




Optimization of Lifeboat Maintenance at MV Dobonsolo

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Abstract

This research was motivated by the maintenance of lifeboats on board, which was less than optimal. It was proven when the Marine Inspector checked the lifeboat on board in the Java Sea on March 20, 2022, after the ship departed from Makassar Port to Tanjung Perak Port, 2 of the 12 lifeboats on board could not be hobbled, so the ship received Non-Conformity (NC). The purpose of this study is to find out how the implementation of lifeboat maintenance at MV Dobonsolo, the obstacles encountered in carrying out the treatment, and how efforts need to be made to overcome these obstacles. The research method used in the preparation of this thesis is qualitative descriptive by using triangulation (observation, interviews, and documentation) in data collection techniques, as well as using data reduction, data presentation, and conclusion drawing in data analysis techniques. The research found that lifeboat maintenance at MV Dobonsolo was not optimal. The obstacles encountered include a large number of lifeboats, but the maintenance time is less due to the limited daily working hours of the Senior Third Officer, the crew does not understand the lifeboat maintenance procedures, and the unavailability of spare parts on board. Efforts that need to be made include dividing the task of lifeboat maintenance between Senior Third Officer and Junior Third Officer, conducting safety meetings and training the crew regarding the maintenance of lifeboats according to procedures, and asking for spare parts from the company.

Keywords: *Optimization; Maintenance; Lifeboat*

INTRODUCTION

Lifeboats are small boats designed to provide aid and relief at sea in emergencies, such as evacuation from a vessel in danger or search and rescue of people stranded at sea. This tool is in the form of a boat with more loading capacity compared to other auxiliary tools. The number of lifeboats on a ship can be more than 1 (one), adjusting the number of crew and passengers on board.

Lifeboat maintenance is important as a precaution in case of an emergency on board at any time and requires all crew to leave the ship. However, lifeboat maintenance is often neglected and underestimated so that in an emergency, the lifeboat cannot be lowered into the sea and remain in the stationer position.

As researchers experienced during Marine Practice (Prala) at MV Dobonsolo in 2021/2022, the lack of maintenance of lifeboats on board resulted in two of the twelve lifeboats being unable to be hobbled when the Marine Inspector checked on board in the Java Sea on March 20, 2022, after the ship refused from Makassar Port to Tanjung Perak Port, so that the ship gets Non-conformity (NC).

Based on the description that has been described above, the problems can be formulated, namely:

1. How is the maintenance of lifeboats carried out at MV Dobonsolo?
2. What obstacles are encountered in the implementation of lifeboat maintenance at MV Dobonsolo?
3. How are the efforts made by the crew to overcome obstacles in the implementation of lifeboat

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maintenance at MV Dobonsolo?

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LITERATURE REVIEW

1. Lifeboat

A lifeboat is a rescue device designed to rescue all crew members with a stronger construction than other rescue devices. Depending on their size, lifeboats can accommodate up to 150 people at maximum capacity. Lifeboats have several types: fully-enclosed lifeboats, semi-enclosed lifeboats, and free-fall lifeboats (Rudiana *et al.*, 2020).

2. Maintenance

Maintenance is an action that must be carried out on various non-technical objects, such as management and human resources, as well as technical, such as moving or immovable objects or materials. The goal is for the object to function properly and always meet the established international standards (Widiatmaka, 2018:1).

3. Optimization

According to the Kamus Besar Bahasa Indonesia (KBBI), optimization means optimizing the process, way, and action of optimizing (making the best, the highest, etc.).

4. Passenger

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

5. 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. MV Dobonsolo

6. Safety Meeting

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

7. Research Framework

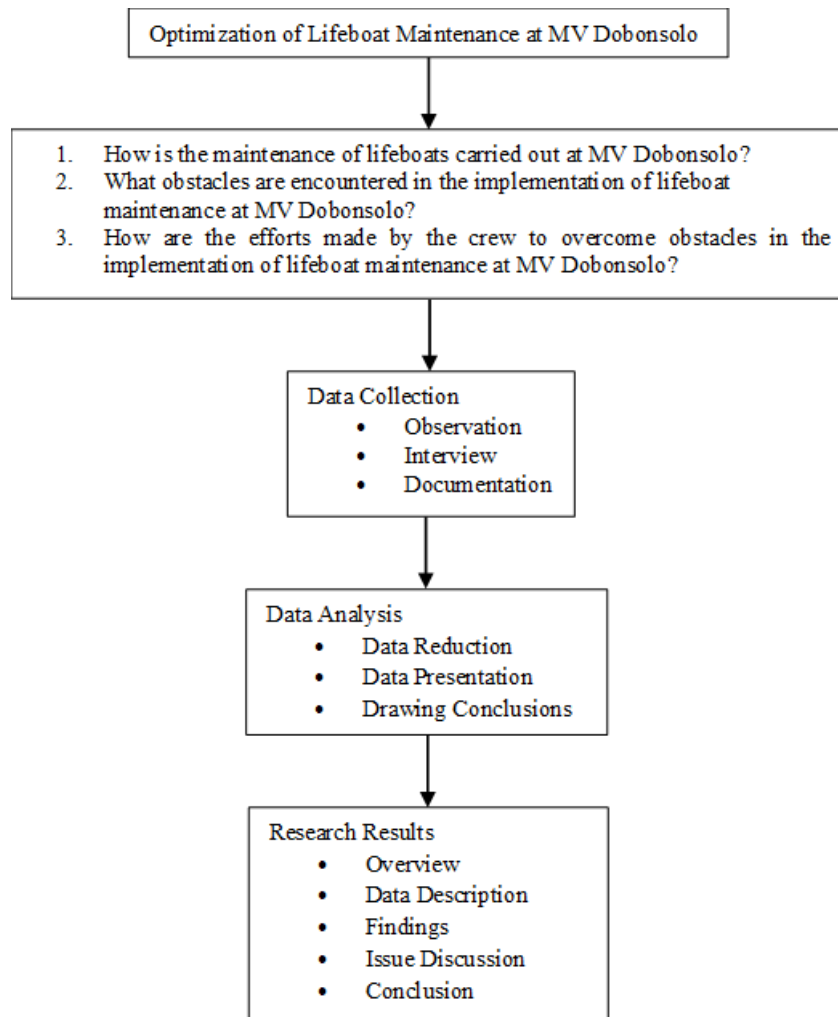


Figure 2. Research Framework

RESEARCH METHOD

Research methods should make readers be able to reproduce the analysis. Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described. Figures are sequentially numbered commencing at 1 with the figure title and number below the figure as shown in Figure 1.

1. Research Methods

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

2. Time and Place of Research

a. Research Time

The research was conducted from August 08, 2021 - August 13, 2022.

b. Place Research

This research was conducted on MV Dobonsolo.

3. 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 Ship particular, Lifeboat and Launching Arrangement, Lifeboat Inventory Inspection Report, Lifeboat Emergency/Ship Abandonment Training Report, etc.
4. Data Collection Technique
 - a. Observation

Conduct direct observations in the field to observe objects related to the maintenance of lifeboats at MV Dobonsolo.
 - b. Interviews

This research conducted interviews with the Captain, Chief Officer, Senior Third Officer, and Senior Fourth Engineer.
 - c. Documents

Documents in this research are Ship particular, Lifeboat and Launching Arrangement, Lifeboat Inventory Inspection Report, Lifeboat Emergency/Abandonment Training Report, etc.
 - d. Literature Study

Researchers used several supporting books in the PIP Semarang library.
5. Data Analysis Technique

The following data analysis techniques were used:

 - a. Data Collection

Researchers combine data collection techniques by means of 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 actually happening to achieve research objectives.
 - d. Conclusion Drawing / Verification

Drawing conclusions is the ability of researchers to conclude from various data obtained from the research process.

FINDINGS AND DISCUSSION

MV Dobonsolo is a passenger ship that can carry as many as 1.046 passengers and is owned by the company PT Pelayaran Indonesia (Persero). As well as having the following routes: Jakarta - Surabaya - Makassar - Baubau - Ambon - Sorong - Serui - Jayapura PP.

1. Problem Analysis

The implementation of lifeboat maintenance at MV Dobonsolo has not been optimal.

- a. The large number of lifeboats and the lack of maintenance time for lifeboats by Senior Third Officer.

In implementing lifeboat maintenance, sufficient time is needed to carry out the treatment. The number of lifeboats above MV Dobonsolo is 12 lifeboats. By this amount, it takes enough daily work time to carry out the treatment. The daily working time of the Senior Third Officer responsible for lifeboats is approximately 4 hours, from 07.30 – 11.30. It is due to the platform guard time or navigation guard time of the Senior Third Officer on board the ship, starting at 12:00 – 16:00. The daily working time is considered less than optimal to maintain a large number of lifeboats. In fact, for maintenance to be carried out

optimally, implementing lifeboat maintenance requires sufficient time.

- b. The crew did not fully understand the lifeboat maintenance procedures.

In the implementation of treatment, skills, and experience are also needed so that the treatment can run optimally. In reality, crew members still do not fully understand the lifeboat maintenance procedures. These obstacles cannot be left alone because it will have an impact on the life safety of passengers and crew in the event of an emergency caused by lifeboats not being ready for use.

- c. Unavailability of spare parts.

Spare parts are indispensable in the implementation of lifeboat maintenance in the event of damage to one of the equipment or if lifeboat equipment expires. The unavailability of spare parts on board can hamper the implementation of lifeboat maintenance.

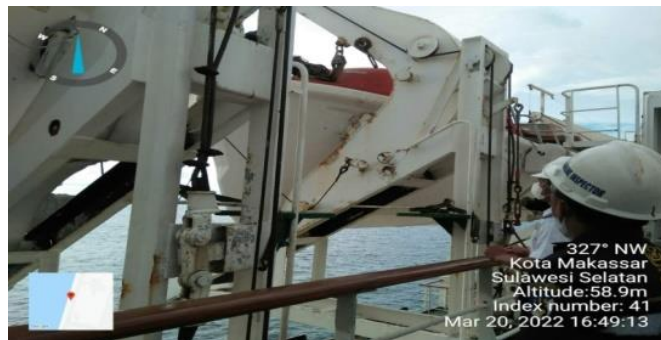


Figure 3. Lifeboat Checking by Marine Inspector

When researchers carried out Prala at MV Dobonsolo, researchers found firsthand that there was less than optimal maintenance on the lifeboats on board. When the Marine Inspector carried out a lifeboat check on board in the Java Sea on March 20, 2022, after the ship departed from Makassar Port to Tanjung Perak Port, 2 of the 12 lifeboats could not be hobbled so that the ship received Non-conformity (NC).

2. Problem Discussion

- a. The division of duties in carrying out lifeboat maintenance between Senior Third Officer and Junior Third Officer.

With the limited time that the Senior Third Officer has in maintaining safety equipment, especially lifeboats, and the number of lifeboats needing care, the work results obtained are not optimal. Junior Third Officer can assist in carrying out lifeboat maintenance so that the treatment carried out can run optimally.

With Junior Third Officer who helped carry out the maintenance of the lifeboat, Junior Third Officer was able to learn and master how to care for the lifeboat properly and correctly, so that when the Junior Third Officer became Senior Third Officer, he already understood, mastered, and could complete his task in caring for the lifeboat well.

- b. Conduct training for the crew regarding the maintenance of lifeboats in accordance with maintenance procedures.

Efforts to overcome ship crews who do not understand the maintenance procedures for lifeboats are by providing training to the crew on good and correct maintenance procedures in the maintenance of lifeboats and by conducting regular safety meetings.

Lifeboat maintenance training was directly explained by Mualim I, the Safety Officer on board.

Safety meetings are held once a month. Through the safety meeting, it can be explained how to care for lifeboats to crew who do not understand so that the crew understands how to care for lifeboats.

- c. Ask the company for spare parts.

An effort to overcome the obstacle of the absence of spare parts is to request spare parts from the company. Spare parts needed and equipment that will expire are made on a list of requests for goods. After that, the request list is sent to the office or company so that the spare parts and equipment needed are immediately sent from land.

CONCLUSIONS

1. Summary

- a. The implementation of lifeboat maintenance at MV Dobonsolo has not been carried out optimally in accordance with the provisions of Safety of Life at Sea (SOLAS) 1974, as well as the Planned Maintenance System (PMS) on board.
- b. Obstacles encountered in the implementation of lifeboat maintenance: a large number of lifeboats and the lack of lifeboat maintenance time due to the small daily working hours of the Senior Third Officer, the crew did not understand the maintenance procedures for lifeboats and the unavailability of spare parts on board.
- c. The crew's efforts to overcome obstacles in the implementation of lifeboat maintenance: the division of lifeboat maintenance duties between Senior Third Officer and Junior Third Officer, conducting safety meetings and training to the crew related to lifeboat maintenance in accordance with maintenance procedures, and requesting spare parts from the company.

2. Advice

- a. It is recommended that lifeboat maintenance be carried out in accordance with the provisions of SOLAS 1974 and the Planned Maintenance System (PMS) on board. Treatment is carried out regularly every week, every month, and every year according to the existing treatment plan.
- b. It is better for the officer in charge of carrying out the lifeboat maintenance to ask for help from other crew members so that the maintenance carried out can run faster and require less time.
- c. It is recommended that the company provide spare parts as soon as possible before unwanted things happen.

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