



## OVERVIEW OF VEHICLE TRANSPORTATION IMPLEMENTATION IN KMP. SIGINJAI ON THE JEPARA – KARIMUNJAWA TRACK

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### ABSTRACT

*The Jepara Ferry Port is managed and operated by the Jepara Regency Transportation Service, under the supervision of the Land Transportation Management Center for Region X Central Java Province and D.I. Yogyakarta. Meanwhile, the operation of the ferry is carried out by PT. ASDP Indonesia Ferry (Persero) Jepara branch. This ferry port only serves 1 (one) pioneer crossing, which is served by 2 (two) ferry boats. This ferry port plays an important role in connecting Java Island with Karimunjawa Island. Because this port is the closest crossing access to the Karimunjawa Islands. This ferry port is served by 1 (one) Ro-Ro type ship and 1 (one) fast boat type owned by 2 (two) shipping companies, namely PT. ASDP Indonesia Ferry (Persero) and PT. Sakti Inti Makmur cruise.*

*Based on the results of the survey that has been carried out, the vehicle handling system on the KMP Ro-Ro ship. Siginjai is not in accordance with the Regulation of the Minister of Transportation Number 115 of 2016 concerning Procedures for Transporting Vehicles on Ships. The distance from one vehicle to another is too close which will result in damage to the vehicle body. There are also several vehicles transported at KMP. Siginjai does not use lashing so it is very dangerous for vehicle operators or ship operators and can also affect the stability of the ship if the vehicles move during the trip.*

**Keywords:** *Lashing, vehicle distance, vehicle transportation.*

### 1. Introduction

Jepara ferry port is a ferry port located in Jepara Regency, Central Java Province with a geographical location at 6°35'26" South Latitude and 110°38'52" East Longitude. This port is one of the ports located on the northern coast of Java Island. The Jepara Ferry Port is managed and operated by the Jepara Regency Transportation Service, under the supervision of the Land Transportation Management Center for Region X Central Java Province and D.I. Yogyakarta. Meanwhile, the operation of the ferry is carried out by PT. ASDP Indonesia Ferry (Persero) Jepara branch. This ferry port only serves 1 (one) pioneer crossing, which is served by 2 (two) ferry boats. This ferry port plays an important role in connecting Java Island with Karimunjawa Island. Because this port is the closest crossing access to the Karimunjawa Islands. This ferry port is served by 1 (one) Ro-Ro type ship and 1 (one) fast boat type owned by 2 (two) shipping companies, namely PT. ASDP Indonesia Ferry (Persero) and PT. Sakti Inti Makmur cruise.

In the transportation system, security and safety are highly favored as a form of providing good services. Safety is shown not only to service users and also to ship operators, but also to the vehicles transported on the ship. As well as handling vehicle cargo on ships. The better the handling of vehicles on the ship, the better the level of security and safety for passengers, operators and vehicles on board. Currently, the vehicle handling system on the KMP Ro-Ro ship.

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## 2. Research Method

The data used in this paper are primary data, which is data obtained directly from the source or based on direct observations in the field and secondary data, namely data obtained based on observations of other parties and in the form of written reports, in obtaining secondary data including data on ship characteristics and productivity data for the last 5 years. In obtaining primary data the author uses the following methods:

### 1) Observation Method

Make direct observations of actual conditions in the field, namely observing the process of loading vehicles on ships, measuring the distance between vehicles on ships and observing the types of vehicle groups on ships in loading vehicles using lashings and the distance between vehicles in accordance with the Regulation of the Minister of Transportation Number 115 of 2016 concerning Procedures Ways of Transporting Vehicles on Ships.

### 2) Measurement Method

Measurements are carried out to obtain information about the reasons for loading that are not in accordance with existing provisions so that it can affect the safety of the ship and dig deeper into the factors that cause this to happen. The data can include vehicle productivity data and data on the distance between vehicles on the ship.

## 3. Results and Discussion

### a. Vehicle Weighing Equipment Needs

Based on the Regulation of the Minister of Transportation Number 115 of 2016 article 3 paragraph (1), that every port used to transport vehicles by ship must prepare vehicle weighing equipment in the port area to weigh vehicles before being transported on ships. From the survey results in the field, it was found that at the Jepara Ferry Port there is no vehicle weighing device which should be an important aspect to find out information about the weight of the vehicle before entering the ship.

Based on the vehicle productivity survey, the heaviest vehicle that has ever passed through the Jepara Ferry Port is a vehicle weighing 24 tons. So, the minimum weighbridge capacity is 24 tons plus 5 tons of additional tolerance, so the minimum capacity is 29 tons. The weighbridge is placed before the purchase of a ship ticket, because if the weight and dimensions of the vehicle do not match the capacity of the ship, then you can immediately turn around with a special road that has been provided previously.

### b. Distance Between Vehicles

Based on a survey conducted at KMP. Signinjai for 15 days, the researchers measured the distance between vehicles from other vehicles and the walls of the loading room. The following is a recapitulation of the average distance between vehicles transported per trip, as follows:

**Table 1 Average Distance Between Vehicles Transported Above KMP. Siginjai For 15 Days**

NO	DATE	AVERAGE DISTANCE (cm)					REMARK
		FRONT	RIGHT	LEFT	BEHIND	TO WALL	
1	28 APRIL 2021	64,00	55,67	59,33	59,00	52,50	UNSUITABLE
2	30 APRIL 2021	50,86	52,20	48,80	51,57	47,33	UNSUITABLE
3	03 MEI 2021	46,17	43,80	47,00	44,40	39,25	UNSUITABLE
4	05 MEI 2021	33,14	53,60	54,80	34,29	45,25	UNSUITABLE
5	7 MEI 2021	37,50	46,50	46,50	37,50	51,25	UNSUITABLE
6	10 MEI 2021	27,67	49,00	49,00	27,67	51,00	UNSUITABLE
7	12 MEI 2021	NO SURVEY OBJECT VEHICLE LOADING					
8	15 MEI 2021	-	-	-	-	57,50	UNSUITABLE
9	17 MEI 2021	37,00	43,50	43,50	37,00	31,50	UNSUITABLE
10	19 MEI 2021	44,29	48,80	48,20	39,43	42,17	UNSUITABLE
11	21 MEI 2021	34,50	34,00	34,00	34,50	44,25	UNSUITABLE
12	24 MEI 2021	45,33	44,60	46,60	43,20	37,00	UNSUITABLE
13	26 MEI 2021	51,67	45,60	47,60	51,80	37,50	UNSUITABLE
14	28 MEI 2021	55,00	57,00	61,00	51,00	59,50	UNSUITABLE
15	31 MEI 2021	35,25	42,00	43,86	34,43	34,00	UNSUITABLE

According to the survey results, it was found that the arrangement of the distance between the vehicles transported by KMP. Siginjai there are many deviations and not in accordance with the requirements for the distance between vehicles according to the Minister of Transportation Regulation No. 115 of 2016 below:

- The distance between one side of the vehicle is at least 60 cm.
- The distance between the front and back of each vehicle is 30 cm.
- For vehicles whose side is adjacent to the ship's wall, a distance of 60 cm is calculated from the layer of the inner wall or the outer side of the tusks.



## **c. Lashing and Wheel Clamps**

Based on the Regulation of the Minister of Transportation Number 115 of 2016 article 18 that the number of fasteners must be adjusted to the overall weight of the vehicle, while the number of vehicle straps is based on the overall weight of the vehicle as follows:

- 1) Vehicles whose total weight is between 3.5 (three point five) tons to 20 (twenty) tons, must use at least 2 (two) lashing gears with a safe working load in accordance with the each side of the vehicle.
- 2) Vehicles whose total weight is between 20 (twenty) tons to 30 (thirty) tons, must use at least 3 (three) lashing gears with a safe working load that is suitable for each vehicle side.
- 3) Vehicles whose total weight is between 30 (thirty) tons to 40 (forty) tons, must use at least 4 (four) lashing gears with a safe working load that is suitable for each vehicle side.

Based on the results of the survey in the field, only a few of the vehicles transported on board the ship were tied up and not even in accordance with applicable regulations.

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## **d. Need for Lashing Tools and Officers**

According to the Regulation of the Minister of Transportation Number 115 of 2016 Article 18, that:

- 1) Vehicles whose total weight is between 3.5 – 20 tons, must use at least 2 fasteners on each side, so the number of lashing tools required for 1 vehicle is 4 pieces.
- 2) Vehicles whose total weight is between 20-30 tons, must use at least 3 fasteners on each side, so the number of lashing tools needed for 1 vehicle is 6 pieces.

In calculating the load class on the vehicle, the researchers used the legal basis of the SE Director General of Land Transportation Number SE.02/AJ.108/DRJD/2008 concerning the Guide to Maximum Limits for the Calculation of JBI and JBKI for Goods Cars, Special Vehicles, Towing Vehicles and Patch Trains/Trains. Couple. Using the axis configuration as the delimiter for each group. The following is the axis configuration class data with the maximum allowable amount of weight.

## **e. The Need for a Secured Points . Tool**

Based on the analysis of the need for lashing equipment, it was found that the minimum rope requirement was 32 ropes. So, the minimum required securing points tool is also 32 pieces.

## **f. Vehicle Loader Sterilization**

Based on the Regulation of the Minister of Transportation No. 115 of 2016 Article 17 paragraph (2) that "Vehicle placement space must be sterile from the presence of passengers during the voyage"

## **4. Closing**

### **a. Conclusion**

Based on the results of the analysis that has been done, the authors can draw conclusions

- 1) Condition of transportation of vehicles on KMP. Siginjai currently operating on the Jepara - Karimunjawa route are as follows:
  - a) Unavailability of vehicle weighing equipment.
  - b) There is no oil/oil spill in the cargo hold.
  - c) The distance between vehicles is still close.
  - d) The vehicle has turned off the engine.



- e) Every vehicle on the ship, be it the front (bow), midship (midship), rear (stern) is not attached to the vehicle.
- f) The loading space is not sterile from people/passengers.
- 2) Condition of vehicle binding above KMP. Siginjai which operates on the Jepara - Karimunjawa route in 2021 in accordance with the Regulation of the Minister of Transportation Number 30 of 2016 and Regulation of the Minister of Transportation Number 115 of 2016 requires the need for a number of binding tools, namely lashing ropes and securing points. Each requires 32 lashing straps and 32 securing points.
- 3) The number of officers needed to improve the transportation system onboard the KMP Ship. Siginjai operating on the Jepara – Karimunjawa route is at least 1 officer.

## **b. Suggestion**

Based on the conclusions above, there are several suggestions or inputs as follows:

- 1) Transportation of vehicles on ships must comply with the procedures for transporting vehicles as regulated in the Regulation of the Minister of Transportation Number 115 of 2016.
- 2) Preferably, in carrying out vehicle loading efforts, it should be carried out based on PM No. 30 of 2016
- 3) Preferably, the ship should provide sufficient vehicle binding equipment in accordance with the number of vehicles transported, so that all vehicles in the mandatory lashing section can be lashed in accordance with the regulations.
- 4) Vessel operators may propose a tariff increase due to the cost of purchasing vehicle binding equipment.
- 5) The lashing officer must have the skills to carry out lashing in accordance with applicable regulations. So, lashing officers must take lashing skill training first.

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