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Penerapan Tugas Jaga saat Proses Bongkar Muat untuk Menghindari Kerusakan pada Muatan di MV. Dahlia Merah

Implementation of Guard Duty during Loading and Unloading Process to Avoid Damage to Cargo on MV. Dahlia Merah

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ABSTRAK

Dunia globalisasi pada zaman ini sangat membawa dampak bagi tatanan maupun peraturan kehidupan. Pada umumnya tugas seorang perwira jaga ketika kapal sedang berlabuh ataupun sedang bongkar muat tidak hanya mengawasi kondisi di sekitar kapal tapi juga harus mengawasi proses bongkar muat agar tidak terjadi kesalahan-kesalahan, perwira jaga harus selalu mengetahui tentang tugas dan tanggung jawabnya ketika kapal sedang bongkar muat, karena jika sampai terjadi kesalahan ataupun kelalaian dari seorang perwira jaga akan menimbulkan sebuah masalah yang besar. Terkadang perintah yang sudah dibuat oleh Nakhoda (*Master Standing Order*) tidak sepenuhnya dapat dijalankan oleh kru yang sedang melaksanakan dinas jaga, sehingga kelalaian-kelalaian tersebut dapat menimbulkan kerugian terhadap pihak perusahaan dan pemilik kargo. Penelitian ini menggunakan pendekatan kualitatif deskriptif, yang bertujuan untuk menggambarkan fenomena secara mendalam berdasarkan data yang diperoleh dari lapangan. Hasil dari penelitian ini yaitu: 1) Cara menghindari kerusakan saat bongkar muat di MV. Dahlia Merah antara lain persiapan yang tepat, pelatihan pekerja, penanganan yang hati-hati, pengaturan ruang yang optimal, pemantauan cuaca dan lingkungan, pengawasan selama proses, kolaborasi yang baik, pemeriksaan setelah bongkar muat; dan 2) Hambatan dan solusi dalam melaksanakan bongkar muat sesuai prosedur di MV. Dahlia Merah sebagai berikut: a) Hambatan, antara lain keterlambatan dalam proses administrasi, cuaca buruk, keterbatasan fasilitas pelabuhan, masalah pada peralatan, kepatuhan terhadap prosedur Keselamatan dan Kesehatan Kerja (K3), masalah komunikasi, tantangan dalam pengaturan barang; b) Solusi, antara lain peningkatan sistem administrasi, pemantauan cuaca secara *real-time*, peningkatan infrastruktur pelabuhan, pemeliharaan dan perawatan peralatan, peningkatan prosedur K3, sistem komunikasi yang lebih efisien, manajemen barang dengan teknologi.

ABSTRACT

The globalization of the world in this era has had a great impact on the order and regulations of life. In general, the task of a watch officer when the ship is anchored or loading and unloading are not only to monitor the conditions around the ship but also to supervise the loading and unloading process so that no errors occur, the watch officer must always know about his duties and responsibilities when the ship is loading and unloading because if a mistake or

negligence occurs from a watch officer it will cause a big problem. Sometimes the orders made by the Captain (Master Standing Order) cannot be fully carried out by the crew who are on guard duty so this negligence can cause losses to the company and the cargo owner. This study uses a descriptive qualitative approach, which aims to describe the phenomenon in depth based on data obtained from the field. The results of this study are as follows: 1) How to avoid damage during loading and unloading on the MV. Dahlia Merah includes proper preparation, worker training, careful handling, optimal space arrangement, weather and environmental monitoring, supervision during the process, good collaboration, inspection after loading and unloading; and 2) Obstacles and solutions in carrying out loading and unloading according to procedures on the MV. Dahlia Merah as follows: a) Obstacles, including delays in the administrative process, bad weather, limited port facilities, equipment problems, compliance with occupational health and safety (K3) procedures, communication problems, challenges in arranging goods; b) Solutions, including improving the administration system, real-time weather monitoring, improving port infrastructure, equipment maintenance and care, improving K3 procedures, a more efficient communication system, and managing goods with technology.

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1. INTRODUCTION

Globalization in the modern era has significantly impacted societal structures and regulations. Occupational safety and health are critical factors in determining the productivity and success of a company. Therefore, to achieve a safe and healthy working environment, specific techniques and tools must be implemented. Many companies now adopt a "safety first" approach to ensure that workers receive adequate protection. Human resources play a pivotal role in the success of any organization (Wangi et al., 2020).

Law Number 17 of 2008 concerning Shipping, Article 1, Paragraph 1, defines shipping as a unified system consisting of water transportation, port activities, safety and security, and marine environmental protection. Furthermore, Article 1, Paragraph 36 of the same law defines a ship as a watercraft of specific form and type, propelled by wind, mechanical power, or other energy sources, towed or pushed, including dynamically supported vessels, submersibles, and other floating or stationary floating structures.

Based on these provisions, shipping can be understood as an integrated system encompassing all waterborne activities, including those in seas, rivers, and lakes. It involves transport equipment that can float and move across water surfaces, regulated by operational standards. Within the maritime industry, the International Maritime Organization (IMO) plays a vital role. Ships are the primary means of transportation in shipping, capable of floating and moving through the application of various propulsion methods such as wind, mechanical energy, or

towing. Ships serve not only as transport mechanisms but also support the broader needs of society. Fundamentally, ship maintenance and repairs aim to ensure navigational safety (Dwiono et al., 2021).

Port watchkeeping during loading and unloading operations is a crucial responsibility, as the primary function of a ship is to transport cargo safely, swiftly, and efficiently from the port of origin to the destination. Safeguarding the cargo is the duty of all watchkeeping personnel, necessitating the execution of watch duties in strict accordance with established procedures. Officers on watch must adhere to operational standards and procedures, particularly those outlined in the *standing orders*, the STCW 1978 Convention as amended in 2010, and other port watchkeeping guidelines. Coordination between officers and crew is essential to successful watchkeeping. To ensure competitiveness and improve operational performance, human resource capabilities must be continuously developed and enhanced. Watchkeeping involves maintaining control and security aboard the vessel or at the port over a 24-hour period, ensuring safe and orderly working conditions (Nugraha et al., 2021).

According to the STCW 1978 as amended in 2010, port watchkeeping duties must be performed by the officer of the watch, assisted by crew members scheduled for duty. Typically, the responsibilities of a watch officer during anchorage or cargo operations extend beyond monitoring the ship's surroundings. The officer must also supervise the cargo handling process to prevent errors. Full awareness of their duties and responsibilities is imperative during such operations, as negligence could lead to serious consequences. Watchkeeping must be conducted diligently and attentively by both the officer on duty and assisting crew members, whether at sea or in port, to ensure the safety, security, and orderliness of the vessel, its cargo, passengers, and environment (Widyaningsih & Nisa'Lestari, 2019).

However, orders issued by the Master (Master's Standing Orders) are not always fully implemented by the crew on watch. Such lapses in compliance can lead to significant losses for the shipping company and cargo owners. Based on research conducted aboard MV *Dahlia Merah*, the author concludes that negligence during watchkeeping duties can lead to cargo damage during loading and unloading. The primary objective of watchkeeping is to prevent or minimize the risk of accidents such as collisions, groundings, and other operational hazards (Nuryaman & Denisyanti, 2022).

2. RESEARCH METEDOLOGY

This study employed a qualitative descriptive approach, aiming to provide an in-depth depiction of the phenomenon under investigation without manipulating the variables involved. This approach was selected because it is appropriate for exploring meanings, perceptions, and experiences of individuals or groups within their natural context. Qualitative research typically involves techniques such as observation, interviews, and document analysis (Purba et al., 2025).

Participants in this study were selected through purposive sampling, considering their direct relevance to the research problem. The selection criteria included active involvement in activities related to the topic and the capacity to provide rich and meaningful information. The number of participants was not predetermined but was guided by the principle of data saturation, whereby data collection ceased once no new significant information emerged. Purposive sampling is a non-random technique in which participants are chosen based on specific criteria relevant to the research focus (Melati et al., 2025).

Data collection was conducted using in-depth interviews, direct observations, and documentation. Semi-structured interviews were used to allow informants the flexibility to express their perspectives and experiences.

Observations were employed to capture real-time behaviors and situations occurring in the field. Meanwhile, document analysis was used to support data validity by reviewing relevant materials such as activity reports, photographs, and archival records.

The data obtained were analyzed using thematic analysis, a process of identifying key patterns or themes from qualitative data. The stages of analysis included: transcription of data, repeated reading, initial coding, grouping of codes into themes, and interpretation of meaning. The findings are presented in descriptive narrative form to fully reflect the context and dynamics of the situation studied. Thematic analysis generally involves reading the complete interview transcripts to identify ideas or points emerging from participants' responses (Ananda et al., 2025).

To ensure the credibility and trustworthiness of the data, the researcher employed source and method triangulation, as well as member checking, which involved confirming interview results with participants to verify the accuracy of interpretations. Furthermore, the research process was conducted transparently through reflective journaling and detailed field notes.

3. RESULT AND DISCUSSION

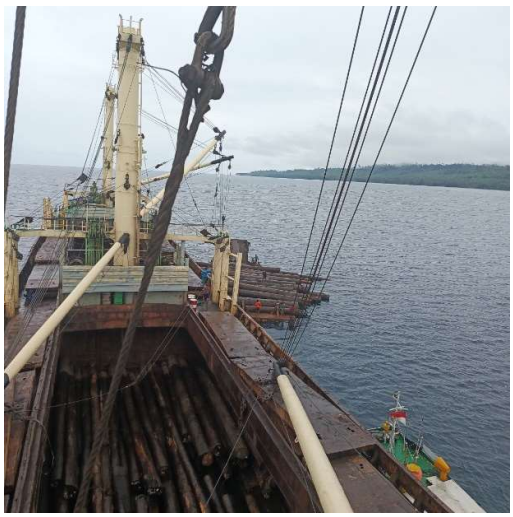
The MV. *Dahlia Merah* is a General Cargo vessel owned by PT. Pelayaran Inti Internasional. The vessel was built in 1980 at the Taihei Industry Co. Ltd. shipyard in China. It is registered under the Indonesian flag and listed in Jakarta with IMO Number 8005812, Call Sign YEJQ, and MMSI 525016261. The ship is classified under BKI (Bureau of Classification Indonesia).

The MV. *Dahlia Merah* has the following specifications: a Length Overall (L.O.A) of 106.43 meters, a Breadth Moulded of 16.4 meters, and a Depth Moulded of 8.15 meters. The vessel's Gross Registered Tonnage (GRT) is 3,893 tons, Net Registered Tonnage (NRT) is 2,389 tons, and it operates at a speed of 15.912 knots.

Vessels can be categorized based on the type of cargo they carry, including general cargo ships, tankers, container ships, bulk carriers, and log carriers (Jayanti & Todingan, 2025).

The MV. *Dahlia Merah* operated a voyage from Port of Semarang to Maluku. After completing loading and unloading operations in Semarang without any reported issues, the vessel proceeded to its next port of call in Maluku for further cargo operations. However, upon arrival in Maluku, the vessel encountered severe weather conditions, which posed significant challenges to the unloading process.

These adverse conditions presented operational difficulties for the Master and crew, requiring extra vigilance and adaptive decision-making to ensure that loading and unloading activities could be completed safely and efficiently, without causing financial loss or occupational injury to any crew members.



Gambar 1. MV. Dahlia Merah

How to Prevent Damage During Loading and Unloading on MV. *Dahlia Merah*

Preventing cargo damage during loading and unloading operations on a ship like MV. *Dahlia Merah* requires planning,

careful execution, and the use of appropriate technology.

The following are several ways to minimize the risk of damage:

Proper Preparation

1. Loading and Unloading Equipment Inspection

Make sure all equipment such as cranes, forklifts, slings, and spreaders are in good condition and have passed inspection before use.

2. Worker Training

Provide training to the crew on proper loading and unloading techniques for various types of cargo, including heavy, fragile, or hazardous goods.

3. Cargo Identification

Label the cargo appropriately, such as "Fragile," "This Side Up," or "Flammable," to ensure proper handling.

4. Use of Appropriate Equipment

Use specific tools for certain types of cargo, such as container spreaders for containers, pallet jacks for palletized goods, or soft slings for fragile items. Ensure that ropes or slings used for lifting cargo have adequate load capacity and are not worn.

Careful Handling

1. Controlled Speed

Avoid handling cargo too quickly, especially for sensitive items or those with irregular shapes.

2. Proper Handling Techniques

Ensure that cargo is lifted and moved according to the correct direction and support points to prevent deformation or structural damage.

Optimal Space Arrangement

1. Organized Cargo Planning

Arrange cargo in the ship's hold or deck by considering weight distribution, vessel stability, and accessibility during loading and unloading.

2.Additional Protection

Use padding or protective layers such as bubble wrap, foam, or wooden blocks to prevent impacts and scratches during transport.

Weather and Environmental Monitoring

Avoid loading and unloading during bad weather conditions, such as strong winds or heavy rain, which can increase the risk of cargo slipping or accidents. For cargo that is sensitive to temperature or humidity, ensure the storage area has temperature control or use special protective coverings. Other obstacles include limited cleaning equipment, inadequate personal protective equipment (PPE), and poor weather conditions (Panjaitan et al., 2025).

Supervision During the Process

Assign a supervisor or foreman to monitor the loading and unloading process, ensuring that procedures are followed and any potential issues are immediately addressed. Use cameras or sensors to monitor cargo during the operation.

Good Collaboration

Ensure effective communication between ship crew, port workers, and equipment operators. Miscommunication can lead to cargo being dropped or struck. Conduct a short meeting (toolbox talk) before starting the unloading to align understanding of the plan and potential challenges.

Post-Loading and Unloading Inspection

1. Cargo Inspection

Check the cargo after the loading and unloading process to detect any damage immediately so that insurance claims or corrective actions can be taken quickly.

2. Documentation

Document the condition of the cargo before and after loading and unloading using photos or videos as evidence.

By implementing the above steps, the risk of cargo damage during the loading and unloading process on MV. *Dahlia Merah* can be minimized, ensuring efficiency and customer satisfaction.

Obstacles and Solutions in Implementing Proper Loading and Unloading Procedures on MV. *Dahlia Merah*

Loading and unloading cargo on a vessel such as MV. *Dahlia Merah* may face several obstacles that can affect the smooth execution of the process, especially in complying with established procedures. The following are common obstacles and proposed solutions:

Obstacles

1. Delays in Administrative Processes

Inefficient administrative procedures, such as the inspection of import/export documents, permits, or cargo certifications, can cause delays in loading and unloading.

2. Bad Weather

Adverse weather conditions such as heavy rain or strong winds can affect safety and the smooth running of loading and unloading, especially in open ports or unprotected docks.

3. Limited Port Facilities

Ports with limited capacity or inadequate facilities, such as cranes or storage space, may hinder quick and efficient loading and unloading.

4. Equipment Issues

Damaged or insufficient loading equipment, such as cranes, forklifts, or conveyors, may halt or slow down the process.

5. Compliance with Occupational Safety and

Health Procedures (OSH) Sometimes, a lack of proper OSH procedures or non-compliance with safety protocols can lead to delays or accidents that hinder the loading and unloading process.

6. Communication Problems

Poor communication between ship crew, port authorities, and laborers can lead to coordination errors, resulting in cargo being misplaced or mishandled.

7. Challenges in Cargo Arrangement

Cargo with unusual shapes or sizes, or hazardous goods, may require special attention, thus slowing down the loading and unloading process.

Solutions

1. Improved Administrative Systems

Enhance administrative efficiency by implementing digital management systems that allow for fast and automated document verification.

2. Real-Time Weather Monitoring

Use technology-based weather monitoring systems to track changes in weather conditions, allowing for better planning of delays or adjustments in the loading schedule.

3. Improved Port Infrastructure

Upgrade port facilities such as cranes and storage areas to reduce congestion and speed up the loading and unloading process.

Regular Maintenance of Equipment Ensure regular maintenance and servicing of loading equipment to prevent unexpected failures that could disrupt operations.

4. Enhanced OSH Procedures

Conduct regular training to ensure every worker understands safety procedures and increase supervision to prevent accidents.

5. More Efficient Communication Systems

Use advanced communication technology (such as mobile apps or radio-based systems) to facilitate coordination among all involved parties.

6. Technology-Based Cargo Management

Apply warehouse and logistics management technologies to handle cargo with unique shapes or hazardous materials, including the use of specialized tools.

By addressing these obstacles with effective solutions, the loading and unloading process on MV. *Dahlia Merah* can be carried out more smoothly, efficiently, and in accordance with applicable procedures.

4. CONCLUSION

Ways to prevent cargo damage during loading and unloading on MV. *Dahlia Merah* include: 1) Proper preparation; 2) Worker training; 3) Careful handling; 4) Optimal space arrangement; 5) Weather and environmental monitoring; 6) Supervision during the process; 7) Good collaboration; and 8) Post-loading and unloading inspection.

Obstacles and solutions in implementing proper loading and unloading procedures on MV. *Dahlia Merah* include: 1) Obstacles such as administrative delays, bad weather, limited port facilities, equipment issues, compliance with Occupational Safety and Health (OSH) procedures, communication problems, and cargo arrangement challenges; and 2) Solutions such as improved administrative systems, real-time weather monitoring, port infrastructure upgrades, regular equipment maintenance, enhanced OSH procedures, more efficient communication systems, and technology-based cargo management.

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