

Analysis of The Implementation of Crew Responsibilities on Board Ships in Accordance with The Maritime Labour Convention 2006

Shoffil Tian Mubharoq^{1*}, Dety Sutralinda², Romanda Annas A³, A.A Istri Sri Wahyuni⁴

^{1,2,3,4} Ship Operation Engineering Technology Study Program, Politeknik Pelayaran Surabaya, Indonesia

*Corresponding Author:

Email: agusmujiyanto39@gmail.com

Abstract.

This study analyzes the implementation of Crew Member (ABK) responsibilities according to the Maritime Labour Convention (MLC) 2006 on the MV Meratus Kalabahi owned by PT Pelayaran Meratus Line, driven by the gap between regulations and field practices such as work fatigue on domestic Indonesian routes. The aim is to identify compliance with working hours, safety, and crew complaints. Using a descriptive qualitative approach with a population of 20 crew members and a purposive sample of 10-15 respondents, the instruments include interviews, observations, FGDs, and Miles and Huberman analysis (data reduction, presentation, conclusion). The results show good administrative compliance (working hour recording, PPE availability), but field inconsistencies such as double tasks during loading and unloading cause fatigue and low PPE use. The conclusion recommends adjustments to manning levels and safety culture to optimize the MLC 2006.

Keywords: ABK Responsibilities; Crew Manning; Maritime Labour Convention; Seafarer Safety and Work Hours.

I. INTRODUCTION

The shipping industry is the backbone of international trade, connecting countries worldwide. Crew members play a crucial role in ensuring the safety and smooth operation of ships transporting cargo and passengers between ports (UNCTAD, 2023). On the Indonesian-flagged cargo ship MV Marine Trader, sailing from Tanjung Priok to Rotterdam with 20 crew members, incidents such as injuries due to lack of personal protective equipment, fatigue from excessive working hours, and poor accommodation conditions emphasize the dependence on proper crew responsibility (Romanda, 2024; ITF Seafarers, 2022). Life on board a ship demands trust between crew and leaders, which includes trust in the training process, perceived relative advantage, knowledge-sharing self-efficacy, and perceived compatibility to support safe operations (Annas et al., 2024; Tseng & McLean, 2021). This phenomenon is further complicated by the fact that crew members often face high risks during long voyages, including the need for emergency medical access, which requires adherence to international standards to protect their well-being (ILO, 2022). In Indonesia, as a major maritime nation, similar challenges are evident on national vessels, where human factors, such as crew coordination, are a key determinant of safety, as evidenced by analyses of domestic and international shipping cases (Ministry of Transportation of the Republic of Indonesia, 2023; Manuel, 2021).

The main problem arises from the inconsistency of working conditions for seafarers with the minimum standards of the 2006 Maritime Labour Convention (MLC), established by the ILO to guarantee fair wages, decent working hours, and access to healthcare, although its implementation often fails in practice (ILO, 2022). Differences in legal interpretations between member states lead to inconsistent protections, coupled with a lack of enforcement and awareness, resulting in seafarers still experiencing long working hours, low wages, and unsafe environments (Romanda, 2024; Devi & Purba, 2023). These challenges are exacerbated by ship management constraints, such as crew fatigue leading to incidents, and the lack of integration of social factors into ship operations, as evidenced by global case studies on cargo ships (Annas et al., 2024; Koceja et al., 2022). In the Indonesian context, field practice during sea trials demonstrated a gap between the 2006 MLC regulations and reality, including legal and social issues affecting crew responsibilities (Tseng & McLean, 2021; Manuel, 2021). This study aims to analyze the implementation of crew responsibilities according to the 2006 MLC and identify key issues for formulating compliance improvement strategies, focusing on legal, management, and social factors during maritime practices. Its urgency lies in the urgent need to protect crew amidst the rise in global incidents, while its novelty lies in the development of a conceptual framework based on trust and perceived factors integrated

with empirical data on Indonesian maritime practices, which has not been widely explored in the current literature (Devi & Purba, 2023; Koceja et al., 2022).

II. METHODS

This study uses a descriptive qualitative approach to analyze the implementation of crew responsibilities on board ships according to the 2006 Maritime Labour Convention (MLC). This method provides a detailed overview of social phenomena without variable manipulation (Sugiyono, 2013). The qualitative approach allows for an in-depth exploration of crew members' experiences, perceptions, and dynamics related to these regulations, with a descriptive design that focuses on the factual conditions of field practices such as working hours, safety, and welfare (Creswell & Poth, 2021). This method was chosen because it suits the complexity of maritime reality, where direct observation and interviews generate rich contextual data, as applied in similar studies in the shipping industry (Emzir, 2021; Sudaryono, 2022). The primary instrument was the researcher herself as the primary data collector through face-to-face interviews, participant observation, Focus Group Discussions (FGDs) with crew members, as well as secondary data from literature and documentation studies such as the 2006 MLC report and shipping policies (Bungin, 2015). Data collection techniques included semi-structured interviews to capture crew members' perceptions, observations of ship activities during sea practice, literature studies from recent maritime journals, and regulatory documentation for triangulation (Sugiyono, 2013; Nasution, 2003).

Data analysis followed an adapted Miles and Huberman model, encompassing data reduction through transcription, familiarization, category organization, and theme development; data presentation via flowcharts, category tables, and supporting images; and drawing conclusions to answer the problem formulation (Moleong, 2010; Creswell & Poth, 2021). The study population consisted of all crew members on the Indonesian-flagged cargo vessel MV Marine Trader during the Tanjung Priok-Rotterdam route, including 20 crew members with operational experience according to the 2006 MLC (Romanda, 2024). The sample was selected purposively with the criteria of crew members directly involved in safety incidents, work fatigue, and accommodation, involving 10-15 respondents for interviews and FGDs to achieve data saturation (Sugiyono, 2013; Emzir, 2021). This approach ensured the representation of legal, management, and social factors, in line with the problem definition in maritime practice (Annas et al., 2024; Sudaryono, 2022). The procedure begins with the preparation of ship ethics and permits, followed by primary data collection during sea practice through daily observations, in-depth interviews, and crew FGDs; and secondary data via the 2006 MLC literature and fleet documents (Bungin, 2015). The sequential analysis phase includes data reduction to focus on trust and compliance themes, visual presentation for coherence, and triangulated conclusions (Sugiyono, 2013; Wahana, 2009). The research was conducted at the Tanjung Priok ship site from January to June 2026, with a 6-month time allocation for data collection and reporting, ensuring systematicity and relevance to the objectives (Nasution, 2003; Devi & Purba, 2023).

III. RESULT AND DISCUSSION

Overview of Research Location



Fig 1. Researcher's Marine Practice Location

This study analyzes the implementation of Crew Member (ABK) responsibilities according to the Maritime Labour Convention (MLC) 2006 at PT Pelayaran Meratus Line, a national shipping company based in Surabaya since 1957 which has adopted the MLC principles regarding working hours, accommodation, health, and ABK rights. The specific location is the merchant vessel MV Meratus Kalabahi on a domestic route, where direct observation during sea practice evaluated the compliance of regulations with daily operational practices in navigation, machinery, and crew life management.

Table 1. Ship Particular MV. Meratus Kalabahi

No	Ship Data	Information
1	Ship Name	MV. Meratus Kalabahi
2	Type of Ship	Container Ship
3	Flag	Indonesia
4	Owner	PT. Meratus Line
5	Year Built	1997
6	Builder	Jurong Shipyard Singapore
7	IMO Number	9157961
8	Gross Tonnage (GT)	8203 Tons
9	Deadweight (DWT)	±10,488 Tons
10	Length (LOA)	128.84 m
11	Width	23.00 m
12	Draft	±7.8 m
13	Main Engine	MAN B&W 7S42MC (7175 kW)
14	Service Speed	16.2 Knots
15	Container Capacity	802 TEUs

Data Presentation

1. Identity Observation Data

During the 12 months of observation on board, the crew's work and rest hours followed a clear watch system under normal conditions, but during container loading and unloading, maneuvering, and berthing, the limited deck crew forced the crew to carry out dual tasks such as lashing/unlashing and supervision simultaneously. This condition has the potential to cause fatigue, decreased alertness, and the risk of work accidents, which is not in accordance with MLC 2006 Regulation 2.7 (manning levels) and Regulation 2.3 (minimum work/rest hours). Working hours were recorded but did not always reflect the actual workload, with crew members having dual responsibilities as deck watch steersmen and port operational officers, indicating potential non-compliance with MLC 2006 standards for adequacy of manning and rest periods.

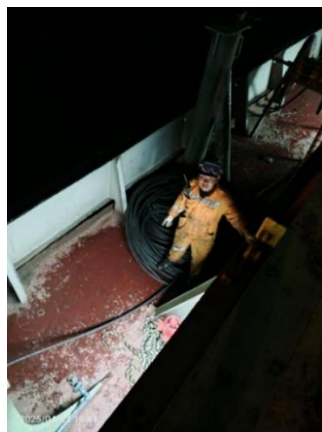


Fig 2. Daily Work Overtime

2. Interview data

Based on interviews with several crew members directly involved in ship operations, it was found that the available rest time is not always sufficient for optimal physical recovery. This is particularly true when ships are loading and unloading with short docking times, requiring crew members to work for relatively long and repetitive periods. Furthermore, respondents stated that the fatigue they experience has the potential to affect their levels of concentration and alertness while carrying out their duties. This fatigue is feared to increase the risk of errors.



Fig 3. Double Job At AB

The implementation of the Crew Members' (ABK) responsibilities on board the MV Meratus Kalabahi owned by PT Pelayaran Meratus Line has generally been in accordance with their respective job duties and followed standard operational procedures, as observed during 12 months of sea practice. However, the main obstacle lies in working and rest hours which do not always reflect actual conditions, especially during container loading and unloading and ship maneuvers, where limited deck crew triggers duplicate tasks, fatigue, and decreased alertness that have the potential to violate MLC 2006 Regulation 2.3 and 2.7. This condition shows a gap between administrative records and field reality, so that it is necessary to adjust the number of crew members, strict supervision of actual rest times, and increase commitment to the 2006 MLC standards to optimize safety, crew welfare, and operational efficiency of ships.

Several crew members said that:

- 1) The rest time available is not always sufficient for physical recovery.
- 2) Fatigue has the potential to affect concentration and alertness while working.

Although no significant work accidents were found during the study period, these fatigue conditions have the potential to increase work safety risks.

3. Documentation Data

The documents analyzed included crew lists, ABK job descriptions, watch schedules, records of hours of work and rest, and ship log books, demonstrating administrative compliance with the provisions of the MLC 2006 regarding the regulation of ABK work and rest hours, with well-documented routine recording. However, matching with field observations revealed discrepancies, where additional activities such as loading and unloading were not fully reflected in the data, so the documents do not reflect the actual crew workload. The documents also confirm the availability of PPE, safety equipment, and the regular implementation of safety meetings and drills, although triangulation with observations and interviews is needed to ensure full objectivity regarding the implementation of crew responsibilities.



Fig 4. Complete PPE for ABK

However, in practice in the field, several problems were found, including:

- 1) The use of PPE by some ABK is not consistent, especially in routine work.
- 2) Some crew members have the perception that PPE is only necessary for certain high-risk jobs.

This condition shows that the implementation of occupational safety has not fully become a work culture that is inherent in all ABK.

Data analysis

Data analysis was conducted continuously during a 12-month sea practice on MV Meratus Kalabahi owned by PT Pelayaran Meratus Line, integrating observations, interviews, and documentation to evaluate the implementation of crew responsibilities towards MLC 2006, with a focus on work/rest hours, K3, and complaint mechanisms. Normatively, the ship has provided a systematic schedule, safety equipment, and written complaint procedures in accordance with MLC 2006 Regulation 2.3 (max. 14 working hours/24 hours or min. 10 hours of rest/day), but in-depth observation revealed inconsistencies during intensive loading and unloading and berthing of the ship, where the workload exceeded the limit for smooth operations.

Routine administrative records follow procedures, but do not reflect actual conditions such as crew dual duties, which was confirmed by interviews where crew considered it a professional responsibility even though it sacrificed the minimum rest of 77 hours/week (MLC Standard A2.3). This recurring phenomenon indicates a normative-practice gap due to operational situational factors, requiring adjustment of manning levels (Regulation 2.7) and actual supervision to maintain vigilance and prevent fatigue.

Table 2. Problem Aspects Found on Board the Ship

No	Observed Aspects	MLC 2006 Provisions	Factual Conditions in the Field	Influencing Factors	Impact
1.	Working Hours & Breaks	Maximum working hours and minimum rest hours	Exceeding the limit under certain conditions	Busy schedule & intensive loading & unloading	Potential for work fatigue
2.	Guard Schedule	Systematically arranged and documented	Adapted when operational conditions are urgent	Limited time to dock	Additional working hours
3.	ABK Workload	Proportional according to position	Increases significantly when the port is busy	Intensity of activity	Decreased quality of rest
4.	Working Hours Recording	Mandatory and documented	Noted but does not always reflect the exact conditions in the field	Administrative adjustments	Normative-practical gap

Structurally, MV Meratus Kalabahi has provided complete PPE such as helmets, gloves, safety shoes, and work vests, supported by regular safety meetings that demonstrate formal compliance with the K3 provisions in MLC 2006 Regulation 4.3 (health and safety). However, field practice reveals inconsistencies in the use of PPE: compliance with high-risk tasks, but often neglected for routine work considered low risk, influenced by the habits and perceptions of ABK as confirmed by interviews. This condition reflects formal compliance that has not yet been transformed into a comprehensive safety culture, potentially increasing the risk of long-term work accidents due to a lack of discipline and intrinsic awareness of the crew.



Fig 5. Safety meeting and Complaints

Furthermore, regarding the complaint mechanism, the ship has a formal procedure in place that complies with the provisions of the 2006 MLC. This procedure allows crew members to submit complaints without fear of retaliation. However, observations and interviews indicate that this mechanism is rarely used formally. Crew members prefer to resolve problems directly through informal communication with officers. This situation indicates that the existence of a formal system does not necessarily guarantee its effectiveness. The work culture on board, which emphasizes hierarchical relationships and direct communication, is a major factor in the low use of the written complaint mechanism.

Table 3. Findings Related to Occupational Safety and Complaints

No	Aspects Analyzed	Normative Provisions	Conditions in the Field	Causative factor	Implications
1.	Use of PPE	Must be used according to procedure	Not consistent in routine work	Habits & risk perception	Safety culture is not yet strong
2.	<i>Safety Meeting</i>	Held periodically	Implemented according to schedule	Procedural compliance	Formal running system
3.	Complaint Mechanism	Procedures are available and documented	Rarely used in writing	Informal culture & minimal socialization	Protection is not yet optimal
4.	Problem solving	Through official channels	More often informal	Work hierarchy	Poorly documented

Through this entire analysis, it is clear that the implementation of the 2006 MLC on board ships has been carried out both normatively and administratively. However, implementation in the field is heavily influenced by operational dynamics, workloads, and the prevailing work culture on board. The problems identified lie not in the absence of regulations, but rather in adapting practices to situational demands. Overall, this analysis indicates that the implementation of the 2006 MLC is at a fairly good stage, but still requires strengthening in terms of consistency of implementation. Improving oversight of working hours, establishing a stronger safety culture, and more effective outreach regarding crew protection mechanisms are important steps to achieving a more optimal and sustainable implementation of the 2006 MLC.

Discussion

This discussion interprets the results of research on the implementation of Crew (ABK) responsibilities on board ships based on the provisions of the Maritime Labor Convention (MLC) 2006. The discussion is conducted by linking the results of the Miles and Huberman model data analysis with real conditions in the field during sea practice on the MV Meratus Kalabahi operated by Meratus Line. Based on the research results obtained through direct observation on board the ship and interviews with the Crew (ABK), it can be seen that the implementation of ABK responsibilities has in principle been carried out in accordance with the ship's organizational structure and the division of tasks based on their respective positions. ABK carries out operational responsibilities such as sea watch duties, preparation and implementation of ship maneuvers, container loading and unloading activities, as well as daily ship maintenance and cleaning work in accordance with superior orders and applicable procedures. In relation to the Maritime Labor Convention (MLC) 2006, the implementation of these responsibilities has referred to the provisions regarding the adequacy of manning, occupational safety and health, as well as the regulation of ABK work hours and rest hours. Administratively, the ship also has the required documents, thus indicating an effort to implement the MLC 2006 in the implementation of ABK duties on board the ship. However, the research results show that in certain operational practices, the implementation of crew responsibilities has not been fully implemented optimally in accordance with the principles of MLC 2006.

This condition is particularly evident when the ship is carrying out container loading and unloading activities, ship maneuvers in port, and carrying out daily work when the ship is berthed. The limited number of crew, especially on deck, causes double jobs, where an AB must carry out more than one job at the same time, such as being involved in lashing and unlashng containers while still carrying out watch duties or preparing for maneuvers. This situation results in an increased workload and reduced rest time for crew, thus potentially causing work fatigue and increasing the risk of work accidents on board the ship. These issues indicate obstacles in the implementation of the Maritime Labor Convention (MLC) 2006, particularly those related to Regulation 2.7 concerning adequate manning and Regulation 2.3 concerning working hours and rest hours. Although crew members continue to strive to carry out their responsibilities professionally to

ensure the smooth operation of the ship, the lack of crew members means that the balance between work responsibilities and the fulfillment of crew members' rights has not been fully met. Therefore, the main problem in implementing the MLC 2006 on board ships lies not in the crew's lack of understanding of their responsibilities, but rather in the limited number of crew members, which directly impacts the implementation of these responsibilities. This emphasizes the need for an evaluation of the number of ship crew members so that the implementation of the MLC 2006 can run effectively and sustainably.

IV. CONCLUSION

This study found that the implementation of Crew Member (ABK) responsibilities on board the MV Meratus Kalabahi was administratively in accordance with the 2006 Maritime Labor Convention (MLC), including recording work/rest hours, availability of PPE, and formal complaint procedures. However, field practice showed significant discrepancies, particularly during container loading and unloading and ship maneuvers, where limited deck crew led to duplicate tasks, work fatigue, and inconsistent use of PPE due to low risk perception. Grievance mechanisms were also rarely utilized due to a preference for informal communication, reflecting a gap between normative and operational realities influenced by a hierarchical work culture. However, the study's limitations lie in its sole focus on a single domestic vessel and a 12-month period, thus limiting generalizability and not encompassing financial aspects or international vessels. Practical implications include recommendations for adjusting manning levels, actual monitoring of rest hours, and safety culture training for shipping companies. Future research is recommended to explore internationally flagged vessels or compare multiple fleets with a quantitative approach for broader validation.

REFERENCES

- [1] Annas, R., Dwi, A., Rizqy, S., Rakhman, A., Agus, A., Santoso, D., Prayitno, Rizqy, Saipul, Subakti, I., Rizki, & Pratama, A. (2024). Improving maritime logistics human resources with trust strength training. National Seminar on Transportation and Safety, 1.
- [2] Arleiny, A., Wulandari, DA, Putri, IAJ, Firdaus, MI, & Lawangi, MN (2021). Optimizing the implementation of the MLC (Maritime Labor Convention) on board the KM Bukit Siguntang. *Dinamika Bahari*, 2(2), 125–130.
- [3] Bungin, B. (2015). *Qualitative research methodology*. PT RajaGrafindo Persada.
- [4] Creswell, J. W., & Poth, C. N. (2021). *Qualitative inquiry and research design: Choosing among five approaches* (5th ed.). SAGE Publications. <https://doi.org/10.1007/978-3-030-16347-0>
- [5] Devi, RA, & Purba, JT (2023). Challenges in implementing MLC 2006 in Indonesian shipping. *Journal of Maritime Affairs*, 22(1), 45–62. <https://doi.org/10.1007/s13437-022-00285-4>
- [6] Emzir. (2021). *Qualitative research methodology: Data analysis techniques*. Rajawali Pers.
- [7] ILO. (2022). *Maritime Labor Convention, 2006: Consolidated 2022 updates*. International Labor Organization.
- [8] ITF Seafarers. (2022). *Seafarers' rights and welfare: Annual report*. International Transport Workers' Federation.
- [9] Ministry of Transportation of the Republic of Indonesia. (2023). *National shipping safety report 2022*. Directorate General of Sea Transportation.
- [10] Koceja, D., et al. (2022). Fatigue management under MLC 2006: A global review. *Safety Science*, 150, Article 105712. <https://doi.org/10.1016/j.ssci.2022.105712>
- [11] Manuel, M.E. (2021). Human factors in ship safety: A review. *Marine Policy*, 132, Article 104678.
- [12] Moleong, LJ (2010). *Qualitative research methodology (Revised ed.)*. PT Remaja Rosdakarya.
- [13] Nasution, S. (2003). *Qualitative naturalistic research methods*. Tarsito.
- [14] Romanda. (2024). *Trust in maritime crew dynamics*.
- [15] Sugiyono. (2013). *Quantitative, qualitative, and R&D research methods*. Alfabeta.
- [16] Sudaryono. (2022). *Qualitative & quantitative research methods for librarianship & library research*. Student Library.
- [17] Tseng, S.-M., & McLean, G. N. (2021). Knowledge sharing self-efficacy in high-risk industries. *Human Resource Development International*, 24(4), 456–473. <https://doi.org/10.1080/13678868.2021.1928423>
- [18] UNCTAD. (2023). *Review of maritime transport 2023*. United Nations Conference on Trade and Development.
- [19] Wahana, IM (2009). *Basic programming*. Andi Publisher.
- [20] Yulianto, A., Hanik, K., & Salsa Nabila, L. (2023). Analysis of health qualification policies and manning standards on crew performance based on the implementation of MLC 2006. *Journal of Maritime Transportation Science and Technology*, 5(1), 8–14. <https://doi.org/10.51578/j.sitektransmar.v5i1.60>