

Conference Paper

Increased Safety for the Community when Using Ferries Transportation

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Abstract

Ferries transportation is transportation that can connect one area to area two, or we can call it a bridge. As a bridge whose function is to connect, of course many people will take advantage of ferries transportation. Due to the large number of people who use ferries transportation optimally, the needs of the users must take precedence. Virtue for Society is a factor of Safety and Comfort. Activities in optimizing community safety are carried out by means of research looking for data from one or more existing data, there is an analysis of the data obtained. In an effort to find solutions to existing problems, research research is carried out that is looking for related data and comparing it with cases that have occurred.

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1. Introduction

Today, Indonesia's geographical condition as a country with many islands has its own advantages and difficulties. In 2004, there were reports from governors and mayors about the islands of Indonesia. Based on the report, there are 2,870 named islands and 9,634 unnamed islands. amount these are still at the national data level and have not been officially reported to the United Nations (UN). As for 2020, the validation and verification process for the remaining 88 islands. That way, the number of islands in Indonesia can be calculated accurately (Articles.rumah123.com/number-island-in-indonesia-and-explanation-history-location-and-the-extent-64427). We cannot deny that the many islands in Indonesia make it a little difficult for us to socialize directly with Sauradas and our families on the opposite island. Therefore, the creation of a means of ferries transportation as our bridge to other areas. From an economic perspective, ferries transportation is very important in supporting the economic activities of the community, the meeting point between people and the economy is like a wheel that is always turning. The important role of multi-functional ferries as a bridge can connect one area

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to another (Regulation Of The Minister Of Transportation Of The Republic Of Indonesia Number PM 104 of 2017 Concerning Operating Transportation Transport).

The motherland community are people who uphold a high relationship, with the presence of ferries transportation can improve the establishment of good communication. From an economic point of view, ferries transportation is very profitable considering that many small islands that have not been touched by the hands of modernization require staples that can support them.

Transportation Ferries is very functional in supporting the government's task in supporting the mobility of passenger and goods transportation to all corners of the archipelago. The mode of ferries transportation as part of the national transportation system has an important role in the national connectivity program that connects one island to another so that the distribution of goods and passengers can run smoothly, and the goal of realizing an equitable distribution of development that is sustainable and integrated and not centralized in one particular area.

This is in line with the Minister of Transportation's statement at an event at UNDIP in 2017, namely that the continuity of the availability of transportation services in all regions is an absolute must because the strategic function of transportation contributes to creating stability and continuity of community activities and wheels of government. Furthermore, it was also emphasized that the development of an integrated mode includes the development of ferry and roro vessels for easy access as well as a change in the distribution paradigm from land to sea.

The importance and strategic importance of ferries transportation services needs to be accompanied by measures to prevent and handle ship accidents in order to achieve a proper level of safety for passengers and goods. Ferries transportation in Indonesia needs to be improved from a safety aspect. Sea accidents that claim lives and property are still happening. The root cause has not been taken seriously so that danger always lurks users of ferries transport services. Recently, there has been a lot of attention from the public regarding the safety of ferry boats due to accidents that seem to have happened one after another in several places. Therefore, the safety aspect is the main requirement starting from the design (design) to the operation of the transportation mode. It takes the interaction of various related parties, both elements of the government, the private sector as well as the general public in achieving a high level of safety. The high number of ferry accidents at this time must be the concern of all related parties and the public takes an active role in supporting the creation of a safety system for ships and passengers and the goods transported.

2. Research Methods

It is said to be scientific research if it fulfills the elements covering. If the steps are owned and taken by the resource person in order to collect concrete data or information and investigate what has been obtained. The research method can provide an overview of the research design. In an effort to find solutions to existing problems, research is carried out that is looking for related data and comparing it with cases that have occurred. This research is assisted by written regulations which can then be applied properly and significantly. Legal research is a scientific activity, which is based on methods, systematics, and certain thoughts, which aim to study one or more legal phenomena by analyzing them. In addition, research also carries out an in-depth examination of these legal facts and then seeks a solution to the problems that arise in the symptoms concerned.

3. Results and Discussion

By implementing a strict and coordinated supervision system, safety in the shipping sector will be well maintained. If the people in charge of safety seem to close their eyes, safety will not be realized for the ferries passengers. In fact, in implementing ship safety, there is a need for increased security, such as, appropriate passengers to board the ship must be seen in correspondence, for example a ticket. With the condition that they carry cargo, be it a vehicle or cargo.

In Minister Regulation No. 25 of 2015 concerning River, Lake and Ferries Transportation Safety Standards (Minister Regulation No. 25 of 2015 concerning River, Lake and Cross Transportation Safety Standards) Article 1, namely:

1. Safety is a condition where safety requirements are met with regard to transportation in waters, at ports and in the maritime environment.
2. The operator of facilities and infrastructure as well as human resources in the field of river, lake and ferries transportation as referred to in paragraph (1) must comply with safety standards; "The safety standard for river, lake and ferries transportation as referred to in paragraph (2) is a reference for administrators of facilities and infrastructure for river, lake and ferries transportation, which include:
 3. Human Resources;
 4. Facilities and/or Infrastructure;

5. Standard Operating Procedures;

6. Environment.

Ship accidents that occur often coincide with certain activities such as national holidays. Under these conditions, port service managers are often unable to manage operational activities due to imbalance in facilities and infrastructure, especially during school holidays and holidays, which affects the smooth process of transporting passengers and goods. As a result, accidents are caused because the carrying capacity exceeds the stipulated provisions, both the transportation of goods and people. In fact, it is not uncommon for service users to force themselves to board the ship even though the ship is full of determination as long as they get a place on the ship.

Ships are water vehicles of certain shapes and types, which are driven by wind power, mechanical power, other energies, towed or delayed, including vehicles with dynamic support, vehicles under the surface of the water, as well as floating devices and floating structures that do not move. Work safety equipment is basic personal protective equipment that must be present in a shipping workplace to ensure worker safety. (Regulation Of The Minister Of Transportation Of The Republic Of Indonesia Number PM 40 of 2019 Concerning Sea's Health Examination, Safety Supporting Personnel, And Shipping Environment)

In PM No. 20 of 2015 concerning shipping safety standards covering human resources (HR), facilities and/infrastructure, standard operating procedures (SOP), environment and sanctions. Violation of shipping safety will be subject to criminal sanctions or administrative sanctions in the form of dismissal of personnel from their positions or revocation of licenses for operators in accordance with the provisions of laws and regulations. "The Director General supervises the implementation of these regulations, including imposing strict sanctions on any violation of the regulations and reporting to the minister," explained Bobby.

From the aspect of human resources, sanctions will be imposed on the owner, ship operator and skipper in the form of a maximum imprisonment of six months or a maximum fine of Rp. 100,000,000, article 304 of Act No. 17 of 2008. "In article 128 paragraph 2, the owner, ship operator and captain are obliged to assist in the inspection and testing," explained Bobby.

From the SOP aspect, article 246 of Act No. 17 of 2008 states, in the event of a ship accident, everyone on board who knows that an accident has occurred within their limits must provide assistance and report to the captain or crew. Violation of this article

is subject to a maximum imprisonment of one year or a maximum fine of one hundred million rupiah in accordance with Article 331 of Act No. 17 of 2008.

While PM No. 37 of 2015 concerning Sea Transportation Service Standards aims to ensure the fulfillment of the types and quality of shipping that are entitled to be obtained by sea transport service users. Sea transportation passenger service standards include sea transportation service standards at the terminal and service standards on board. Standard services for sea transport passengers on board must meet the requirements for the availability of safety information and facilities, health information and facilities, security and order facilities in the form of means of boarding and disembarking passengers from and to the ship, security posts and officers, information on security disturbances and equipment and security support.

Meanwhile, sea transportation passenger service standards at the terminal must meet the requirements for the ease of obtaining tickets, scheduled ship departures and arrivals, waiting rooms, boarding gates, toilets, places of worship, lighting, temperature control facilities, cleaning facilities, health service rooms, smoking areas., information services, advanced transportation information, passenger baggage services, facilities for persons with disabilities, nursing mothers' room, information and safety facilities, information on security problems and cafeterias. Violations against PM are subject to sanctions in accordance with Act No. 17 of 2008 article 7 in the form of providing heavy meals for a 3 hour delay and a 4 hour delay in the form of refunding tickets or providing lodging for prospective passengers. (SNO).

In addition, the vehicles on the ship are not lashed so that it disturbs the stability of the ship and the shipping safety authorities are overwhelmed in counting the number of passengers and there is not solid relationship between agencies and stakeholders at the port. Therefore, it is necessary to have the awareness of all parties to implement safety standards for both crew, passengers and goods/vehicles

A person traveling is obliged to obtain safety guarantees, even if possible to obtain comfort, while the goods/vehicles being transported must remain intact and not deteriorate when they arrive at their destination. Considering things like this have not been fully realized, it is necessary to conduct research to find solutions/suggestions for improvements to obstacles and challenges in improving the safety of ferry transportation.

There are still frequent accidents, especially for ferry transportation, so this research was conducted with the aim of analyzing and evaluating the operational activities of ferry boats. The aim is to produce recommendations or suggestions for improvement and improvement of the ferry operation management system as a reference for transportation operators ferries and other relevant stakeholders.

The community's need for ferry transportation modes seems to continue to increase but faced with the fact that conditions of limited port infrastructure such as dock and terminal capacity and channel depth are not sufficient, protection in the port area against currents and waves has not been optimal, and facilities and safety management systems for passengers and goods or the vehicles being transported were still weak. All of these have an effect on ship operations which result in frequent ship accidents and many casualties and property.

In Article 10 of the Regulation of the Minister of Transportation of the Republic of Indonesia Number 104 of 2012 concerning the implementation of ferries transportation, it states that Every ship that serves ferry transportation is obliged to:

1. meet the technical requirements of maritime affairs and minimum service requirements for ferry transportation;
2. has technical specifications in accordance with the port facilities used to serve ferry transportation or ferries terminals on the served routes;
3. owning and/or employing crew members who meet the qualification requirements needed for the ferry;
4. have facilities for the needs of crew members as well as passengers and vehicles and their cargo;
5. include the company identity and the name of the ship which is placed on the left and right side of the ship; and
6. include the necessary information or instructions in Indonesian and English.

The party responsible for ship accidents must have prioritized passenger safety and guaranteed that there was responsibility if something untoward happened. The person in charge may have done everything in his power to ensure that the safety of the community was realized when using the ferries, but there are still certain unscrupulous elements that cause unwanted things such as ship accidents. One example of a ship accident that has occurred is the Rafelia 2 motor boat accident in the Bali Strait on Friday, 4 March 2016. (NTSC: KMP Rafelia 2 Is Not Feasible Before Sailing, <https://www.tribunnews.com/nasional/2016/05/10/knkt-kmp-rafelia-2-sudah-tidak-layak-sebelum-berlayar>. Accessed on 23 October, 2020)

On March 4, 2016 at around 12.30 WIB (13.30 WITA) 1, KMP. Rafelia 2 departs from the Landing Craft Machine (LCM) Pier at Gilimanuk Ferry Terminal, Bali, to Ketapang Port, Banyuwangi, East Java. Ships move at an average speed of 6 knots.

About 10 minutes later, when the ship was about 1 NM² from the Gilimanuk ferry dock, the ship began to tilt to the left. Chief Commander I ordered one of the loaders to check the condition of the vehicle deck. The cargo crew saw water entering from the bow and inundating the vehicle deck. The tilt of the ship continues to increase. While the captain is controlling the ship, the First Officer notifies the ship's condition to the Ship Traffic Controller (STC) Officer at LCM Ketapang Pier. Further examination of the condition of the puddle showed an increase in height and the ship tilted to the left.

At around 12.54 WIB, the position of the ship was about 0.5 NM from the Ketapang LCM Pier. The prow of the ship changed from initially aiming at the pier to towards the nearest shore. Commander I ordered the crew on the bow to open the door to the bow. The tilt of the ship is up to 40 degrees and growing. The passengers were already trying to find a life jacket and moving to a higher position.

At 12.57 WIB, the tilt of the ship reached 90 degrees and then the ship capsized until it looked the ship's keel. At 13.05 WIB, KMP. Rafelia 2 sank completely at the position 08o 09.111 'LS/114o 24.252' East Longitude or about 0.2 NM from the nearest beach with a depth of about 30 meters. As a result of this accident, 6 sailors consisting of 2 crew members and 4 passengers died. No vehicles or passenger items were saved.

The results of the investigation show that the sinking of the ship occurred due to overloading and the accumulation of sea water that was quite a lot on the deck of the vehicle so that the stability of the ship quickly decreased. The tilt of the ship is followed by the movement of the cargo on the deck of the vehicle and contributes to negative stability, which prevents the ship from returning to its original position. The entry of this sea water comes from the bow waves that enter through the unclosed bow door. The investigation also found that there is a lack of oversight of the ship's operating pattern, including the loading and arrangement of cargo on the part of the operator and ship departure supervisor. In addition, the modification and operating pattern of the bow ramp door were also identified as contributing to the accident.

The NTSC submits safety recommendations to parties related to the safety of ferry boats to be used as a reference in efforts to improve the safety of ship operations and prevent similar incidents from occurring in the future.

As in the RPM regarding the load and loading line, the cargo that can be carried by the ship must adjust to the size of the ship itself, which is seen from the length of the ship (L), the center of the ship, the width of the ship (B), in the largest (D), the load line, hull deck, block coefficient (Cb). (PM 39 Of 2016 Concerning Ship Loading And Loading Line)

The safety of users of ferries transportation services must be well guaranteed, as stated in Act No. 17 of 2008 concerning Shipping, it is stated that: (Act No. 17 of 2008 Concerning Of Shipping)

1. The safety and security of shipping is a condition where safety and security requirements are met with regard to transportation in waters, ports, and the maritime environment.
2. Maritimeity of a ship is the condition of the ship that meets the requirements of ship safety, prevention of water pollution from the ship, manning, loading lines, loading, crew welfare and passenger health, legal status of the ship, safety management and prevention of pollution from ships, and ship security management for sailing in certain waters.
3. Ship safety is the condition of the ship that meets the requirements for material, construction, building machinery and electricity, stability, structure and equipment, assistive devices and radio, ship electronics, as evidenced by a certificate after inspection and testing.

To control shipping safety internationally, it is regulated with the following conditions:

1. International Convention for the Safety of Live at Sea (SOLAS), 1974, as has been perfected and this international rule concerns the following provisions:
 - (a) Construction (structure, stability, machinery and electrical installations, fire protection, fire detectors and fire fighting);
 - (b) Radio communication, navigation safety;
 - (c) Helping devices, such as buoys, lifeboats, rescue rafts;
 - (d) Implementation of provisions to improve shipping safety and security including the implementation of the International Safety Management (ISM) Code and the International Ship and Port Facility Security (ISPS) Code.
2. International Convention on Standards of Training, Certification, and Watch keeping for Seafarers, 1978 and last modified in 1995.
3. International Convention on Maritime Search and Rescue, 1979.
4. International Aeronautical and Maritime Search and Rescue Manual (IAMSAR).

4. Conclusion

The safety and security of shipping is a condition where safety and security requirements are met with regard to transportation in waters, ports, and the maritime environment. Maritimety of a ship is the condition of the ship that meets the requirements of ship safety, prevention of water pollution from the ship, manning, loading lines, loading, crew welfare and passenger health, legal status of the ship, safety management and prevention of pollution from ships, and ship security management for sailing in certain waters. Ship safety is the condition of the ship that meets the requirements for material, construction, engineering and electricity, stability, structure and equipment, assistive devices and radio, ship electronics, as evidenced by a certificate after inspection and testing.

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