

Review of Navigation Equipment in Jukung Vessels in Dermaga River Lais Palembang

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Abstract:- Transportation is the most important means of supporting economic growth in a region. Transportation is also a vein of economic development. Transportation is an activity of moving goods or people physically from one place to another, whether by land, sea or air. Transportation has a very important role in the economic development and social and political development of a region or region.

Palembang City is the capital of South Sumatra Province and has the Musiriver. There is also the LaisRiver which has a dock and is the first filter used by the Department of Transportation to check navigation equipment on ships.

However, in reality there are still many ships that do not have these equipment, but really needed. In connection with this, we also as a survey team conducted an inspection of navigation equipment on a Jukung ship on the Sungai Lais Pier, Palembang.

Keyword:- Transportation, Navigation equipment, Jukung ship.

I. INTRODUCTION

Transportation is the most important means of support for economic growth in a region. Apart from the characteristics of service providers, transportation is also the lifeblood of economic development. Transportation is an activity of physically moving goods or people from one place to another by land, sea or air. Transportation has a very important role in economic development and community development as well as the socio-political development of a region or region.

Palembang City is the capital of South Sumatra Province. Palembang City has several rivers, one of which is the MusiRiver which is the longest river in Indonesia. Having an overall length of ± 700 km and a navigable distance of ± 450 km, makes the Musi River an important role in supporting the economy of the people of Palembang City through river transportation.

Sungai Lais port partly serves traditional ships (Motor Sailboats/ KLM) for food (groceries) and building materials, such as cement, which will be sent to remote areas. In addition, Sungai Lais Port also serves several customers with liquid bulk commodities which are dominated by High

Speed Diesel (HSD) and crude palm oil (CPO) which is one of the mainstay commodities of South Sumatra Province and also dry bulk commodities such as split stone and sand, although the activity of Sungai Lais port has not been as dense and busy as Boom Baru Port as the center of goods loading and unloading activities for Palembang city since several decades ago, it has the potential to make Sungai Lais port the second largest port in Palembang City after Boom Baru. It is very possible, considering that the current condition of the Boom Baru Port in Palembang is rather difficult to develop again, due to the limited existing land, which occupies approximately 95% of the total land area of 24 hectares. Sungai Lais Port is managed directly by the Lais River UPTD under the Palembang City Transportation Service with the Provincial Transportation Office work unit.

The Lais River Pier is a mandatory reporting dock for supporting boats crossing, either from upstream to downstream or from downstream to upstream. The Lais River Pier also plays an important role because it is the first filter used by the Transportation Agency to check the navigation equipment on ships.

One of the ferry modes of transportation used by the people around Palembang's Lais River as a mobility for their daily activities is the Jukung ship. The boat is generally used as a means of transporting goods and passengers, as a livelihood for fishermen as well as a tourist destination for the people of Palembang and tourists who come from outside the city of Palembang.

For ships with Indonesian flags that have not been included in international regulations such as Solas (Safety of Life at Sea), Standard Training Certificate and Watchkeeping (STCW), International Safety Management (ISM) Code, Marine Pollution (MARPOL) are now obliged to use Non-Standard Vessels. Convention (SKNK) or what is commonly called Non Convention Vessel Standards (NCVS), following the issuance of Decree General Sea Transportation No. Um.008 / 9/20 / DJPL-12 concerning the Enforcement of Standards and Technical Guidelines for the Implementation of Indonesian Flag Non-Convention Vessels on February 16, 2012.

With the enactment of this Non-Convention Ship Standard (SKNK), Indonesia is the 14th country that has ship standards that are not regulated in international conventions. This Decree of the Director General of Hubla is a technical regulation of the Decree of the Minister of

Transportation No. 65 of 2009 concerning the Standard for Indonesian Flagged Non-Convention Vessels.

According to Indonesian Flag Non-Convention Vessels Standards, the navigation equipment on ships include: Compass, Map, GPS, Radio, Handy Talking (HT), Fog Lights, Trumpets, and sign lights on ships.

II. RESEARCH PURPOSES

1. The purpose of this study is to provide an overview of the factors causing the incomplete navigation equipment on the Jukung.
2. To find out whether the navigation equipment for the support vessel that is anchored at the Lais River Pier in Palembang is in accordance with the shipping safety standards.
3. Knowing the solution in overcoming these problems.

➤ *Legal Foundation*

Law no 17 of 2008 concerning Shipping;

A. article 1

34) Ship safety is the condition of the ship that meets the requirements for material, construction, building, machinery and electricity, stability, structure and equipment including auxiliary equipment and radio, ship electronics, which is proven by a certificate after inspection and testing.

(43) Navigation is everything related to Sailing-Navigation Assistive Facilities, Telecommunications-Sailing, hydrography and meteorology, channel and crossing, dredging and reclamation, guidance, handling of ship frames, salvage and underwater work for the benefit of shipping safety.

(44) Navigation is the process of directing the motion of a ship from one point to another safely and smoothly and to avoid shipping hazards and / or obstacles.

(46) Sailing-Navigation Assistance Facilities are equipment or systems outside the ship which are designed and operated to improve the safety and efficiency of ship navigation and / or ship traffic.

(47) Shipping-Telecommunications is special telecommunications for the purposes of the shipping service which constitutes every transmission, delivery or receipt of any kind of sign, image, sound and information of any kind by means of wire, optical, radio or other electromagnetic systems in the mobile-navigation service which is part of the safety of navigation.

➤ *Theoretical Basis*

In accordance with the International SOLAS Regulations 1974 and Colreg (collision regulation 1972) all ships must be equipped with Navigation equipment, there are many navigation and communication equipment (Navigation and Communication System) above such as:

1. Navigation Light
2. Magnetic compass
3. Other navigation equipment (Other Safety Navigation)

4. Radio Equipment (Radio Equipment)
5. Enco Sounder
6. GPS (Global Positioning System)
7. Ships Radar
8. Engine Telegraph
9. And others

III. RESEARCH METHODS

The research methodology used to obtain primary and secondary data in this study is through:

➤ *Primary data*

1. Observation / observation in the field
 - a. Ship Inventory Survey
 - b. Ship Navigation Equipment Survey
 - c. Traffic Volume Survey
2. Interview

Seek information directly from sources or respondents who are considered to know the conditions that you want to know by asking questions related to navigation equipment on support ships operating at the Lais River Pier in Palembang.

➤ *Secondary Data*

The methods used are:

1. *Institutional Methods*

The Institutional method is a method of collecting data by visiting agencies or offices to obtain secondary data related to this research, namely

2. *Palembang City Transportation Service Office*

3. *Literature Method*

Literature method is an effort to collect data and information based on reference books and regulations that are related to research and it is hoped that the processing of the data that has been obtained can be accounted for.

IV. DISCUSSION & RESULT

Palembang's Lais River Pier is a check-point location for Jukung Ships passing through the Lais River Pier. Each Jukung ship is obliged to transit, perform check points and pay fees according to the existing tariff and be given proof in the form of a ticket by the UPTD River Lais Pier as the supervisor and person in charge of inland water transportation. Apart from that as a transit dock, the Lais River Pier also has a function as the place for the issuance of the Ship Registration Book, Domestic Measurement Letter, River and Lake PAS, River and Lake Ship Operation Approval Letter and Inland Ship Safety Certificate.

The results of data processing of navigation equipment on the Jukung ship at the UPTD Sungai Lais Pier, with data processing results as follows:

No	Jukung ships	Navigation Equipment on Jukung Ships								
		Navigation Light	Magnetic Compass	Radio Equipment	Echosounder	GPS	Ship Radar	Engine Telegraph	Proportion	%
1.	Danil Putra	√							1/7= 0.14	14 %
2.	Sama Indah	√							1/7= 0.14	14 %
3.	Langlang Buana								0/7= 0	0 %
4.	Puji Mandiri								0/7= 0	0 %
5.	Dani Putra 01								0/7= 0	0 %
6.	Mega Akbar								0/7= 0	0 %
7.	Berkat Taba								0/7= 0	0 %
8.	Eka Jaya								0/7= 0	0 %
9.	Cahaya Niaga								0/7= 0	0 %
10.	Dua Putra	√							1/7= 0.14	14 %
11.	Sumber Jaya	√							1/7= 0.14	14 %
12.	Tunas Muda								0/7= 0	0 %
13.	Hidup Baru								0/7= 0	0 %
14.	Aidil Putra								0/7= 0	0 %
15.	Doa Keluarga								0/7= 0	0 %
16.	Aszka Abadi								0/7= 0	0 %
17.	Rustam Jaya								0/7= 0	0 %
18.	Subur Makmur								0/7= 0	0 %
19.	Hidup Baru								0/7= 0	0 %
20.	Sumber Jaya								0/7= 0	0 %
21.	Nadia Jaya								1/7= 0.14	14 %
22.	Jupri Putra								1/7= 0.14	14 %
23.	Doa Jaya								1/7= 0.14	14 %
24.	Sama Berdoa								0/7= 0	0 %
25.	Mega Utama								0/7= 0	0 %
26.	Doa Saudara								0/7= 0	0 %
27.	Setia Kawan								0/7= 0	0 %

28.	Jaya Agung 05								0/7= 0	0 %
29.	Rezki Satria Putra								0/7= 0	0 %
30.	Diah								0/7= 0	0 %
31.	Putra Putri								0/7= 0	0 %
32.	Selamat Jaya								0/7= 0	0 %
33.	5 Putri								0/7= 0	0 %
34.	Sumber Bahagia								0/7= 0	0 %
35.	Jaya Sakti 02								0/7= 0	0 %
36.	Megi Putra 02								0/7= 0	0 %
37.	Sempurna								0/7= 0	0 %
38.	Putri Dewi								0/7= 0	0 %
39.	Bukan Nasa Basi								0/7= 0	0 %
40.	Usaha Baru								0/7= 0	0 %
41.	Harum Jaya								0/7= 0	0 %
42.	Sinar Petang								0/7= 0	0 %
43.	SK Mulya								0/7= 0	0 %
44.	Levi Putra	√							1/7= 0.14	14 %
45.	Caca Putri								0/7= 0	0 %
46.	Dodi Saputra								0/7= 0	0 %
47.	Jasa Utama								0/7= 0	0 %
48.	KhalifahJaya								0/7= 0	0 %
49.	Nur Azizah								0/7= 0	0 %
50.	Sahabat Utama								0/7= 0	0 %
51.	Putri Agung								0/7= 0	0 %
52.	Arkan Putra								0/7= 0	0 %
53.	Murah Rezeki								0/7= 0	0 %
54.	Putra Sanka								0/7= 0	0 %
55.	Beringin Jaya								0/7= 0	0 %
56.	Agung Jati	√							1/7= 0.14	14 %
57.	Sukardi Putra								0/7= 0	0 %
58.	Sumber Jaya								0/7= 0	0 %
59.	Putra Tunggal	√							1/7= 0.14	14 %
60.	Ikhwan Pratama	√							1/7= 0.14	14 %

61.	Keluarga Setia	√							1/7= 0.14	14 %
62.	Rirodi Jaya	√							1/7= 0.14	14 %
63.	Semoga Raya 01								0/7= 0	0 %
64.	Putri Bungsu	√							1/7= 0.14	14 %
65.	Buana Indah 03	√							1/7= 0.14	14 %
66.	Ari Jaya	√							1/7= 0.14	14 %
67.	Selamat Bahagia								0/7= 0	0 %
68.	Berkat Jaya								0/7= 0	0 %
69.	Habibi	√							1/7= 0.14	14 %
70	Murah Rezeki	√							1/7= 0.14	14 %
71	Alam Nirwana 01								0/7= 0	0 %
72	Putra Lematang								0/7= 0	0 %
73	Heri Putra								0/7= 0	0 %
74	Rahmat Ilahi 02								0/7= 0	0 %
75	Hendra								0/7= 0	0 %
76	Sama Cinta 07								0/7= 0	0 %
77	Puji Rahayu								0/7= 0	0 %
78	Andalas								0/7= 0	0 %
79	Mega Remaja								0/7= 0	0 %
80	Anugerah Srijaya								0/7= 0	0 %
81	Netes								0/7= 0	0 %
82	Sani Riono								0/7= 0	0 %
83	Sari Permana								0/7= 0	0 %
84	Nur Rahma								0/7= 0	0 %
85	Cahaya Muda								0/7= 0	0 %
86	Rena Putra								0/7= 0	0 %
87	Sinar Pegagan								0/7= 0	0 %
88	Rahmat Ilahi								0/7= 0	0 %
89	Pria Idaman								0/7= 0	0 %
90	Kawan Kito								0/7= 0	0 %
91	Bunga Impian								0/7= 0	0 %

Table 1. Data for Navigation Equipment Equipment on Jukung Ships at the Lais River Pier in 2020
Sumber: Hasil Survey 2020

1. From field observations, 18 (eighteen) jukung ships only have 1 (one) out of 7 (seven) existing navigation equipment, which is 19.7% of the total incoming jukung ships for 7 (seven) survey days.
2. From the field observation, 73 (seventy three) boats do not have navigation equipment, which is 80.2% of the total incoming jukung ships for 7 (seven) survey days.

➤ *Problem Solving Proposed*

1) *Stipulation of Rules by the Directorate of Land Transportation concerning the Standard of Navigation Equipment on Land Water Ships.*

Currently, the standard for inland ship navigation equipment still refers to the applicable international maritime regulations, namely SOLAS (Safety of Life at Sea) rules, Standard Training Certificate and Watchkeeping (STCW), International Safety Management (ISM) Code, or Marine Pollution (MARPOL).). And it is not right if it is applied to inland water vessels, especially jukung ships, considering that jukung ships are more traditional in nature.

2) *Dissemination of the Importance of Ownership of Navigational Equipment That Should Be Owned by Inland Water Ships, Especially Jukung Ships.*

Socialization must be carried out immediately when the rules are clear so that the fulfillment of the standard needs for navigation equipment on inland water vessels can be immediately met.

3) *Training on the Use of Navigation Equipment*

This needs to be done considering that not all ship operators have the same ability, expertise, educational background and experience in using navigation equipment. For this reason, the media of introduction, learning and practicing the use of navigation tools are carried out during training activities. It is hoped that if training is given to ship operators, the level of security in working in achieving shipping safety can be realized.

4) *Implementation of Supervision Function*

Direct supervision is also applied by regulators who are directly involved in the location by checking / monitoring on a scheduled basis the condition and ownership of navigation equipment that must be on board the support ship, in this case the Lais River UPTD directly under the Palembang City Transportation Agency accompanied by the availability of an inventory list of navigation equipment is on board as well as an examination journal of the condition and needs of navigation equipment.

V. CONCLUSION

From the results of the discussion, the authors can draw the following conclusions:

1. There are no regulations regarding the standard of navigation equipment on inland water vessels.
2. There is no socialization either in the form of introduction or training on understanding the functions, types and ways of using navigation equipment for inland water ship operators, especially on jukung ships.

3. The availability of navigation equipment on the ships is still lacking, namely from the results of field observations as many as 18 (eighteen) ships only have 1 (one) out of 7 (seven) existing navigation equipment, which is 19.7% of the total incoming support ships. during 7 (seven) days of survey and as many as 73 (seventy three) of the ships did not have navigation equipment, namely 80.2% of the total incoming support ships for 7 (seven) survey days.

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