



## Optimization Of The Crew In The Implementation Of The Guard Service To Prevent The Occurrence Of Collision Hazards in KM. TL-IX

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### Abstrak

*Officer has an important role in processing the motion of the ship when sailing to avoid things that are not desirable to avoid the dangers of collision. Formulation of the problem taken by the author in this thesis is the implementation of the guard service to prevent the occurrence of collision hazards in KM.TL-IX optimization of the use of navigation tools to prevent the occurrence of collision hazards. With qualitative research methods that produce descriptive data, the implementation of the guard service can be described clearly and concretely because the data obtained from direct interviews and supported by library methods that provide a clearer picture of a clearer picture of the information presented. The results obtained by the author during the research is the implementation of the guard service on the ship that has not been done properly because Mualim II undisciplined in carrying out guard duty, lack of attention and sense of responsibility of the Guard officer when carrying out guard duty on the bridge and the use of navigation tools that are not optimal. Discussion of the results of the study is the optimization of guard duty must be applied in accordance with STCW 1978 as amended in 2010, Mualim should also be guided by the Collision Regulation 1972 in the face of situations that allow the danger of collision. The use of navigation equipment as a detection of collision hazards should be able to produce maximum results for the Prevention of collision hazards and to avoid emergencies. In this case, it is concluded that the distribution of guard duty on board KM.TL-IX has been in accordance with regulations set internationally but in practice there are irregularities because the Mualim II is not responsible when carrying out his guard duty, a sense of lack of attention of the Guard officer during the bridge guard service and the use of navigation tools that are less than optimal by the mualim cause the results obtained are not optimal. The advice of the author is a senior Mualim should set an example to other mualim in the implementation of the guard service on schedule and must be carried out in a disciplined manner and the captain and the Mualim must have skills in operating navigation equipment.*

*Keywords: collision hazard, optimization of guard service, navigation.*

### 1. Introduction

In the implementation of the Marine guard service when the ship is sailing, concentration, accuracy, high responsibility in carrying the ship and skills as a good sailor in decision making are needed. Therefore, the Guard commander as a substitute for the captain, is fully responsible at all times during his duty hours for the safety of the ship and complies with Collision Regulation 1972 and Regulation II/1 of STCW 1978 as amended in 2010.

In carrying out its duties and responsibilities, a Mualim who is carrying out the Guard service must collect information in support of his guard duty, such as weather conditions, sea



conditions, shipping traffic conditions, navigation equipment conditions, navigation hazards that exist in shipping lanes and so on. This is done so that during carrying out the guard service can take the right, effective and efficient decisions if experiencing things that become obstacles during the voyage, such as when entering waters that are in the traffic of other ships. As for the efficient implementation of the guard service, the mualim must be sure that all visual early warning takes place in the existing situation, including the presence of ships and signs from the mainland, continuous observation and observation by laying down to other ships that have the potential or risk of collision. as well as observations of navigation tools such as Radar and AIS (automatic identification system) to determine the circumstances around the ship. Things like this must be done periodically during the guard service and have an important role in processing the motion of the ship when the ship sails to avoid unwanted things, especially the danger of collision, where lately we often hear about cases that occur in the maritime world, especially regarding ship collisions. As the author experienced at the time of carrying out the practice of sailing on board KM. TL-IX. At that time the author was carrying out the guard service on the KM.TL-IX ship which almost collided with another ship while sailing from Bengkulu to Padang on March 22, 2022 at the mualim II Guard Service hour, with initial allegations caused by lack of communication between the KM.TL-IX crew with other ships in front.

## 2. Research Methods

Research is a step that is used in a planned and systematic manner, in order to get problem solving or answers to certain questions. A research method is defined as a mode of research to obtain data with a specific purpose and usefulness. The type of research method used by the author in conveying the problem is descriptive qualitative, to describe and describe the object under study. As for what is meant by descriptive here is the data collected in the form of words, images and not numbers so that it cannot be calculated. Qualitative research is research that is used to examine human and social problems where researchers will report from the results of research based on data views and data analysis reports obtained in the field, then described in a detailed research report. Sources of data needed and used in the preparation of scientific papers this research is the information obtained by the author through direct observation of the object under study and the information obtained by the author through the internet and journals related to this research.

## 3. Results And Discussion

### a. Overview Of Research Sites

The history of PT. Tonasa Line

PT. Tonasa Line was originally a company located at Jalan poros pelabuhan biringkassi which is part of PT. Biringkassi Raya. But over time PT. Tonasa Line is one of the shipping companies based on notarial deed no.61 dated February 8, 1989, which subsequently underwent changes no.4 dated november 2, 1989 signed and ratified by the minister of justice and published in the state gazette of the Republic of Indonesia no.104 dated December 29, 1992. At this time PT. Tonasa Line is one of the leading cement transportation shipping company in Indonesia under the company PT. Semen Tonasa, which is incorporated in the apliasi group company, in its existence as a partner of PT. Semen Tonasa, especially in the distribution of cement and coal transportation until this year Tonasa Line has been able to have cement and coal transportation ships which as a whole reach 25 units of ships which are all operated at Biringkassi port.



## b. Ship background KM. TL-IX

Ship KM. TL-IX is one of the fleet of ships owned by PT. Tonasa Line, located at jl kapten pahlawan laut no.5 mop shafts. Biringkassi pangkep South sulawesi. In accordance with the author's place of research that is at the time of carrying out the practice of sailing on the ship KM.TL-IX. for a general description of where the research site is conducted researchers will attach the data of the ship that is used as a place of research.

### Ship Particular of KM TL – IX

Nama Kapal	: KM. TL IX
Hull No	: 2001 Lla No.2380/L
Call Sign	: Y G O E
I M O	: 7375375
Flag / Register	: Indonesia / Makassar
Type Kapal	: Cement Bulk Carrier
Bulder	: Oshima Dock Co. Ltd Japan
Klasifikasi	: B K I
Maksimum Draft	: 7.10 M
Depth (Mld)	: 6.109 M
D W T	: 3850 Ton
L O A / L B P	: 83.35 / 78.336 Meter
Breadth (Mld)	: 14.40 Meter
G R T / N R T	: 2294 / 1249
Loading Rate	: 300 Ton/Jam
Un Loading Rate	: S U.150 Ton/Jam
Loading System	: By Air Slide
Un Loading System	: Belalai, 300 Ton/Jam
Cargo Compressor Type	: Kaishan Lgcg_54/4,5
Navigation Equipment	: Auto Pilot,Radar,Giro Kompas,Gps,Ais & 2 Pcs Radar Transponder
Safety Equipment	: 2 Pcs Life Boat 25 Person, 2 Pcs Life Raft 20 Person, 26 Pcs Life Jacket, 6 Pcs Life Bouy
Communication Equipment	: Furuno Vhf, Telepon Fm8500 Mhz, Icom Ic 718, 1 Vhf lcm
Fresh Water Tank Capacity	: 72.60 Ton
Ballast Tank Capacity	: 708 M/T
Fuel Oil Tank Capacity	: 127 M/T
Speed	: Max 10.0 Knot
Crew Accomodation	: 22 Person

## c. Research Results

### Observation result Data

On March 22, 2022, the author was carrying out the guard service on the bridge aboard KM.TL-IX and there was an emergency because KM.TL-IX almost experienced a collision with another ship while sailing from Bengkulu to Padang due to lack of communication between KM.TL-IX crew members with the ship. At that time the latitude and longitude position of the ship on the map was adalah 01°33'500LS 100°43'401" BT .The incident occurred at night precisely at 03.00 when the guard service hours 00.00-04.00 where the



clock officer in charge is the second officer / mualim 2 and other Guard personnel are helmsman 2 and cadets prala. At that time the bow of the ship 307° and the bow of another ship 167° so that it is estimated that there will be a cross situation that will result in a collision hazard. Before such a situation occurs, mualim / Guard officers due to early entry and physical conditions that have been sleepy and lack of mobile observations made during the guard service. Other Guard personnel do not understand what their duties and responsibilities are in the guard service when the ship is sailing. Guard officers began to notice the ship approaching the ship KM. TL-IX at the time of seeing the condition of the means of navigation that is AIS and conditions at that time the distance between the ship KM. TL-IX with other ships is close that is about 1-2 miles and the next step is done by the mualim through radio contact via VHF radio, when the radio in the position of channel 16 and no response from other ships at the time of communication, because the position is close to the ship and the mualim consider everything to avoid the ship, mualim gave direct orders to the helmsman as the holder of the steering wheel to process the motion of the ship to the left with the left cekar steering due to the conditions of the incident occurred at night and the other ship is clearly visible light position is a green light and true enough in a short time the ship passed in the right hull of the ship with a very close After that, the ship returns to its normal position to continue the destination route. The incident became a lesson for the Guard commander and other Guard personnel to always carry out periodic mobile observations to ensure that the situation around the ship is in safe condition and monitor navigation aids to detect the presence of other ships around and be more responsible when carrying out the guard service, especially during the curfew, which is to prepare everything.

#### d. Discussion

On March 22, 2022 when the ship sailed from Bengkulu to Padang, the position of the ship was 01°33'500LS 100°43'401" BT at 03.00 WIB KM. TL IX almost suffered a collision with another ship whose identity is unknown. The Guard personnel on the bridge at that time were Mualim 2, helmsman 2 and Cadet. Before the incident, the ship KM. TL IX with a bow of 307° (T) and there is another ship with a bow of 167° (T) is in front of the left of the ship KM. TL IX. The crew of the ship carrying out the guard service at that moment did not notice the presence of another ship in front of her left. The Guard commander was also sleepy and fell asleep on the bridge, while other Guard personnel also did not carry out roving observations properly because they did not understand their duties and responsibilities in carrying out the guard service when the ship sailed. Their presence only complements the guard formation so as not to carry out mobile observations. Guard officers began to notice the ship approaching the ship KM. TL-IX at the time of seeing the condition of the means of navigation that is AIS and conditions at that time the distance between the ship KM.TL-IX with other ships was close that is about 1-2 miles and the Guard commander made radio contact via radio VHF channel 16, but there was no response from other ships in front of the left KM. TL IX. Because the position was close to the ship and the Guard commander considered everything to avoid the ship, the Guard commander gave direct orders to the helmsman to change the course of the ship to the left with the left cekar steering and visible lighting of the hull of the other ship the position of the lights that are clearly visible is a green light and the ship passed on the right Hull with a very close distance estimated at 0.5 cable.

This is clearly contrary to the rules of p2tl Rule 5 circumnavigation which states that every



ship must ALWAYS hold a proper circumnavigation with sight and hearing and use all available equipment in the circumstances and conditions that exist, so as to take into account the situation and the danger of collision. From this rule it is clear that Guard personnel on the bridge must carry out mobile observations both by sight and hearing and with available equipment such as Radar and AIS in KM. TL IX. The actions of the Guard commander who falls asleep while carrying out the guard service also clearly contradict his duties and responsibilities as a guard officer as in Chapter VIII, Section a-VIII/2, part 4 – guard service at sea in the implementation of the navigation Guard service that the Guard officer must be responsible for the safety of ship navigation. In this case the duty officer as a substitute for the skipper in maintaining the safety of the ship while navigating. This undisciplined attitude can lead to huge losses. In addition, this attitude does not reflect good seafaring habits as stated in Rule 2 P2TL. Good seafaring habits generally mean expertise and knowledge of the job of navigating, maintaining and operating a good ship. Good seafaring habits are the result of the good attitude of a merchant ship officer in carrying out his duties and responsibilities while working on board. Coordination between Guard personnel is also less than optimal, The Guard commander should provide clear instructions and provide training to other Guard personnel what to do when carrying out the guard service during the sailing ship.

For this reason, in carrying out the guard service on the bridge when the ship is sailing, the Guard personnel consisting of the Guard officer and the helmsman must carry out a good circumnavigation as a good sailor, using both sight and hearing and with existing equipment. Good coordination must also be established between Guard personnel, giving each other what information is seen and heard during the guard service. Complying with the rules and procedures of good care will result in good operation of the ship, especially in achieving safety objectives in shipping. Salvation is for all things, namely the salvation of the ship, the salvation of the people on board, the salvation of the ship's cargo and the salvation of the environment. The crew must also increase knowledge in terms of ship safety during sailing, especially in carrying out the guard service. The captain and the officers must carry out training on board to other crew members about the implementation of good and correct. Guard service so that they can take the right, effective and efficient decisions if they encounter problems during the guard service.

#### **4. Closing**

##### **a. Conclusion**

Based on the results of research and discussion of the problem, the authors draw conclusions :

- 1) Implementation of the guard service on the bridge when the ship sailed in KM. TL IX still needs improvement in terms of discipline, coordination between Guard personnel and understanding of the duties and responsibilities of Guard personnel in the guard service when sailing ships.
- 2) To prevent the occurrence of collision hazards at sea, training should be held on board the rules of collision prevention at sea and understand the procedures that have been established.

##### **b. Suggestion**

Based on the results of the study can be proposed the following suggestions:

- 1) Duty personnel consisting of duty officers and helmsmen shall conduct



circumnavigation as well as a good Seaman, using both sight and hearing and with available equipment. Good coordination must also be established between Guard personnel, giving each other what information is seen and heard during the guard service. Complying with the rules and procedures of good care will result in good operation of the ship, especially in achieving safety objectives in shipping.

- 2) The crew must also increase knowledge in terms of ship safety during sailing, especially in carrying out the guard service. The captain and the officers can carry out training on board to other crew members about the implementation of good and correct Guard service so that they can take the right, effective and efficient decisions if they encounter problems during the guard service.

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