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Overview Equipment Safety Traditional Motor Boats at Tigaras Harbor Regency Simalungun North Sumatra Province

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Abstract

Ferry port Tigaras is in the district Simalungun Province Sumatra North is one harbour crossing on Lake Toba to to Island Samosir . Equipment safety passenger on traditional motorboat is things to do filled with all ships operating at the ferry port Tigaras at the moment To do cruise good from life jacket, lifebouy , rocket parachute, tools extinguisher fire and rope discharge 30 m. Study this aim for knowing a lot traditional motor boats that have not been complete equipment safety and quantity percentage tool safety met above traditional motorboat on the track Tigaras-simanindo.For Methodology research used is observation directly in the field , interviews , library / documentation. Analysis used is analysis in the form of Gap Analysis as comparison Among existing state with secured situation. Based on Regulation Director General Communication Land Number : 3424/AP.402/DRJD/2020 About River And Lake Ships. Based on analysis the obtained conclusion that traditional motorboat on the track Tigaras-Simanindo not yet complete equipment safety in accordance with regulations governing and for Level of compliance tool safety on board traditional operating on the lake track Tigaras-Simanindo namely Life Jacket 35%, Life bouy 6%, Firefighter 0% fire , 100% for rope waste 30 m all boat already equips and 33% for Rocket Parachute.

Keywords : Ferry Port , equipment safety , traditional motorboat

1. Introduction

Ferry Port Tigaras located in District Mountain Pardamean . Province Sumatra north is one of the ferry ports on Lake Toba to Island Samosir managed by Balai Manager Transportation Land Region II North Sumatra. Ships operating in this port consist from 2K ship motor Crossing namely KMP. SUMUT I and KMP. SUMUT II and 17 traditional motor boats with Route the track at Tigaras Pelabuhan Harbor this is track Tigaras – Simanindo which is 3.6 miles from time take 30 minutes.

In organizer there is necessary thing noticed that is fulfillment requirements safety on traditional motorboats on the track Tigaras-Simanindo for ensure safety moment sail for passenger as well as make it easy in regulation and supervision for aspect safety on traditional motorboats .

At the Ferry Port Tigaras district Simalungun who has L path Tigaras-Simanindo with 17 traditional motor boats still anything yet complete equipment must safety filled in accordance with applicable regulations for above ship . Based on these problems, a study is needed to To do review Equipment Safety Traditional Motor Boats At Tigaras Harbor on the track Tigaras-Simanindo.

2. Research Methods

The type of research used in this study is a qualitative research method with descriptive data

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presentation to describe and describe in detail. The data sources of this research consist of primary data and secondary data as follows:

a. Primary Data

1) Observation Method
   To do observation by direct actual conditions in the field that is see by direct operational traditional motor boat , up and down passenger and tools safety installed on traditional motorboats and their activation use During boat sail . The data obtained namely :
   a) Productivity data of passengers and vehicles on board M otor Traditional for one month at Tigaras Port , North Sumatra Province
   b) Survey data safety
   c) Survey data balance tool safety on board with provisions .
2) Interview Method
   Interview conducted for get information about tool safety mounted on a motor boat crossing . As for the chosen one Becomes source person in study this is as following :
   a) Speaker I : Budianto, Harbormaster, Ferry Port Tigaras BPTD Region II North Sumatra Province
   b) Resource Person II : Traditional Motor Ship Master

b. Secondary Data

Secondary data is the data obtained in form already so , already collected and processed so that already in form publication , in obtain secondary data writer use data as following :

1) External Data
   Data external is the originating data from outside organization where study done . This data got with method look for literature or documentation from various existing sources about theories and related data in solving problem in Paper Work Mandatory (KKW).
2) Internal Data
   Internal data is data that comes from from in organization where study currently done . This data got with method To do visit to agency or office related for get secondary data in accordance with study this that is as following :
   a) Land Transportation Management Center Region II North Sumatra Province a
   b) Tigaras Port Service Unit – Simanindo This data is obtained through reports then studied and processed and analyzed as supporting material in the discussion of existing problems.

3. Results and Discussion

a. Helper Dress Analysis

Table following is level data fulfillment Helper Clothes on traditional motorboats operating on the track Tigaras - Simanindo in accordance with regulation on as following :

Table 1. Percentage Helper Clothes

No	Ship Name	Required quantity (units)	Number of existing (units)	Fulfillment rate
1	sea Bid 02	80	60	75%
2	Romeuli 08	47	24	51%
3	Simanindo 06	47	42	89%

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4	sea Bid 01	58	60	103%
5	Romeuli 07	59	50	85%
6	Marsada please 02	46	50	109%
7	Marsada Please 01	70	55	79%
8	Marsada please 03	70	50	71%
9	Be patient Farmer 03	59	60	102%
10	Be patient Farmer 02	59	60	102%
11	Be patient Farmer 08	86	70	81%
12	Lamhotma 02	59	50	85%
13	Sinta Dame 02	48	50	104%
14	Sinta Dame 03	48	60	125%
15	Simanindo 03	80	50	63%
16	Galung Get up	81	80	99%
17	Lamhotma 03	81	80	99%

On the comparison of the results of the analysis with existing conditions such as seen in the table 1. that needs equipment safety for Life jackets on traditional motorboats on the track Tigaras-Simanindo at the ferry port Tigaras for percentage level Fulfillment of Helper Clothes i.e. 65% ships no meet and 35% of ships that have fulfill.

Based on Ministerial Decree No. 65 of 2009 concerning Non- Conventional Ship Standards Indonesian flag for the requirements for the appropriate helper clothes with standard namely :

1) Child life jackets must be made in accordance with adult life jackets, with the additional requirements:
   a) Need help putting on life jackets for young children;
   b) The distance from the water must be free when lifting the face of a person who is exhausted or unconscious according to the size intended for the wearer;
   c) Tends not to reduce the freedom of movement in the life raft;
   d) Government approved life jacket sizes and weights;
   e) Its use is marked with children's life jackets.
2) Life jackets must have buoyancy that will not decrease by more than 5 percent after being submerged for 24 hours in fresh water;
3) Life jackets must allow the person wearing them to swim short distances and board lifeboats;
4) Each life jacket must be equipped with a whistle that is tightly tied with a rope and a light that can turn on itself when submerged in water.
5) Inflated Rescue Suit A life jacket whose buoyancy depends on inflating shall have not less than two separate compartments and meet the above requirements and must:
   a) Inflates automatically when immersed, provided with a means which permits inflating by one manual movement and can be inflated by mouth blowing;

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b) If it loses buoyancy in any of the compartments, it can meet the above requirements;
c) Meet the above requirements after inflating with an automatic mechanism.

6) Lighting of life jackets, must:
   a) Have a luminous intensity of not less than 0.75 candela in all directions;
   b) Has an energy source capable of providing a irradiation intensity of 0.75 candela for a period of not less than 8 hours;
   c) Visible in most of all directions and when fastened to a swimsuit;
   d) Colored white;
7) If the life jacket lighting is bright lighting, it must:
   a) Equipped with manually operated buttons;
   b) Flickering not less than 50 flashes per minute or not more than 70 flashes per minute with an effective luminous intensity of at least 0.75 candela.

b. Analysis Lifebuoy Helper

Table following is level data fulfillment Lifebuoy Helper at boat motorcycle traditional operating on the track Tigaras-Simanindo in accordance with regulation on as following :

Table 2. Percentage Lifebuoy Helper

No	Ship Name	Required quantity (units)	Number of existing (units)	Fulfillment Rate
1	sea Bid 02	6	3	50%
2	Romeuli 08	6	5	83%
3	Simanindo 06	6	2	33%
4	sea Bid 01	6	5	83%
5	Romeuli 07	6	4	67%
6	Marsada please 02	6	4	67%
7	Marsada Please 01	6	4	67%
8	Marsada please 03	6	5	83%
9	Be patient Farmer 03	6	4	67%
10	Be patient Farmer 02	6	5	83%
11	Be patient Farmer 08	6	5	83%
12	Lamhotma 02	6	4	67%
13	Sinta Dame 02	6	5	83%
14	Sinta Dame 03	6	8	133%
15	Simanindo 03	6	3	50%
16	Galung Get up	6	4	67%
17	Lamhotma 03	6	4	67%

Based on the comparison of the results of the analysis with existing conditions such as seen

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in the **table 2.** that needs equipment safety for Lifebuoy Helper on traditional motorboats on the track Tigaras-Simanindo at the ferry port Tigaras for percentage level fulfillment Lifebuoy Helper that is 94% ships no fulfill and 6% ship already fulfill .

For condition on Lifebuoy Helper in accordance with Ministerial Decree No. 65 of 2009 concerning Standard Non Convention Ship Indonesian flag for suitable conditions _ with standard namely :

a) have a buoyancy of not less than 100N in fresh water
b) made of suitable materials and is resistant to oil and its derivatives and resistant to temperatures up to 50° C;
c) given a striking color so that it looks real in the water;
d) having a mass of not less than 2.5 kg and an inner circle diameter of 0.45 m ± 10 percent;
e) equipped with a handle strap;
f) equipped with a free float arrangement , except for a life buoy equipped with a self-igniting smoke signal;
g) marked with light-reflecting materials; and
h) be marked with Latin capital letters upright with the inscription of the name of the ship and the port of registration of the ship carrying it;

c. Rocket Parachute Analysis

Table following is level data fulfillment *Rocket Parachute* on the ship motorcycle traditional operating on the track Tigaras - Simanindo in accordance with regulation on as following :

Table 3. Percentage *Rocket Parachute*

No	Ship Name	Required quantity (units)	Number of existing (units)	Fulfillment rate
1	sea Bid 02	2	0	0%
2	Romeuli 08	2	0	0%
3	Simanindo 02	2	0	0%
4	sea Bid 01	2	0	0%
5	Romeuli 07	2	0	0%
6	Marsada please 02	2	0	0%
7	Marsada Please 01	2	0	0%
8	Marsada please 03	2	0	0%
9	Be patient Farmer 03	2	0	0%
10	Be patient Farmer 02	2	0	0%
11	Be patient Farmer 08	2	0	0%
12	Lamhotma 02	2	0	0%
13	Sinta Dame 02	2	0	0%
14	Sinta Dame 03	2	0	0%

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No	Ship Name	Required quantity (units)	Number of existing (units)	Fulfillment rate
15	Simanindo 03	2	0	0%
16	Galung Get up	2	0	0%
17	Lamhotma 03	2	0	0%

Based on the comparison of the results of the analysis with condition *existing* like seen in the **table 3.** that needs *Rocket Parachute* on a Traditional Motorboat on a track Tigaras-Simanindo at the ferry port Tigaras for percentage level fulfillment tool extinguisher fire that is 100% ship no Fulfill based on in Regulation Director General Communication Land Number : KP.3424/AP.402/DRJD/2020.

For Requirements on *Rocket Parachute* in accordance by Ministerial Decree No. 65 Years 2009 About Standard Non Convention Ship Indonesian flag for suitable conditions with standard namely :

1) Technical Requirements
   a) D stored in a waterproof tube;
   b) Have brief instructions for use or a diagram clearly illustrating the use of the umbrella rocket launcher printed on the tube;
   c) Have their own ignition means;
   d) Designed in such a way that it does not cause discomfort to the person holding the cylinder when used in accordance with the operating instructions.
2) Special Requirements
   a) When fired vertically, it can reach a height of not less than 300 meters.
   b) Towards or at the peak of the throw must release a parachute nozzle that can:
      (1) Lights up in bright red;
      (2) ignites in a fixed flame form with a luminous intensity of not less than 30,000 candela;
      (3) Have an ignition period of not less than 40 seconds;
      (4) Has a descending speed of not more than 5 meters per second;
      (5) Do not damage the umbrella or its circuit when it is on.

d. Analysis *Rope* Exhaust 30 m

Table following is level data fulfillment rope 30m dump on ship motorcycle traditional operating on the track Tigaras - Simanindo in accordance with regulation on as following :

Table 4. Percentage Rope Exhaust 30 m

No	Ship Name	Required quantity (units)	Number of existing (units)	Fulfillment rate
1	sea Bid 02	1	1	100%
2	Romeuli 08	1	1	100%
3	Simanindo 02	1	1	100%
4	sea Bid 01	1	1	100%

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5	Romeuli 07	1	1	100%
6	Marsada please 02	1	1	100%
7	Marsada Please 01	1	1	100%
8	Marsada please 03	1	1	100%
9	Be patient Farmer 03	1	1	100%
10	Be patient Farmer 02	1	1	100%
11	Be patient Farmer 08	1	1	100%
12	Lamhotma 02	1	1	100%
13	Sinta Dame 02	1	1	100%
14	Sinta Dame 03	1	1	100%
15	Simanindo 03	1	1	100%
16	Galung Get up	1	1	100%
17	Lamhotma 03	1	1	100%

Based on the results of the analysis with condition *existing* like seen in the table 4. 20 that equipment rope 30 m dump on a traditional motorboat on the track Tigaras-Simanindo at the ferry port Tigaras for percentage level fulfillment rope 30 m discharge i.e. 100% ship already Fulfill based on in Regulation Director General Communication Land Number : KP.3424/AP.402/DRJD/2020.

e. Fire Extinguisher Analysis

Table following is level data Fulfillment of Extinguishers Fire on the ship motorcycle traditional operating on the track Tigaras - Simanindo in accordance with regulation on as following :

Table 5. Percentage of Fire Extinguishers

No	Ship Name	Number of existing			Required quantity	Fulfillment rate
		Portable extinguisher dry Powder fire (4.5kg)	Portable extinguisher Foam combustion (4.5kg)	fire bucket		
1	sea Bid 02	1	1	1	6	33%
2	Romeuli 08	1	1	1	6	33%
3	Simanindo 02	1	1	1	6	33%
4	Fresh Sea01	1	1	1	6	33%
5	Romeuli 07	1	1	1	6	33%

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No	Ship Name	Number of existing			Required quantity	Fulfillment rate
		Portable extinguisher dry Powder fire (4.5kg)	Portable extinguisher Foam combustion (4.5kg)	fire bucket		
6	Marsada please 02	1	1	1	6	33%
7	Marsada Please 01	1	1	1	6	33%
8	Marsada please 03	1	1	1	6	33%
9	Be patient Farmer 03	1	1	1	6	33%
10	Be patient Farmer 02	1	1	1	6	33%
11	Be patient Farmer 08	1	1	1	6	33%
12	Lamhotma 02	1	1	1	6	33%
13	Sinta Dame 02	1	1	1	6	33%
14	Sinta Dame 03	1	1	1	6	33%
15	Simanindo 03	1	1	1	6	33%
16	Galung Get up	1	1	1	6	33%
17	Lamhotma 03	1	1	1	6	33%

On the comparison of the results of the analysis with condition *existing* like seen in the **table 5.** that needs tool extinguisher fire on traditional motorboats on the track Tigaras-Simanindo at the ferry port Tigaras for percentage level fulfillment tool extinguisher fire i.e. 33% ships complied and 67% who have not Fulfill based on in Regulation Director General Communication Land Number: KP.3424/AP.402/DRJD/2020.

For requirements on extinguishers Fire in accordance with Regulation of the Minister of Manpower and Transmigration Number: Per.04/Men/1980 Regarding Terms Fire Extinguisher Installation And Maintenance Fire Light for suitable conditions with standard namely :

1) For liquid and foam type fire extinguishers, inspection is carried out by removing the head cover carefully and keeping the tube in an upright position, then examined as follows:
   a) The contents of the fire extinguisher must be up to the specified surface level;
   b) The discharge pipe inside the tube and filter must not be clogged or clogged;
   c) The headgear threads must not be deformed or damaged, and the nozzles must not be clogged.
   d) Moving equipment must not be damaged, can move freely , have sharp ribs or edges and the buckle or gasket must be in good condition;
   e) The headgear bracelet must be in good condition;
   f) The interior and the fire extinguisher must not be perforated or deformed due to rust;

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g) For the type of foam liquid that is mixed before being added the solution must be in good condition;
h) For the type of foam liquid in the tube to be lacquered, the tube must still be well lacquered ;
i) L protective layer and compressed gas cylinders, must be in good condition;
j) Compressed gas cylinders must be fully filled according to their capacity.

2) For halogenated *hydrocarbon* fire extinguishers , inspection is carried out by removing the head cover carefully and keeping the tube in an upright position, then examined according to the following provisions;
a) I the cylinder must be filled with a predetermined weight;
b) The discharge pipe inside the tube and filter must not be clogged or clogged;
c) The headgear thread must not be damaged and the outlet must not be blocked;
d) Moving equipment must not be damaged, must be able to move freely, have sharp ribs or edges and the compression area must be in good condition;
e) The headgear bracelet must be in good condition;
f) protective enclosure of the gas cylinder must be in good condition;
g) Compressed gas cylinders must be fully filled according to their capacity .

4. Closing

a. Conclusion

Based on results analysis and discussion concluded that :

1) Traditional motor boats operating on the track Tigaras-Simanindo not yet be equipped with equipment safety as arranged _ in Regulation of the Director General of Land Transportation Number: KP.3424/AP.402/ DRJD/2020.
2) Fulfillment rate tool safety on board traditional operating on the lake track Tigaras-Simanindo that is *Helper Clothes* 35 %, *Lifebouy* 6 %, Firefighters 33 % , 100% for rope waste 30 m all boat already complete and 0% for *Rocket Parachutes.*

b. Suggestion

Based on the conclusions that have been described above , then need set some suggestions that can support the conclusions that have been obtained in order to made input and materials consideration for party ferry port Tigaras , the intended suggestion that is as following :

1) It is necessary to improve counseling, supervision, action and improvement on an ongoing basis to increase operator awareness and owner ship on track Tigaras-Simanindo about importance tool safety .
2) Giving a firm san against operators who do not heed the rules.

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