Evaluation of Procedures for Transportation and Tying of Vehicles Aboard Crossing Vessels at Galala Port Ambon, Maluku Province

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Abstract. The Galala Ferry Port is in Ambon, Maluku Province, managed by PT. ASDP Indonesia Ferry (Persero) Ambon branch. The Galala Ferry Port serves the Galala – Namlea route which is served by 2 ships, namely KMP Wayangan and KMP Garda Maritim 5 with a speed of 10 knots. The Galala-Namlea route takes 8-10 hours. The Galala-Namlea route has 1 sailing trip scheduled every day at 20.00 WIT. The Galala-Namlea route has characteristics of medium-high waves and a long distance of 85 nautical miles, so the procedures for transporting and attaching vehicles need to be considered. Therefore, qualitative research was carried out using observation, interview, measurement, research methods. Based on the results of the analysis of problems at the Galala Ferry Port and KMP Wayangan as well as KMP Garda Maritim 5, several problems were still found, such as no weigh bridges available, the height distance between vehicles and sprinklers was not a safe distance, 2-wheeled vehicles were placed transversely, the vehicle loading space was not yet sterile. passengers during a cruise, the vehicle distance does not comply with the regulations, and the vehicle fastening does not comply with the regulations. Therefore, it is necessary to evaluate port and ship operators regarding the procedures for transporting and fastening vehicles so that they comply with Minister of Transportation Regulation Number 115 of 2016, Minister of Transportation Regulation Number 30 of 2016, and Minister of Transportation Regulation Number 103 of 2017.

Keywords: Ports, Ferrying Vessels, Freight, Tying

1. Introduction

Transportation is an important element in the development of a country, where transportation is one of the bases for developing the economy and development of society as well as the growth of industrialization. The development of transportation will encourage economic activities and development in a region or country (Fatimah, 2019). There are various modes of transportation operating in Indonesia, land, water and air transportation. One of the modes of water transportation in Indonesia is Inland water and ferry transportation. Ferry transportation is very important transportation for people in Indonesia, especially in Maluku Province because most of its territory is water with a water area percentage of 92.40% (Sihaloho, H. & Jinca, M., 2019). The importance of ferry transportation in Maluku,

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especially Ambon City, requires ferry boat operators to continue to improve the quality of service, safety and security of ferry transportation for both passengers and vehicles and their cargo. One effort to maintain safety and security for vehicles and their cargo is good procedures for transporting and tying vehicles.

Tying up vehicles is very important because it aims to prevent collisions between vehicles, loss of balance of vehicles on board, and not disrupt the stability of the ship so that shipping safety and security is guaranteed, especially when facing extreme weather (Raharjo, 2020). Like the Galala-Namlea crossing which has wave heights that tend to have medium-high waves with wave heights of 1.5-4 m. Apart from that, the Galala-Namlea route is a long-distance voyage with a distance of 85 miles which takes 8-10 hours of sailing. That way, transportation and fastening procedures need to be paid attention to so that accidents do not occur. Even though the procedures for transporting and tying vehicles are very important, there are still ship operators who do not pay enough attention to them. One example is the ferry accident reported in Detik.com (2022), namely 2 cars that overturned on KMP Raja Dilaut on February 21 2022, which was caused by high waves due to bad weather and the failure to tie up the vehicles.

Currently, the procedures for transporting and fastening vehicles on boarding vessels are regulated in Minister of Transportation Regulation Number 115 of 2016 concerning Procedures for Transporting Vehicles on Ships, Minister of Transportation Regulation Number 30 of 2016 concerning Obligations for Tying Vehicles, and Minister of Transportation Regulation Number 103 of 2017 Regarding the Regulation and Control of Vehicles Using Ferry Transport Services. This regulation aims to improve the governance of ferry transportation regulations so that it can improve service quality, transportation security and safety (Directorate General of Land Transportation, 2016).

2. Research Methodology

The type of research carried out is qualitative research. According to Hardani, et al (2020), qualitative research methods are research methods that focus on scientific research by describing and understanding the symptoms and facts that exist in the research object. After the data is obtained, the data will be analyzed by comparing the existing conditions at the research location with the applicable regulations. After that, the results of the analysis regarding the object under study are described in a descriptive manner so that efforts can be made to ensure that the thing being studied complies with applicable regulations. To carry out this research, data sources are needed, namely primary and secondary data.

Primary data is data obtained or collected directly in the field by the person

conducting the research or the person concerned who needs it. Primary data is obtained from informant sources, namely individuals, such as the results of field observations, interviews, surveys and documentation. Secondary data is data obtained or collected by people conducting research from existing sources. This data is used to support primary information that has been obtained, namely from library materials, literature, previous research, books, and so on. Secondary data was obtained from parties, including: BPTD Class II of Maluku, Galala Ferry Port Service Unit, Maluku Province Central Statistics Agency, Ship Operator

3. Analysis and Discussion

3.1 Analysis of Vehicle Portal Availability at Ports

From the results of the survey that has been carried out, it is known that the vehicle portal facilities at the Galala Ferry Port are in accordance with the regulations because a portal with a height of 3.5 m has been provided which is adjusted to the deck height of KMP Wayangan which is 3.8 m high and KMP Garda Maritim 5 which is 4 high. 5m This is in accordance with the applicable regulations but needs to be analyzed further regarding the height distance of vehicles transported on the KMP Wayangan because the distance between the height of the vehicle and the sprinkler is too close together so it can impact the performance of the sprinkler on the KMP Wayangan.

3.2 Analysis of the Availability of Weigh Bridges at Ports

From the results of the survey carried out, the Galala Ferry Port does not have a weigh bridge. The weighbridge is not available at the Galala Ferry Port resulting in the unknown weight of the cargo and vehicles to be transported on board the ship. with the weight of the cargo and vehicle not being known, the vehicles carried on the ship are only arranged based on vehicle class where class V vehicles and above are placed at the stern to the middle of the ship and class IV and 2-wheeled vehicles are placed at the bow of the ship.

3.3 Analysis of the Cleanliness of Vehicle Loading Spaces on Ships from Oil and Grease

From the results of the survey carried out on board the ship, it was discovered that the cleanliness of the vehicle loading space from oil and grease was in accordance with the regulations. After the ship docks and unloads, officers routinely clean the vehicle's loading space. There are only a few puddles of water caused by sea water

from waves or rainwater falling in the vehicle loading space. The cleanliness of the vehicle loading area is very important so that no vehicle or passenger slips. So that the vehicle loading space is always clean, it is necessary to carry out routine cleaning of the vehicle loading space as usual. The ship's crew can take turns cleaning the vehicle loading space when the ship is not operating or docked at the port.

3.4 Analysis of Vehicle Placement on Ships

From the results of the survey carried out on board the ship, it was discovered that 2-wheeled vehicles were still placed not in accordance with the regulations, namely transversely, due to maximizing vehicle loading space. There are 2-wheeled vehicles that are loaded first so they are placed at the stern longitudinally. Then the 4-wheeled vehicle started to be loaded. After completing the loading of the 4-wheeled vehicle, the 2-wheeled vehicle that has not been loaded will be loaded and placed at the bow of the ship. It is at the bow that 2-wheeled vehicles are loaded transversely to maximize the remaining vehicle loading space so that all remaining 2-wheeled vehicles can be loaded on the ship. Two-wheeled vehicles that are placed crosswise can result in the loading and unloading process of the vehicle taking longer because it takes more time to turn the vehicle when it is loaded and when it is about to get off the ship. Two-wheeled vehicles should be placed in such a way that they can be placed longitudinally in the direction of the bow and stern of the ship so that the loading and unloading process of vehicles on the ship can run smoothly.

3.5 Analysis of Vehicle Height Distance to Sprinklers

From the results of the survey carried out on board the ship, it was discovered that at KMP Garda Maritim 5 the distance between the height of the vehicle and the sprinkler was in accordance with the regulations because it had the closest distance of 1 m, while at KMP Wayang it was not appropriate because it had the closest distance of 30 cm. This results in the sprinkler not being able to work optimally when a fire occurs because the water distribution is covered by the top of the vehicle.

3.6 Analysis of Vehicle Distances on Ships

From the results of the survey carried out on the ship, it was discovered that the distance between vehicles on the ship was not in accordance with the applicable regulations because the distance between the sides of the vehicle was less than 60 cm and the front and rear distance between vehicles was not in accordance with the regulations because the distance was less than 30 cm. However, the distance be-

tween the side of the vehicle and the ship's wall is in accordance with the applicable regulations because the distance is more than 60 cm, although there is still a distance of less than 60 cm but it is not too significant.

3.7 Analysis of the Sterility of Vehicle Loading Spaces for Passengers During Shipping

From the results of the survey carried out on board the ship, it was still found that passengers were in the vehicle loading area or in the vehicle because the drivers did not have a bed so the drivers chose to rest in their respective vehicles. This is dangerous for passengers during an emergency because it is difficult to evacuate and save themselves because the passenger safety equipment is in the passenger compartment. Therefore, firmness is needed from the ship operator to reprimand passengers who are in the vehicle loading area when the ship is about to depart. In addition, ship operators can maximize passenger space for drivers without disrupting roads or evacuation routes so that drivers do not need to rest in the vehicle

3.8 Analysis of the Implementation of Vehicle Attachment on Ships

From the results of the survey carried out on the ship, it was discovered that all 4-wheeled vehicles on the ship had been tied up. However, referring to Minister of Transportation Regulation Number 115 of 2016 Article 18, the number of lashings used on ships is not in accordance with regulations because they are only tied to one side of the outermost part of the vehicle and the ones in between are tied together as one unit. This is also influenced by not knowing the gross weight of the vehicle so that it is not possible to determine the number of lashes appropriate to the weight of the vehicle. As a result, vehicle lashing is not carried out optimally, which can endanger the safety and security of the vehicle and cargo as well as the stability of the ship.

3.9 Analysis of the Number of Vehicle Fasteners on Ships

From the results of the survey carried out on board the ship, it is known that KMP Wayangan and KMP Garda Maritim 5 have provided vehicle straps of the Ratchet Strap Assembly type. However, the vehicle straps on the ship are not fully used because the vehicle is only tied to one side of the vehicle on the outermost part and the ones in between are tied to each other. In fact, there are quite a lot of vehicle tie-down straps provided, namely 50 units at KMP Wayangan and 64 units at KMP Garda Maritim 5, but their utilization is not optimal.

3.10 Analysis of the Number of Vehicle Fasteners on Ships

From the results of the survey carried out on board the ship, it is known that KMP Wayangan and KMP Garda Maritim 5 already have vehicle tie-down officers who are carried out by ship crew members with the positions of attackman, deckhand, helmsman or oilman. There were 4 officers who carried out the tying during the loading of the vehicle. With a total of 4 bonding officers, vehicle binding can be completed quickly and optimally.

4. Conclusion

The existing condition of the procedures for transporting vehicles on ferry boats at Galala Port, Ambon City, Maluku Province is still not in accordance with Minister of Transportation Regulation Number 115 of 2016 and Minister of Transportation Regulation Number 103 of 2017. This can be seen from the weigh bridges that have not been provided at the Port. Galala crossing, vehicle height distance with sprinklers above KMP Wayangan which does not meet the safe distance, 2-wheeled vehicles which are placed transversely, vehicle loading space which is not sterile from passengers during the voyage, distance to the side of the vehicle is less than 60 cm, and distance to the front side and the rear of the vehicle is less than 30 cm. However, The conditions for implementing vehicle tie-downs on ferry boats at Galala Port, Ambon City, Maluku Province are quite good because sufficient vehicle tie-down equipment and vehicle tie-down officers have been provided. However, there are still aspects that are not in accordance with Minister of Transportation Regulation Number 115 of 2016, such as the use of vehicle fastening devices based on vehicle weight that are not appropriate and the vehicle wheel chocks do not use vehicle wheel clamps but rather wooden blocks.

Several efforts that need to be made so that the procedures for transporting vehicles and fastening vehicles on ferry boats at Galala Harbor, Ambon City, Maluku Province can comply with applicable regulations are by providing a weighbridge at Galala Ferry Harbor, adjusting the maximum height of vehicles that can be transported on KMP Wayangan. , placing two-wheeled vehicles longitudinally towards the bow and stern, strictly appealing to passengers not to be in the vehicle loading space during the voyage, and arranging the vehicle distance in such a way as is in accordance with the regulations, and tying the vehicle with the number of tie-down devices according to the weight of the vehicle.

A weighbridge should be provided at the Galala Ferry Port so that weight and type of cargo can be verified before vehicles purchase tickets. Then, the height of the vehicle portal can be adjusted to a safe distance between the vehicle height and the sprinkler above the KMP Wayangan, namely 3.34 meters. Ship operators should place 2-wheeled vehicles longitudinally towards the bow and stern of the

ship, consistently clean the vehicle loading space from oil and grease, strictly supervise and encourage passengers or vehicle drivers in the vehicle loading space to move to the passenger loading space, arrange The distance between vehicles is according to the regulations, namely the side distance between vehicles is 60 cm, the front and rear distance between vehicles is 30 cm, and the distance between vehicles and walls is 60 cm.

Ship operators should tie the vehicle according to the weight of the vehicle, namely tying it with 4 tie-down tools for vehicles weighing 3.5-20 tons, 6 tie-down tools for vehicles weighing 20-30 tons, and 8 tie-down tools for vehicles weighing 30-40 tons. tons. Then, ship operators are required to provide a sufficient number of vehicle tie-down equipment, namely a minimum of 48 units at KMP Wayangan and 56 units at KMP Garda Maritim 5. Ship operators must also provide a sufficient number of officers, namely 2-4 vehicle tie-down officers which can be adjusted to loading times. vehicle. Apart from that, officers can improve their competence in carrying out the transportation and fastening of vehicles on ferry boats at the relevant educational institutions so that the transportation and fastening of vehicles can be better.

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