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Professionalism of Marine Inspectors in Actualizing Voyage Safety Towards Zero Accident at the Tanjung Perak Main Class Port

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Abstract

This study examines the important role of Marine Inspectors in ensuring voyage safety and towards Tanjung Perak Surabaya Main Class Port Zero Accident. It examines the professionalism of Marine Inspectors in checking the seaworthiness of ships to sail. This study also analyzes the challenges faced by Marine Inspectors in conducting inspections. The method uses by the researchers is qualitative research methods. The study used observation and interview methods to obtain data. This study found that the ship inspection procedure carried out by the Marine Inspector is in accordance with the procedure. The inspection is not only carried out on the ship's body, but also related machinery and certificates that must be owned before sailing. The processing of these certificates can also be done online through SIMKAPEL. SIMKAPEL is a web-based database to assist certificate processing without having to come to Tanjung Perak Surabaya Main class Port. The professionalism of the Marine Inspector is required to keep the inspection in accordance with the procedure. Professionalism is needed so that every ship sailing can be guaranteed to be seaworthy to minimize the occurrence of accidents while sailing. Although it has been done properly and according to procedure, there are still challenges experienced by Marine Inspectors in conducting inspections. The challenges faced by Marine Inspectors in conducting inspections are adverse weather, lack of attachments from shipowners for ship inspections, and lack of personnel to conduct ship inspections.

Keywords: professionalism, port, evaluation, inspection, seafaring

1. INTRODUCTION

Seafaring is a means to maintain the flow of the economy as well as to maintain the national unity. Seafaring also a boost for the growth of regions that has a nature resource potential but has not been developed yet. The characteristics of seafaring is serves national shipping and reaches all the water areas. Because of the characteristics of the seafaring, there is the need to developed its potential and its role as the medium to connect between regions. The main responsibility in the implementation of seafaring is the safety. The urgency of seafaring safety is also the mission of the International Maritime Organization (IMO).

The Harbormaster and Port Authority Office is a technical executive unit under the direction of Directorate General of Sea Transportation [1] that has the task and responsibility to carrying out the safety and security which includes the implementation of the SOP, supervision and law enforcement. This organization was formed based on the Regulation of the Ministry of Transportation of the Republic of Indonesia No.PM year 2023 regarding the Organization and Work Procedures of the Office of Major Ports and Port Authorities. Through the regulation, the Main Harbormaster Office and Main Port Authority Office were merged to become the Harbormaster and Port Authority Office. The merger is based on the consideration to develop and improve the effectiveness and efficiency of the implementation of tasks [2].

Indonesia has four Main Harbormaster Offices, one of them is the Main Harbormaster Office in Tanjung Perak, Surabaya. This office has the task to coordinating the government activities in the port, supervision, law enforcement, regulation, control, and certification of the seaworthiness of a ship. The ship inspection by Marine Inspector is crucial to decide wheter the ship is seaworthy or not. The inspection is should be based on predetermined rules and uses the proper inspection method so that every ship that has been declared seaworthy could sail and become a means of sea transportation [3]. Meanwhile the ships that declared not seaworthy are not allowed to sail to avoid accidents.

Sea worthiness is a condition of a ship that meets all the requirements stipulated in Law No. 17 of 2008 concerning Indonesian Shipping [4]. Seaworthy ships are given permission to sail issued by the local Port Harbormaster with the issuance of a Sailing Approval Letter. The Directorate General of Sea Transportation through the Harbormaster carries out the process of supervising the fulfillment of the statutory provisions to ensure the safety and security of the seafaring. Marine Inspectors are the forefront of marine safety and their professionalism reflects how well safety of all Indonesian vessels is maintained. Marine Inspector (MI) is the forefront in the implementation and achievement of seafaring safety. To actualize marine transportation towards zero accident, synergy is needed from regulators, as well as the professionalism of marine inspectors, operators and users of marine transportation services.

This research aims to analyze the professionalism of marine inspector performance at Tanjung Perak Harbormaster Office Surabaya and whether the implementation of marine inspector authority is in accordance with PM No. 110 of 2016 [5]. This research is hoped to be useful for the development of maritime law to expand knowledge and add references related to Harbormaster's authority on seafaring safety and security in Law No. 17 of 2008 on Seafaring [6]. This research is also expected to be a development resource for sea transportation service companies. It also contributes to the control of security, safety and comfort of sea transportation passengers.

Before analyzing further, it is essential to understand the meaning of professionalism. Professionalism can be interpreted as a person's ability and skill in performing a job according to their respective fields and levels. Professionalism concerns the match between the abilities possessed by a person and the needs of the task as well as the fulfillment of the match between the abilities and the needs of the task. Professionalism is also related to skills, services and strict supervision [7, p. 137]. Another opinion states that professionalism is a barometer of employee expertise at work [8, p. 96].

PM 110 of 2016 categorizes marine inspectors into three categories [9]. The first is Assistant Marine Inspector, a marine safety inspector who has attended and passed the Marine Safety Inspector Education which has been appointed by the Minister but has not been confirmed by the Director General. Then there are Marine Inspectors, Assistant Marine Inspectors who have been confirmed by the Director General. The last one is Senior Marine Inspector, an active Marine Inspector who is appointed with certain requirements.

To control the safety of seafaring internationally, the following provisions are in place:

A. International Convention for the Safety of Live at Sea (SOLAS) 1974
B. International Safety Management (ISM) Code and International Ship and Port Facility Security (ISPS) Code
C. International Convention on Standards of Training, Certification and Watch Keeping for Seafarers 1978 and last amended on 1995
D. International Convention on Maritime Search and Rescue 1979
E. International aeronautical and Maritime Search and Rescue Manual (LAMSA).

Stability and navigation are important in ship safety. There are three points of force concentration that affect ship stability [10]. The three points are center of bouyancy, gravity and metacenter. While navigation is used to sail the ship safely. The GPA (Global Posistioning System) system makes it easy for navigators to know the position of the ship. There is also AIS (Automatic Identification System) tool that help navigators to monitor the presence of other ships around them. The radar system also makes it easier for navigators to steer the ship when sailing at night.

The Harbormaster conducts an inspection for ships that are about to sail. In conducting the inspection, the Harbormaster collects and processes data, information and/or evidence carried out objectively and professionally based on an inspection standard to test compliance with the fulfillment of requirements, Inspection of foreign-flagged vessels (Port State Control) is based on the Safety of Life at Sea 1974. The inspection carried out by the Harbormaster ensures that the ship has valid certificates and meets all the provisions in the SOLAS convention. Not only is the completion of the documents checked but also checks for ship accidents that occur. The examination of ship accidents includes a preliminary examination conducted by the Harbormaster and continued by the Maritime Court.

2. METHODOLOGY

This research uses qualitative approach. Creswell [11] tates that a qualitative approach can produce findings that cannot be obtained using statistical procedures or other quantitative methods. Questions asked by why, what and how can be researched using a qualitative approach [11]. This research was conducted using the

case study method. Creswell [12] states that this method explores a problem in detail with in-depth data collection and incorporates various sources of information. The case study method focuses on a particular case that is studied to research issues or problems using the case so that it can describe the complexity of the problem under study.

This research uses two types of data, primary and secondary. The researchers obtains primary data from respondents' answers to the interviews conducted and the secondary data from literature, journals and other sources used to support this research.

The interview to obtain the data is in 15-30 minutes in the office of each respondent who had agreed to be interviewed during their free time. In addition to interviews, researchers also conducts observations to obtain secondary data to support the primary data. The researchers made observations by taking photographs related to letters and other documents as evidence to support the data obtained from the interviews. The photos not only contain supporting documents but also contain ship inspection events.

The data is then analyzed using three steps. The three steps of analysis are data condensation, data presentation and drawing conclusions [13]. Data condensation is the process of selecting the selected data, simplifying, abstracting and formatting the data contained in the interview field notes.

After the data is presented, the researcher draws simulants from all the data to present the results in the study.

3. RESULT AND DISCUSSION

a. Brief History of the Tanjung Perak Harbormaster and Port Authority Office

The Port Authority Office is a government agency at the port that is tasked with regulating, controlling and supervising port activities that are commercially operated with the aim of increasing fair competition and performance efficiency for all ports in Indonesia. Tanjung Perak Port Surabaya is one of the main ports in Indonesia which is a collector and distributor of goods to and from Eastern Indonesia. The Tanjung Perak Port development plan was initiated by the increase in East Indies export commodities at the end of the 18th century. This plan was supported by the acceleration of transportation for exports to Europe which had to be balanced with improved facilities at existing ports. The idea was then continued but shortened with only the construction of docks in the area around Tanjung Perak.

The construction of this port was planned in 1908 and actualized in 1912. The development area became known as Terminal Jamrud, Terminal Mirah and Terminal Nilam. Despite development in the Tanjung Perak area, the Kalimas Estuary is still used today to serve the traditional island armada.

The city of Surabaya, which later developed into a port city due to economic and trade development, has succeeded in achieving the vision of port development at that time. The vision was to create a port complex spanning from Gresik to Surabaya. In fact, the Tanjung Perak Port area has been considered as a unified area of docks, terminals and ports.

b. Profile of the Tanjung Perak Harbormaster and Port Authority Office

The Tanjung Perak Surabaya Main Port Authority Office is one of four main port authority offices in Indonesia, each of which is located in accordance with the main ports in Indonesia. The office is located within the Tanjung Perak Surabaya Port Complex with geographical coordinates of 1120 44'100“ - 1120 32'40” East Longitude and 7 0 11'50“ - 700 13'20” South Latitude. Administratively, this office is the regulator of ports and terminals located in Surabaya, Gresik and Bangkalan.

The vision of the Tanjung Perak Main Port Authority Office is the establishment of national connectivity that is reliable, competitive and provides additional value. Apart from being based on regulations, the implementation of the duties and functions of the Tanjung Perak Main Port Authority Office is based on its vision. The mission of the Tanjung Perak Main Port Authority Office to achieve its vision is:

a) Improve transportation safety and security in an effort to improve transportation services
b) Improve public accessibility to transportation services to support the development of inter-regional connectivity
c) Improve the quality of transportation services
d) Improve the infrastructure and facilities quality of transportation services
e) Increase the role of the region, State-Owned Enterprises and the private sector in the provision of infrastructure in the transportation sector

f) Restructuring and reform in the field of regulations, institutions, human resources and consistent implementation of law enforcement
g) Achieving the development of environmentally friendly transportation and transportation technology to anticipate climate change.

The Marine Inspector at Tanjung Perak Harbormaster and Port Authority Office has three sections, Marine Inspector Nautical, Marine Inspector Radio, and Marine Inspector Technical. Likewise, the Legal Status and Ship Certification Division has 2 sections with different tasks:

1) Legal Status of Vessels Section
   Preparing materials for measurement, registration, name transfer, mortgage and nationality certificate, replacement of ship's flag and installation of nautical marks.
2) Vessel Certification Section
   Conducting inspection, surveillance of vessel design, supervising the construction, overhaul and docking of vessels. The duties of the Vessel Certification Section also include nautical, technical, radio, electrical testing of the vessel, calculation and testing of vessel's stability, layer trials, equipment testing, verification and preparation of materials for the issuance of ship safety certificates, safety management and prevention of pollution from ships, tank cleaning, and protection of pollution compensation.

c. Analysis of the Problems

Based on the results of the observations, the researcher find that the Marine Inspector as a Cadet has the task of assisting in conducting inspections, surveillance of the vessel's design, supervision of the construction, overhaul and docking of vessels, inspection and testing of the vessel's seaworthiness (nautical, technical, radio, vessel's electronics), calculation and testing of vessel stability, sailing trials, equipment testing, verification and preparation of materials for the issuance of vessel safety certificates, safety management and prevention of pollution from vessels, tank cleaning and protection of pollution compensation. In the observation, the researchers participated in the inspection of docking vessels with Marine inspector Nautical, Technical and Radio.

d. Appropriate Vessel Inspection Procedure

The appropriate vessel inspection procedures are as follows:

a. Marine inspector Nautis
   The main tasks carried out in the vessel inspection procedure are:
   1) External hull inspection
   2) Inspection of the inner hull, inspection of the vessel's rudder, and conducting pressure tests and efficiency tests of the vessel
   3) Inspection of navigation equipment
   4) Safety equipment inspection
   5) Fire prevention check
b. Marine inspector Radio
   The main tasks carried out in the vessel inspection procedure are:
   a) Inspection of non-GMDSS (Global Maritime Distress and Safety System) conventional Radio installations
   b) Inspection of GMDSS conventional Radio installations
c. Marine inspector Technique
   The main tasks carried out in the vessel inspection procedure are:
   a) Inspection of equipment in the engine room
   b) Inspection of electrical installations

The Maritime Inspector will conduct the inspection based on the guidelines and fill in the inspection report form as shown in Figure 1 to determine the seaworthiness of the vessel to be certified.

	DIREKTORAT JENDERAL PERHUBUNGAN LAUT SYAHBANDAR UTAMA TG. PERAK	NTR-I
	LAPORAN PEMERIKSAAN KAPAL	

DATA UMUM KAPAL

Nama Kapal		
Jenis Kapal		
Call Sign / No. MMSI		
IMO Number		
Nama Pemilik Alamat Pemilik /Operator		
Keagenan		
Tempat & tanda pendaftaran		
Tempat & tgl kontrak pembangunan		
Tgl. penyerahan		
Isi Kotor (GT)		
Panjang keseluruhan		LOA :
Kelas & Tanda kelas '		
Daerah Pelayaran		
Jumlah ABK + Nahkoda		
Rebuild / Bangunan Baru / Lama		
Tempat & tgl. dok terakhir		
Tempat pemeriksaan		
Tanggal pemeriksaan	1.	
	2.	
	3.	
Jenis pemeriksaan		
Uraian pemeriksaan		
Pemeriksaan umum y.a.d		
Tgl. masa berlakunya sertifikat		
Tempat & tgl pengeluaran sertifikat		
PUP 1 No.		
Marine Inspector		

Figure 1. Form NTR Vessel Inspection Report

1. Vessel Certificate Processing Procedure

In processing a vessel certificate, the owner must make an application and complete the requirements for processing the certificate. After this stage is complete, the owner must come to Tanjung Perak Harbormaster and Port Authority Office and submit the application. Checking the application and requirements is then carried out by the vessel certification section officer. After checking is complete, the pays the Non-Tax Revenue and Supporting Test Inspection. After the payment is complete, the certification officer then appoints or notifies the Marine Inspector officer.
The Marine Inspector must then coordinate with the owner to conduct a vessel inspection. The inspection is carried out by the Marine Inspector together with the deck officer and engine officer. Once the inspection stage is complete, the certificate can be processed immediately. The certification process can be delayed if the certification officer finds any deficiencies in the attachments made by the vessel owner or during the vessel inspection.

2. The Certification Process

A. Tonnage Certification

A certificate given after the measurement of a vessel by a surveyor and an authorized government agency. Tonnage Certificate is an authorization of the size and tonnage of the vessel according to the applicable provisions. The procedures for obtaining this certificate are:
a) Apply for a new vessel measurement addressed to the Tanjung Perak Harbormaster and Port Authority Office.
b) The application letter will be scheduled in the incoming letter agenda by the administration section of the Tanjung Perak Harbormaster and Port Authority Office and the application letter will be given a certificate of inspection.
c) Once the letter is scheduled by the administration department, the application letter file is brought to the head of the seaworthiness field at the Tanjung Perak Harbormaster and Port Authority Office to be given a disposition.
d) The disposition of the head of the division, the applicant brings it to the head of the measurement division and the legal status of the vessel at the Tanjung Perak Harbormaster and Port Authority office where the

head of the division will appoint a measuring expert to carry out the task of measuring the vessel.
e) The applicant will then meet the measuring expert who has been selected by the division head to go together to the location of the vessel where the measuring expert is carrying out the task.
f) After the measuring expert carries out their duties, the measuring officer immediately makes a measuring list and temporary measuring certificate.
g) The measuring list and temporary measuring certificate are brought by the applicant back to the head of the measurement division and the legal status of the vessel to be scrutinized and signed.
h) The applicant brings the files to the head of the division who will sign the measuring list and temporary measuring certificate and then signed by the head of Harbormaster and Port Authority Office.
i) The documents are completed and handed over to the applicant.
j) To obtain a permanent measurement letter, the temporary measurement letter from the local Harbor Master and Port Authority Office must be authorized by the central Directorate General of Transportation to be legalized.

B. Certificate of Registry

This certificate states that the vessel has been recorded in the vessel's register. The purpose of having this certificate is to obtain proof of the vessel's nationality after obtaining a letter of measurement. By doing so, the vessel is eligible to fly the flag of the state and has legal protection. There are four types of this certification:

a) A nautical certificate is granted to vessels of $500m^3$ or more (gross contents) that are not fishing vessels or cruise ships
b) A vessel pass is issued to vessels of 20□3 or more (gross displacement) but less than 500□3, which are not fishing vessels or yachts, under the name of an annual pass
c) A small pass (blue pass) is issued to vessels of less than 20□3 gross displacement or fishing boats and yachts
d) Model E is a temporary sea certificate issued by the Harbormaster for new vessels

C. SOLAS/Seaworthiness Certificate

This certificate is given to ships that have met the safety requirements for sailing. SOLAS certificate is issued by the Directorate General of Sea Transportation for voyages on all seas. Based on the 1974 SOLAS regulation, a safety certificate consists of:

a) Cargo Ship Safety Construction Certificate
   Certificate for vessels that have met the requirements of construction materials, machinery, electricity, stability, arrangement and equipment including radio and vessel electronics based on the results of the inspection. Issued by the Directorate General of Sea Transportation
b) Cargo Ship Safety Equipment Certificate
   A certificate used to verify the eligibility of a freighter to sail. This certificate is one of the seaworthiness requirements. This certificate is a part of the certificate of safety of goods. Issued by the Directorate General of Sea Transportation
c) Cargo Ship Safety Radio Certificate
   One of the requirements for seaworthiness to sail. The vessel's radio is one of the most important components, therefore the feasibility of the vessel's radio can determine whether the vessel can be declared seaworthy or not. This certificate is a part of the certificate of safety of goods. Issued by the Directorate General of Sea Transportation

The stages of issuing these certificates are:

a) Apply for the issuance of a certificate of safety of the construction of a freighter, a certificate of safety of the equipment of a freighter, and a certificate of radio safety addressed to the Tanjung Perak Harbormaster and Port Authority Office.
b) The application letter will be given a letter dress by the administrative officer, then submitted to the head of the vessel seaworthiness division for disposition.
c) After being given a disposition by the head of the division, the applicant goes to the head of the vessel safety section to be given a directive (appointment of a Marine inspector) who will carry out the inspection of safety equipment on board.
d) The applicant meets the Marine inspector who has been appointed by the division head to jointly board

the ship, where the Marine inspector will check all the safety equipment on board including radio equipment which must meet safety requirements in accordance with applicable rules.

e) Marine inspectors evaluate and process the nautical technical and radio report (NTR), to be used as a recommendation for the issuance of safety certificates in accordance with the rules in SOLAS 1973.
f) After evaluating all files and NTR reports from Marine inspectors, the head of the division will sign the NTR report as a sign of approval for the issuance of safety certificates.
g) The certificate is made / typed by the vessel safety division staff that has been in accordance with the data in the NTR report made by the Marine inspector and approved by the head of the division.
h) After the certificate is issued, it will be signed by the head of the vessel safety section.
i) The certificate is signed by the head of the vessel seaworthiness section and signed by the head of Tanjung Perak Harbormaster and Port Authority Office.
j) The certificate is numbered and handed to the applicant.

D. Freeboard Certificate/Load Line Certificate

A certificate contains information on the minimum and maximum freeboard so that ship stability is maintained. It is issued by the Directorate of Sea Transportation and the classification bureau. The stages of issuing this certificate are:

a) Apply for the issuance of a temporary load line certificate because the ship has not been registered in the classification, to the Tanjung Perak Harbormaster and Port Authority Office.
b) The application letter will be given a letter dress by the administrative officer, then submitted to the head of the vessel seaworthiness division for disposition.
c) After being given a disposition by the head of the division, the applicant goes to the head of the vessel safety division to be given a directive (appointment of a Marine inspector) who will carry out the inspection of the vessel's loading line.
d) The applicant meets the Marine inspector who has been appointed by the division head to board the vessel together, where the Marine inspector will inspect, and measure the vessel's load line in accordance with the vessel's load line regulations.
e) The Marine inspector evaluates and processes the written report on the vessel's load line, to be used as a recommendation for the issuance of a (temporary) load line certificate.
f) After evaluating all files and reports from the Marine inspector, the head of the division will sign the report on the results of the vessel's load line inspection.
g) The certificate is made/typed by the vessel safety staff in accordance with the data in the report made by the marine inspector and approved by the head of the division.
h) The certificate will be signed by the division head of the vessel safety division.
i) The certificate is signed by the head of the division of vessel seaworthiness and signed by the head of Harbormaster and Port Authority Office.
j) The certificate is numbered and handed over to the applicant.

E. National Pollution Prevention Certificate

A certificate that acknowledges that the vessel is equipped with the required equipment. It is issued by the Directorate General of Sea Transportation in this case the Harbormaster and Port Authority Office. The certificate is given contains several elements of the list of inspection results that shows the feasibility of the ship. The certificate is depicted in Figure 2.

REPUBLIK INDONESIA
Republic of Indonesia

SERTIFIKAT NASIONAL
PENCEGAHAN PENCEMARAN DARI KAPAL
NATIONAL POLLUTION PREVENTION CERTIFICATE
NO. **AL.601/605/2/DK/2023**

Diterbitkan menurut ketentuan
Issued under the provisions of the
UNDANG - UNDANG REPUBLIK INDONESIA NO.17 TAHUN 2008
TENTANG PELAYARAN
INDONESIAN SHIPPING ACT NO. 17, 2008
Untuk Memenuhi
To comply with
Peraturan Menteri Perhubungan No 29 Tahun 2014 Tentang Pencegahan Pencemaran Lingkungan Maritim
Minister Of Transportation Regulation No. 29, 2014 on the Maritime Environment Pollution Prevention

Nama kapal *Name of ship*	Angka atau huruf pengenal *Distinctive number or letters*	Pelabuhan pendaftaran *Port of registry*	Tonase kotor *Gross tonnage*	Nomor IMO *IMO Number*
GAS NUSA Eks. MARINER	YBCA2	BATAM	17980	9178678

DENGAN INI DINYATAKAN :
THIS IS TO CERTIFY

1. **Bahwa kapal telah diperiksa sesuai Pasal 57 Peraturan Menteri Perhubungan No. 29 tahun 2014 tanggal 6 Agustus 2014 tentang Pencegahan Pencemaran Lingkungan Maritim.**
That the ship has been surveyed in accordance with Article 57 of Minister of Transportation Regulation No. 29, 2014, which entered into force on 6 August 2014 on the Maritime Environment Pollution Prevention.

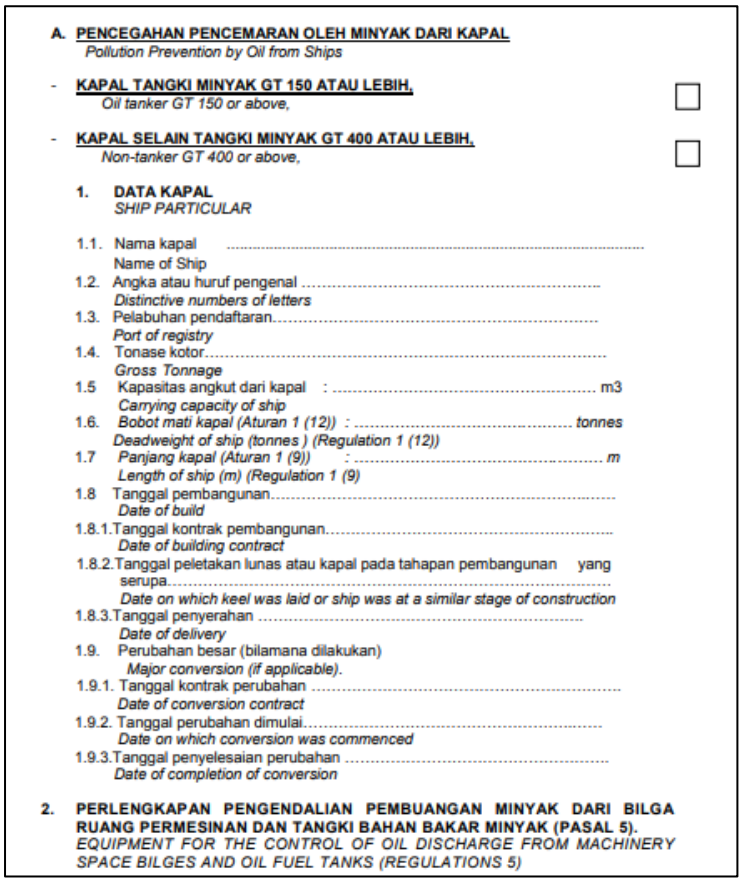
Figure 2. National Pollution Prevention Certificate

F. International Certificate of Prevention of Oil Pollution

This certificate is specialized only for tankers with international and national sailing routes with a gross displacement of 500 GT to 3000 GT or more. To have this certificate and extend the validity of the certificate, the vessel must go through periodic inspections according to the rules. The execution carried out by the operational and agency divisions at the Harbormaster and Port Authority Office are:

a) Apply for the issuance of the certificate, to the Harbormaster and Port Authority Office.
b) The application letter will be given a letter dress by the administrative officer, then submitted to the head of the vessel seaworthiness division to be given a disposition.
c) After being given a disposition by the head of the division, the applicant goes to the head of the vessel safety division to be given a directive (appointment of a Marine inspector) who will carry out an inspection of the vessel's construction and equipment on board.
d) The applicant meets the Marine inspector who has been appointed by the division head to jointly board the vessel, where the Marine inspector will check all the feasibility of the vessel's construction and equipment and drawings of equipment installations on board that have met safety requirements with the rules that have been applied.
e) Marine inspectors evaluate and process the written report, to be used as a recommendation for the issuance of the certificate.
f) After evaluating all files and reports from the Marine inspector, the head of the division will sign the report as a sign of approval for the issuance of an International certificate of the feasibility of transporting hazardous chemicals in bulk.
g) The certificate is made/typed by vessel safety staff in accordance with the data in the report made by the Marine inspector and approved by the head of the division.
h) After issuance, it will be signed by the head of the vessel's safety division.
i) Certificate signed by the head of the division of vessel's seaworthiness and signed by the head of Harbormaster and Port Authority Office.
j) The certificate is numbered and handed over to the applicant

The format of the checklist of the vessel's technical condition inspection report for pollution prevention equipment in accordance with the Decree of the Ministry of Transportation PM. 29 of 2014 on Maritime Environmental Protection in the Context of Issuing Post Registration Number Certificates for oil tank vessels of GT 150 or more and vessels other than oil tanks of GT 400 or more (NCVS) is depicted in Figure 3.



A. **PENCEGAHAN PENCEMARAN OLEH MINYAK DARI KAPAL**
Pollution Prevention by Oil from Ships

- **KAPAL TANGKI MINYAK GT 150 ATAU LEBIH,** ☐
Oil tanker GT 150 or above,

- **KAPAL SELAIN TANGKI MINYAK GT 400 ATAU LEBIH,** ☐
Non-tanker GT 400 or above,

1. **DATA KAPAL**
SHIP PARTICULAR

1.1. Nama kapal .....
Name of Ship
1.2. Angka atau huruf pengenal .....
Distinctive numbers of letters
1.3. Pelabuhan pendaftaran.....
Port of registry
1.4. Tonase kotor.....
Gross Tonnage
1.5 Kapasitas angkut dari kapal : m3
Carrying capacity of ship
1.6. *Bobot mati kapal (Aturan 1 (12)) : ..... tonnes*
Deadweight of ship (tonnes) (Regulation 1 (12))
1.7 *Panjang kapal (Aturan 1 (9)) : ..... m*
Length of ship (m) (Regulation 1 (9)
1.8 Tanggal pembangunan.....
Date of build
1.8.1.Tanggal kontrak pembangunan.....
Date of building contract
1.8.2.Tanggal peletakan lunas atau kapal pada tahapan pembangunan yang serupa.....
Date on which keel was laid or ship was at a similar stage of construction
1.8.3.Tanggal penyerahan .....
Date of delivery
1.9. Perubahan besar (bilamana dilakukan)
Major conversion (if applicable).
1.9.1. Tanggal kontrak perubahan .....
Date of conversion contract
1.9.2. Tanggal perubahan dimulai.....
Date on which conversion was commenced
1.9.3.Tanggal penyelesaian perubahan .....
Date of completion of conversion

2. **PERLENGKAPAN PENGENDALIAN PEMBUANGAN MINYAK DARI BILGA RUANG PERMESINAN DAN TANGKI BAHAN BAKAR MINYAK (PASAL 5).**
EQUIPMENT FOR THE CONTROL OF OIL DISCHARGE FROM MACHINERY SPACE BILGES AND OIL FUEL TANKS (REGULATIONS 5)

Figure 3. Port Registration Number Certificate Check Sheet

3. Problem Discussion

A. Professionalism of Marine Inspectors in Executing Vessel Inspection Procedures

The vessel inspection procedures undertaken are in accordance with the vessel inspection handbook and the technical guidelines for marine transportation safety authorized by the Directorate General of Sea Transportation and the Directorate of Shipping and Seafaring. The appropriate vessel inspection procedures are:

a) Marine Inspector Nautis

Conduct an external inspection on the hull and deck plates that are easily corroded, damaged and deformed. For traditional vessels more than ten years old, a sufficient number of bottom layers are removed for inspection. The external inspection involves the hatch covers and engine casings, ventilator covers, air pipe covers on open decks, relief holes, and side windows. In addition, an internal inspection of the hull and tanks is also carried out which causes rust; damage and deformation, internal inspection of loading spaces; engine rooms; accommodation rooms and tanks. Furthermore, an inspection of the vessel's rudder is carried out. The rudder must be lifted or opened to be tested for rust, damage, loose clutch bolts and bearings that are free to rotate, if the condition is in good condition then it does not need to be opened.

b) Marine Inspector Radio

Marine Inspector Radio has the main task of inspecting Non GMDSS (Global Maritime Distress and Safety System) and GMDSS Conventional Radio Installations. Inspect Non GMDSS conventional radio installations such as: Auto Alarm; Receiving aircraft; Main installation; Reserve installation; VHF installation; Navtex receiver; EPIRB satellite; Power source; Antenna; Tools and spare; Clock; Lighting in radio room. Furthermore, the examination of GMDSS conventional radio installations such as: VHF installation; MF installation; IMMARSAT; MF/HF installation; Navtex receiver; SART; and EPIRB satellite.

c) Technical Marine Inspector

The Technical Inspector will inspect equipment in the engine room such as: main engines, auxillary engines and generators, boilers, other important machinery and pressure vessels, pipes, bilge lines, cleanliness in the engine room and in the control room, protective fences, and means of escape.

Furthermore, the inspection of electrical installations such as: lighting in the engine room, lighting in the accommodation space, lighting in the control station and other rooms, electrical cables, emergency lights, emergency power sources on generators, remote stop equipment on motors, alarms for Unmaned Machinery System (UMS), power sources for navigation lights, electricity to the steering room and electro hydrolic steering, and change over tests on auxiliary power sources.

To prevent accidents and actualize Zero Accident in seafaring, the following shall not be done:

a) Nautical marine inspectors should not only inspect certain parts of the ship, but must also inspect and conduct pressure tests and ship efficiency tests.
b) Not inspecting all navigation equipment written in the vessel inspection handbook and sea transportation safety technical manual and not providing a note on the replacement of vessel navigation equipment spare parts that must be replaced or added to meet the seaworthiness of the vessel.
c) Not inspecting all safety equipment written in the vessel inspection handbook and sea transportation safety technical manual and not providing a record of replacement of safety equipment spare parts that must be replaced or added to make the vessel seaworthy.
d) Not inspecting all fire prevention equipment listed in the vessel inspection handbook and marine transportation safety technical manual and not providing a record of replacement of fire prevention equipment spares that must be replaced or added to make the vessel seaworthy.
e) Not checking all radio installations such as non-GMDSS (Global Maritime Distress and Safety System) conventional radios and GMDSS radios written in the vessel inspection handbook and sea transportation safety technical manuals and not providing records of replacement radio installation spare parts that must be replaced or added to meet the vessel's seaworthiness.
f) Not checking all vessel engines such as main engines, auxillary engines and generators, boilers, other important engines and pipes and cleanliness in the engine room and control room of the vessel as written in the vessel inspection handbook and sea transportation safety technical manual and not providing a record of the replacement of vessel engine spare parts that must be replaced or added to meet the seaworthiness of the vessel.

Vessel inspection is crucial because it is a requirement to be able to determine whether the vessel is seaworthy or not. Usually the vessel is inspected before cast off by the Marine inspector. The Marine inspector must be based on predetermined rules and use the appropriate method of vessel inspection when conducting the inspection. So that every vessel that has been inspected and declared seaworthy can sail and be used as a transportation, and those declared not seaworthy are not allowed to sail in order to avoid or reduce the risk of collisions and vessel accidents at sea.

B. Appropriate Certificate Issuance Procedure

In vessel operations, vessels must meet seaworthiness requirements to ensure vessel safety, crew safety, and environmental protection [14]. Seafaring safety is a priority in ship operational activities [15]. Some factors that affect safety are by preparing a seaworthy vessel [15], [16]. The components that must be prepared to establish a seaworthy vessel involve ensuring the security and safety of the vessel, preventing pollution in the waters, manning, loading lines, loading, crew welfare, passenger health, vessel legal status and certification, and safety and security management to allow the vessel to sail in. Therefore, the vessel's legal status and certification are important components in ensuring a vessel is seaworthy [17]. However, there are vessels that are not seaworthy but are forced to sail because the assessment of whether a vessel is seaworthy or not is still subjective and not always clear [17]. The research that the authors conducted was when the agent carried out the certificate issuance process at the Tanjung Perak Harbormaster and Port Authority Office. The certificates issued from the office are Cargo Ship Safety Construction Certificate, Cargo Ship Safety Equipment Certificate, Cargo Ship Safety Radio Certificate and International Certificate of Fitness for The Carriage of Dangerous Chemicals in Bulk.

C. Implementation of Certification through the Use of SIMKAPEL Application in Processing Vessel Safety Certificates

SIMKAPEL (Sistem Informasi Perkapalan dan Kepelautan/Shipping and Seafaring Information System) is a national shipping and seafaring web-based database that facilitates users of shipping and seafaring services while still prioritizing the best, convenient and integrated services in one service platform. Web-based

applications can be run through operating systems such as Windows, Linux, Mac Os, and so on. In addition, to run this web-based application on various computers, it does not need to be installed on each computer and can be used with an internet connection remotely.
Prior to SIMKAPEL, the process of applying for and monitoring vessel safety certificates was manual and time-consuming. It could lead to unnecessary delays and complexity. The implementation of SIMKAPEL aims to improve efficiency, transparency and accountability in the management of vessel safety certification in Indonesia. The application allows vessel owners to apply, track and manage their certificates more easily and quickly. SIMKAPEL covers various types of vessel safety certificates that are mandatory for every vessel operating in Indonesia. The mandatory items for every sailing vessel are certificate of seaworthiness, construction safety certificate, equipment safety certificate, radio safety certificate, and loading line certificate. Through SIMKAPEL, vessel owners can easily fulfill these requirements and ensure compliance with maritime safety regulations.

a. SIMKAPEL Application Features and Functions

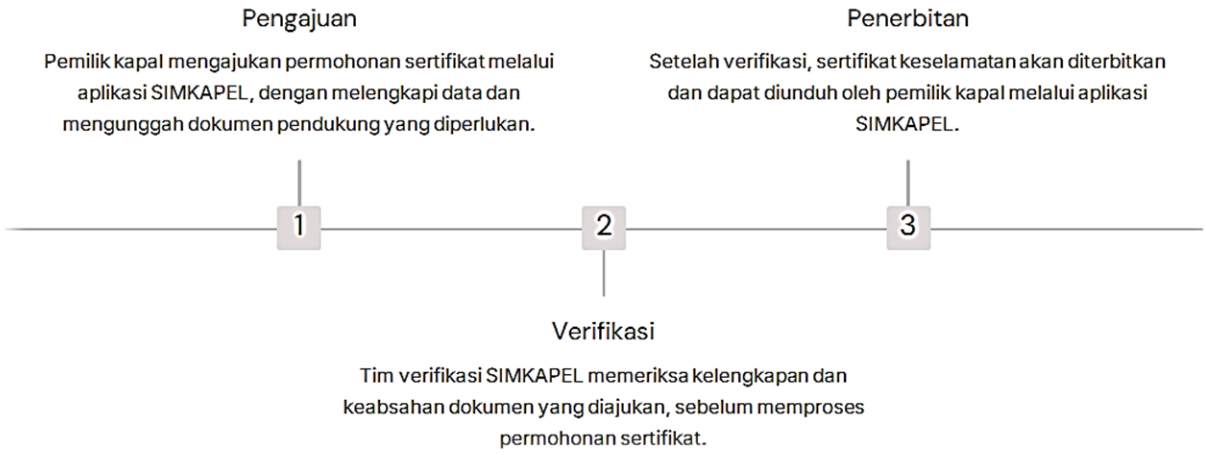
a) Certificate Application
SIMKAPEL allows vessel owners to apply for a safety certificate online, by uploading the required supporting documents.

b) Status Monitoring
Users can track the status of their certificate application, from the application stage to certificate issuance.

c) Due Notification
The application will alert users of the expiry of their certificate, so that they can apply for renewal on time.

d) Digital Archive
SIMKAPEL stores all certificate documents digitally, providing easy access and reporting for ship owners.

b. Process Flow of Safety Certificate Processing through SIMKAPEL



c. Advantages of using SIMKAPEL

a) Efficiency: The process of applying and monitoring certificates becomes faster and simpler, reducing the time and costs required.
b) Transparency: SIMKAPEL provides full visibility of certificate application status, increasing accountability and trust.
c) Compliance: Ensure vessel owners meet safety certification requirements in accordance with applicable maritime regulations.

d. Supporting Document Requirements

To apply for a safety certificate through SIMKAPEL, the vessel owner must prepare several supporting documents, such as:

1) Application Letter for Certificate Issuance
2) Copy of Certificate of Seaworthiness
3) Vessel General Plan Document
4) Copy of Vessel Measurement Letter
5) Copy of Vessel Ownership Document

In addition, vessel owners must also fulfill technical and administrative requirements in accordance with the type of certificate being applied for.

e. The procedure for applying for a certificate through SIMKAPEL

1. Vessel owners can access the SIMKAPEL application through the official website of the Directorate General of Sea Transportation
2. The user fills in the certificate submission form and uploads the required supporting documents
3. The SIMKAPEL team will verify the submission and issue the certificate in accordance with applicable regulations
4. The issued certificate can be downloaded by the vessel owner through the SIMKAPEL application
   The Directorate General of Sea Transportation conducts regular monitoring and evaluation of the use of SIMKAPEL. The monitoring aims to ensure the application is functioning properly, identify problems or issues, and develop improvements and feature enhancements in the future. Feedback from users is also an important input in the SIMKAPEL evaluation and development process.

4. CONCLUSION

Marine Inspectors at Tanjung Perak Harbormaster and Port Authority Office play a crucial role in ensuring the safety of shipping through strict inspection procedures and vessel certification. The inspection procedures applied by marine inspectors follow the technical guidelines set by the Directorate General of Sea Transportation. The inspection procedures are hull inspections, engine room equipment and radio installations all aimed at identifying potential risks and ensuring the seaworthiness of the vessel.
Although certification procedures are in place, challenges such as bad weather, lack of personnel and paperwork can impact the efficiency of port operations. Tanjung Perak Harbormaster and Port Authority Office shows a high commitment in achieving zero accidents by implementing various occupational safety and health programs, as well as safety campaigns.

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