factors hinder the implementation of the ISM Code on the KM SINABUNG?
3. What steps are taken to improve the implementation of the ISM Code at KM SINABUNG?

LITERATURE REVIEW

Implementasi

According to the 2018 5th edition of the Big Indonesian Dictionary, implementation is the implementation of something that has been agreed upon in advance. The implementation in question is the action of an individual, the public directed towards an agreed goal and ensuring the implementation of a policy and providing practical results to others so that it can produce policies that provide results for individual and group actions.

ISM *Code*

The International Safety Management Code (ISM *Code*) is an international provision on management for the safe operation of ships and the prevention of pollution of the marine environment, and this rule can be changed (amendment) by the IMO aims to keep up with the rapid development and changes in the maritime world at this time this rule applies from July 1, 1998. (Capt. Sulistijo M.Pd, 2002:2)

According to IMO (2018:6), the ISM Code consists of 2 parts, the first part A (implementation) and part B (certification and verification), and also consists of 16 elements, namely:
a. General.
b. Safety and environmental protection policy.
c. Company responsibilities and authorities.
d. Designated persons.
e. Skipper's responsibility and authority.
f. Resources and personnel.
g. Ship operation plan maker.

h. Emergency preparedness.
i. Reporting and analysis of non-conformities of accidents, and dangerous occurrences.
j. Maintenance of the ship and its equipment.
k. Documentation.
l. Company verification, review, and evaluation.
m. Certification, verification, and surveillance.
n. Provisional certification.
o. Verification.
p. Certification format

Safety
According to Law No. 17/2008 on shipping, shipping safety, and security is the fulfillment of safety and security conditions for transportation in waters, ports, and protection of the maritime environment. The implementation of shipping safety and security is carried out by the government.

Passenger
In the PDAK book (Ship Crew Service Regulations) PT PELNI (2017: 6), a passenger is someone who has an official ticket issued by a company here PT PELNI which is registered in the ship's passenger manifest.

Passenger ships
Passenger ships are a type of ship intended to transport people from a port of entry to a port of destination, usually intended also to transport goods and containers. Passenger ships are usually equipped with cranes to support the loading and unloading operations on board.


Figure 1. KM SINABUNG

DPA *(Designated Person Ashore)*
According to IMO (2018:13) in the ISM Code book, the DPA (Designated Person Ashore) is there to ensure that the operation of every ship is safe and to provide a link between the company and those on board. Each company should appoint a person or persons ashore who have direct access to the highest level of management.

Safety Meeting
Safety meetings aim to inform everything related to the safety and health of the crew, including information about work procedures, and introducing or improving all types of rules and regulations regarding safety on board.

Familiarization
Familiarization is a method of introduction, and socializing. The purpose of the familiarization is to provide information, and explanations to each crew and ship passenger about, how to handle a danger or prohibition on board that can threaten safety.

Research Framework

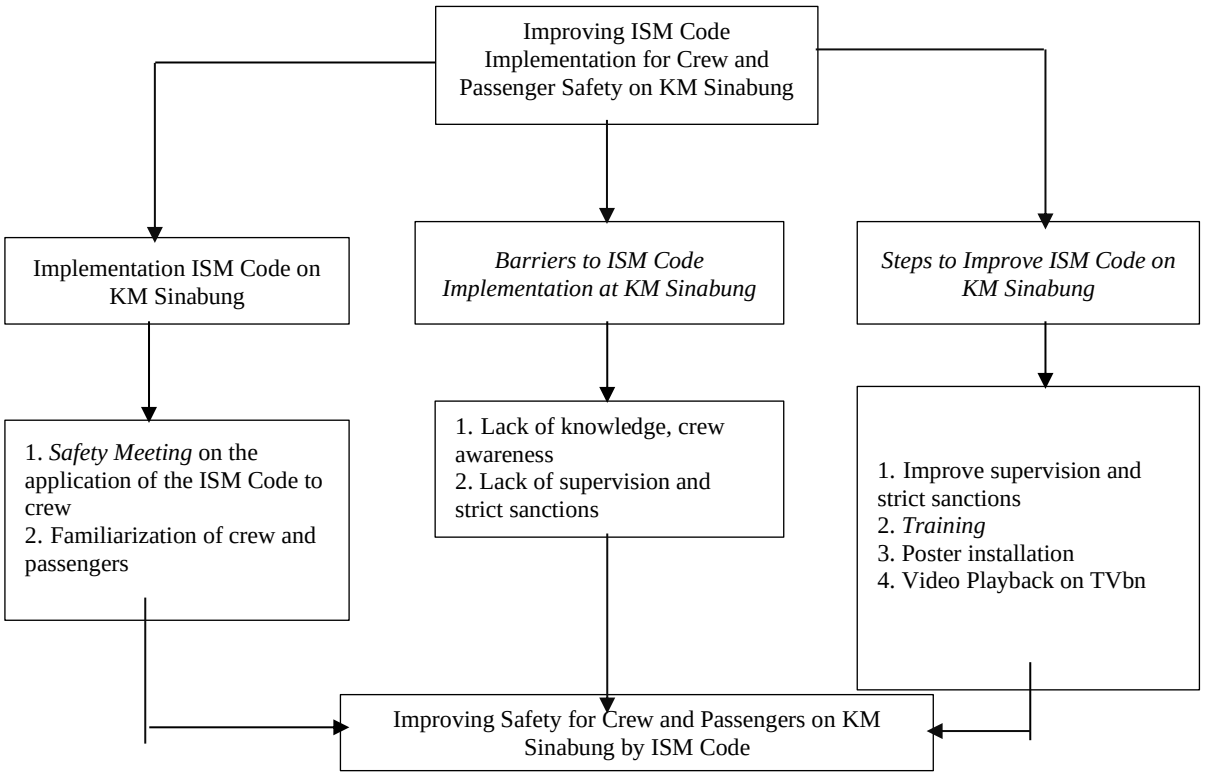

Figure 2. Research framework

METHODOLOGY

Research Methods

The research method used in this research is a qualitative research method using a descriptive pattern.

Time and Place of Research

a. Research Time
   The research was conducted from August 09, 2021 - August 12, 2022.
b. Place Research
   This research was conducted on KM SINABUNG.

Types and sources of research data

a. Primary data
   This primary data is the result of interviews and observations.
b. Secondary Data
   This secondary data is a publication book on board the ship, a manual book, and minutes of the event.

Data Collection Technique

a. Observation
   Conduct direct observation of the field to observe objects related to the implementation of the ISM Code on crew and passenger safety.
b. Interviews
   In this research, interviews were conducted with the Captain, Chief officer, Senior second officer, chief engineer, first engineer, and 2 passengers.
c. Documents
   Documents in this research are log books, manuals, manual books, and minutes of the event.

d. Literature Study
Researchers used several supporting books in the PIP Semarang library.

Data Analysis Technique
The following data analysis techniques were used:
a. Data Collection
Researchers combine data collection techniques using observation, interviews, and documents in this study.
b. Data reduction
Data reduction is an analysis that categorizes, classifies, and summarizes important data.
c. Data presentation
Data presentation is the process of displaying data and making connections between phenomena to interpret what is happening to achieve research objectives.
d. Conclusion Drawing / Verification
Concluding is the ability of researchers to conclude from various data obtained from the research process.

FINDINGS AND DISCUSSION
KM SINABUNG is a passenger ship that can carry as many as 2063 passengers, It is owned by the company PT Pelayaran Indonesia (Persero). As well as having the following routes SURABAYA - MAKASSAR - BAUBAU - BANGGAI - BITUNG - SORONG - MANOKWARI - BIAK - JAYAPURA PP.

Problem Analysis
Implementation of the ISM Code on board KM SINABUNG has not been implemented properly.

a. Found that the crew ignored SOP (*Standart Operasional Prosedur*)
In this study, researchers found that the ship's crew at work deliberately ignored the existing SOP (Standard Operating Procedure), under the pretext of working comfort, with that argument many of the crew worked without wearing a mask. *wearpack, safety mask, safety helme*t, and *safety shoes*.

Figure 3. Machine crews work without using safety equipment

The picture above is a photo taken by researchers during OHN in the engine room on December 12, 2021, researchers saw a machine crew consisting of 1 Cadet, 1 Junior IV Machinist, and 1 motorcycle driver who was working but did not use safety equipment safety helmets, safety goggles, safety gloves safety plugs, and wear packs while working.

Figure 4. Crew deck work not using safety helmet

The picture above is a photo of the deck crew while working on starboard deck 7 taken by researchers on June 12, 2022, the photo consists of 2 sailors and 1 helmsman who are working without using safety equipment safety helmets, and safety goggles.

b. Lack of awareness of ship passengers related to safety.
Researchers found that passengers lacked discipline and consciously sat on and outside the ship's railing which is prohibited on the ship because it can endanger the safety of themselves and others.

Figure 5. Passengers sitting outside the ship's realing

Figure 6. Man overboard

The picture above is a picture of people falling overboard (MOB) on KM SINABUNG which occurred on May 07, 2021 at 11:43 local time when the ship was about to dock at Sorong Harbor, precisely in the position of 00''51,185 S / 131''11,093 E When 1 hour will approach Sorong Harbor, the deck crew has prepared to carry out berthing at Sorong Harbor, at that time the researcher was on deck 4 on the left side seeing MOB passengers then the researcher with other crews threw the life bouy, then the researcher reported to the bridge and the duty officer, precisely during the watch of Chief of Staff 3 Junior, then the duty officer pressed the MOB button on the GPS, coinciding with the ship going to berth, the skipper on the bridge immediately carried out the exercise in an effort to help the victim, then on the hour 12.03 the victim was found on the starboard hull and the victim was raised using the right gang way, the MOB incident above was the result of ship passengers sitting on and off the ship's railing.

Problem Discussion

a. Implementation ISM *Code* om KM SINABUNG
   1) *Safety Meeting* about ISM *code* to *crew*
   By the existing schedule on KM SINABUNG, safety meetings are held at least once every 3 months, in the safety meeting, can be used as a discussion about the obstacles found on the ship with the hope that the skipper as the leader on board can convey the crew's constraints on board to the DPA, then the DPA can convey the existing obstacles to the company. The following are photos of safety meeting activities at KM SINABUNG.

Figure 7. Implementation *safety meeting*

2) *Familiarisasi* to *crew* and passangers on KM SINABUNG
   a) To passangers
      On KM SINABUNG familiarization about safety to passengers is carried out every time it will carry out departure from a port, onboard information, and notifications are always announced or informed through PA (Public Addessor), the information is an example of a ban on smoking, understanding, and a ban on passengers to sit outside the ship's railing.

Figure 8. *Familiarisasi* use PA

   b) To *crew*
      Familiarization of the crew on board has been carried out using every new crew change on board, the new crew is required to read the safety management system book, and then after reading it is required to put a signature, and using each new crew is required to fill out from familiarization.

b. Factors that hinder the implementation of the ISM Code on KM SINABUNG
   1) Lack of crew knowledge of the ISM Code and passenger safety.
      This lack of knowledge based on the results of observations, interviews, and documentation is caused by several factors, namely:
      a) *There are still ship crews who have not followed the training* ISM *Code*.
         It is known that there are crews on board who have not participated in training related to the ISM code carried out by the company, so training is needed for every new crew member on board related to the ISM code.ISM *code.*
      b) Familiarization with passengers who only use PA (*Public Addressor)*
         Passengers on board the ship who first use sea transportation and safety-related familiarization through PA when the ship will carry out the voyage from the port of departure, thus making the lack of understanding and information obtained by passengers on board.
      c) The lack of crew awareness on board the ship towards safety
         Still encountering crew members who work and consciously do not use the *safety helmet, safety mask, safety plug, or safety shoes*.

   2) Lack of supervision of crew and passenger safety on KM SINABUNG
      a) Officers busy on board
         The busyness of the officers on the ship at work makes the officers have to divide their focus and responsibilities on the ship so that before starting the work the officers do

not brief the crew, this is very unfortunate because during the briefing the officers on the ship can convey about work safety procedures, supervision, and motivation to the crew who will work so that the crew can follow work procedures.

3) Lack of strict sanctions against crew and passengers.
There are no strict sanctions from officers on board the ship to crews who violate work safety procedures, one of which results in the crew not having a deterrent effect on the violations they have committed and the absence of strict sanctions carried out by officers and companies against passengers who take actions that endanger safety such as sitting on and outside the ship's realing.

c. Steps taken to improve ISM Code implementation at KM SINABUNG,

1) Increase supervision and strict sanctions
Increase supervision using officers on board routinely every day giving briefings before and after the ship's crew does work, and also checking the ship's crew while working in this way, it is hoped that the ship's crew who will do the work will follow the existing work safety procedures.

Provide strict sanctions to crews who violate work safety procedures. The sanctions given vary according to the level of crew error, which can be in the form of verbal reprimands or punitive actions such as making a bad crew report letter until the heaviest punishment is removed from the ship by the skipper.

Strict sanctions for passengers who violate safety, the sanctions given are in the form of verbal warnings, fines, and sanctions in the form of being dropped off at the next port if in the future passengers are caught violating the restrictions on the ship.

2) Provide training related to the ISM Code before boarding the ship.
The implementation of training is quite appropriate to equip the crew on board with sufficient knowledge about the implementation of the ISM code. This is certainly an important thing to do before doing a job on the ship, all crews are equipped with sufficient knowledge by being re-equipped every time they are on board. So that the crew always remembers related to the ISM Code. Because with this activity the crew gets knowledge about the ISM code. In addition, the crew can also prevent and recognize the risk of danger that can occur due to violations in the use of safety equipment, ignoring work safety procedures, and knowing the risks that arise when not following work procedures properly.

3) Poster installation
Posters are used to inform, danger signs and warnings to ship crews so that work always follows existing work safety procedures such as wearing safety helmets, safety goggles, safety shoes, safety masks, and safety plugs, with posters containing these appeals expected to improve the safety of the crew working, posters are installed in strategic places and can be seen by ship crews such as platforms, ECR, and ship hallways Installation of posters to improve safety is also carried out for passengers on board, passengers are still found sitting on and outside the ship's railing because there are no posters containing prohibitions for passengers outside the ship's railing.

4) Play safety video on TV
It can be seen that there has been no implementation of video playback regarding safety on TV on board so it results in a lack of information obtained by passengers on board. With the implementation of safety video playback on TV, it is hoped that passengers will easily receive information related to prohibitions carried out on board, procedures for using safety equipment, and how to handle any hazards, with the implementation of video playback on TV is expected to improve safety on board.

CONCLUSION AND FURTHER RESEARCH

Summary

a. Implementation of the ISM Code on board KM SINABUNG has been implemented but is not yet optimal.
b. Lack of knowledge, lack of crew awareness, and lack of supervision of safety for crew and passengers are factors that hinder the implementation of the ISM code on KM SINABUNG.
c. Efforts that can be made to improve the implementation of the ISM Code in KM SINABUNG are by increasing supervision, giving strict sanctions, providing training, and installing posters related to the ISM Code.

Problem Limitations

a. The number of passengers was so large that the researcher could not interview all passengers but only took two passengers as informants.
b. Researchers were unable to obtain accurate information directly related to the MOB incident to the victim because the victim had been secured by the Syahbandar.
c. Limited previous literature that discusses the implementation of the ISM Code so researchers have difficulty getting the latest supporting references, especially in the form of journals or scientific publications.

Advice

a. We recommend that the company implement training before boarding the ship related to the ISM Code for all crew who will board the ship, at least 1 week before boarding the ship so that every crew who will board the ship is equipped with safety knowledge.
b. Improve supervision from both the company and officers on board the ship to crew and passengers related to the implementation of the ISM Code on KM SINABUNG.
c. The placement of safety posters must be in the right place and can be read clearly.

REFERENCES

Anderson, P. (2003). *Cracking the code : relevansi kode ISM dan dampaknya terhadap praktik pelayaran.* London: Institut Kelautan.

Arikunto, S. (2021). *Dasar-dasar evaluasi pendidikan edisi 3*. Bumi Aksara.

Bhima, S. P., Louhenapessy, N., & Ibnu , I. M. (2020, Desember 2). Optimalisasi Penerapan Sistem Manajemen Keselamatan Sesuai Standar International Safety Management (ISM) Code Dalam Menghadapi Keadaan Darurat Di MV. CK Bluebell. *Jurnal Ilmiah Nasional Sekolah Tinggi Ilmu Pelayaran Jakarta, 13*.

International Maritime Organization (IMO). (2020). *International Convention For The Safety Of Life At Sea* (SOLASI), 1974. London, United Kingdom: IMO.

International Maritime Organization (IMO). (2018). *International Safety Management (ISM) Code*. London, United Kingdom: IMO.

Kurniawan. (2018). Peranan International Safety Management Code Dalam Menunjang Keselamatan Para Awak Kapal. *Peranan International Safety Management COD*.

Meoleong, J. L. (2014). *Metode Penelitian Kualitatif.* Jakarta: Rajawali Pers.

Mulyadi, S., & Basuki, H. (2019). *Metode Penelitian Kulitatif Mixed Method.* Depok: Rajawali Pers.

Novianto, C. P., Sunusi, S., & Purnomo, J. (2021, September 2). Analisis Penerapan Safty Meeting Untuk Keselamatan Kerja Di MT Royal Emerald. *Jurnal Andromeda, 5*, 88-96.

Pemerintah Indonesia. Undang-Undang (UU) Nomor 17 tahun 2008 Tentang Pelayaran. Jakarta

PT. PELNI (2014) *Peraturan Dinas Awak Kapal* (PDAK). Jakarta

Silalahi, Bennet, N. B., & Rumondang, B. S. (1995). *Manajemen Keselamatan & Kesehatan Kerja.* Jakarta: PT Pustaka Binaman Pressindo.

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Bandung: Alphabet.

Sujarweni, VW (2014). Metodelogi penelitian. *Yogyakarta: Pustaka Baru Pers*.

Tachjan. (2006). *Implementasi Kebijakan Publik.* Bandung: Truen RTH.