



## The Effect of Implementing Pertamina Safety Approval (PSA) and Safety Training on Work Safety Mediated by Safety Culture on PT Pertamina International Shipping Ship Fleet

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### Abstract

*Pertamina Safety Approval (PSA) is a document that is shown when the ship has met the standards and criteria of the vetting inspection results. The aim of the research is to determine the effect of implementing Pertamina Safety Approval (PSA) and safety training on work safety mediated by safety culture on PT's fleet of ships. Pertamina International Shipping. Method presearch with an explanatory quantitative approach. The number of samples is 90 respondents who have a PSA and are on board in 2022. The analysis tools used are SPSS and SEMPLS. The research results show that there is a direct and indirect influence between the implementation of Pertamina Safety Approval (PSA) and safety training on work safety mediated by safety culture on PT's fleet of ships. Pertamina International Shipping.*

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### INTRODUCTION

According to the Message of the Minister of BUMN of the Republic of Indonesia No S-616/ MBU/ 08/ 2021, PT Pertamina International Shipping (PIS) has been formally changed to Subholding Integrated Marine Logistics. This describes the results of the

agreement to restructure Subholding Shipping as Subholding Integrated Marine Logistics. In the beginning, the company wanted to carry out reliable charter outs in accordance with the applicable shipping applications (Dalaklis, 2017; Gavalas et al., 2022). PIS, a leading national shipping industry, seizes the opportunity to

benefit from shipping business management that is reliable and in accordance with Indonesian shipping practices. PIS can also gain financial benefits through tax incentives, which allow them to sell at more competitive prices with a commitment to good service. Because Indonesia is an archipelagic country, PIS is very helpful in meeting energy needs in many places in the country. Especially with the Sea Highway created by the Indonesian government, PIS helps send goods more easily throughout Indonesia. This will certainly increase the balance of logistics prices for all goods throughout Indonesia. Thus, PT PIS, as a subholding of Integrated Marine Logistics, manages 6 strategic stops. PIS has continued to grow since its founding in 2016. This includes building a subsidiary in Singapore, Pertamina International Shipping Pte Ltd., and a subsidiary in Singapore, PIS Polaris Pte Ltd. and PIS Paragon Pte Ltd. As a subsidiary of PT Pertamina (PERSERO), PT Pertamina International Shipping (PIS) continues to be committed to improving the quality and service of Indonesian workers. In order to fulfill this commitment, PT Pertamina International Shipping has just held a coordination meeting on March 25 2021.

The purpose of this coordination meeting is to determine that all PT Pertamina International Shipping organs are able to move forward simultaneously to achieve goals and ensure that the industrial business continues to run. In the Coordination Meeting of the Directorate of Operations for Pertamina International Shipping (PIS), all Pertamina officers were required to remain enthusiastic and confident when experiencing uncertain challenges in the future in the boat and sea business. This commitment is in line with Pertamina International Shipping's (PIS) vision to become the leading shipping industry in Asia and encourage Indonesia's economic development. PIS also has a mission to act as an

agent for Indonesia's economic development. Empowering industry in the country is the goal of increasing the use of products in the country under the Pertamina Team. PT Pertamina International Shipping has a TKDN of 40.42% in 2020. This consists of 20 ships built in 4 shipyards in the country, exceeding the minimum value of 30%. Not only that, PT Pertamina International Shipping was recorded as experiencing several work disasters on its fleet of ships, and the industry received support from 539 of its ships.<sup>3</sup> workers died in a work accident in September 2011. A contractor died after falling from a tank in January 2013. Contractor errors can endanger the industry and cause disasters that affect K3 performance.

Therefore, contractor operations must be managed well to ensure the safety of each job the contractor undertakes in the industry. Planning comfortable work methods is needed to reduce and manage work accidents. Throughout the last 4 years, 2017–2020, when there were no incidents listed as NOA type at the end of December 2017, HSSE's performance has shown that there are 9 incidents that still have outstanding follow-up action status and 622 incidents have completed follow-up. Since September, one HSSE case is still a problem. Until 31 December 2019, there were no LTIR incidents, but on the PIS Paragon ship there was a First Aid Case incident. During 2020, there were no LTIR or NOA incidents, but on the PIS Polaris ship there was a First Aid Case incident in May 2020.

According to the company's data and experience, work safety on board a fleet of ships is quite a challenging issue to discuss. One of the factors influencing this problem is the implementation of the Pertamina Safety Approval (PSA), safety training and the safety culture of PT Pertamina International Shipping (PIS). The first factor is Pertamina's Safety Statement (PSA). PSA is a document issued if

the ship has met the standards and criteria of the inspection results. Ships offered in this procurement process must have a Pertamina Safety Approval (PSA) issued by the Pertamina Safety Assurance and Safety Function (or Pertamina Ship Inspection and Assurance Function). This PSA shows that Pertamina is capable of operating the ship and is able to transport and unload cargo according to the technical specifications required by Pertamina, unless stated otherwise. According to company data and experience, work safety on board a fleet of ships is quite a challenging issue to discuss. One of the factors influencing this problem is the implementation of the Pertamina Safety Approval (PSA), safety training and the safety culture of PT Pertamina International Shipping (PIS). The first factor is Pertamina's Safety Statement (PSA). PSA is a document issued if the ship has met the standards and criteria of the inspection results.

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Safety Function (or Pertamina Ship Inspection and Assurance Function). This PSA shows that Pertamina is capable of operating the ship and is able to transport and unload cargo according to the technical specifications required by Pertamina, unless stated otherwise. At the time of closing the bid box, bidders must attach a photocopy of Pertamina's Security Clearance (PSA) to the bid document as an administrative requirement, which is still valid until the laycan closing date. Therefore, it is necessary to create a treatment standard that identifies and controls emerging risks, namely control.

According to the figure above, inspection inspections are carried out to improve safety, security and environmental pollution (N. Berg et al., 2013; Kim & Park, 2019; Puisa et al., 2021). Basically, inspection inspections ensure that ship owners maintain and care for their ships. The inspection process refers to SIRE regulations, which are also issued by OCIMF (Oil Company International Marine Forum), which is carried out by personnel who meet OCIMF qualifications and requirements. OCIMF publishes the VIQ tool to help inspectors ascertain key (important) aspects of ship inspections. In accordance with the policy for implementing vessel vetting and issuing PSA provided by PT Pertamina (Persero) through the Director of Logistics & Infrastructure Letter No.069/R00000/2021-S0 dated 19 April 2021, PIS is committed to ensuring that all vessels used to carry out integration business processes Maritime and logistics meets the safety requirements specified in maritime convention standards and has gone through a vetting process.

Pertamina Safety Approval (PSA) is an important factor in ensuring the safety of maritime transportation. The basis is the provisions of the International Convention on the Training, Competence and Supervision of Seafarers (STCW). The Maritime Safety

Committee (MSC) is responsible for the implementation of STCW, which focuses on safety training, crew safety and maritime safety. This team is responsible for maritime safety training as it is an important part of the industry. Security in the maritime sector is influenced by several factors such as: B. Discipline, crew safety and human factors. Research on corporate culture is widely carried out in Indonesia and abroad. There has been no research regarding work safety culture, especially in Indonesia, this is proven by the lack of research. Work safety program in areas prohibited by PT. Pertamina International Shipping shows functionality (not freedom of movement). Mairing et al. (2021) 49.02% of respondents showed good K3 behavior. At higher levels of education, the proportion of K3 behavior was higher, while the variables age, gender, work experience and safety culture did not have a significant relationship to K3 behavior. Winriyani and Frinaldi found that the work culture of the Padang City Fire Department had a positive impact on occupational health and safety

Taking into account the above problem background, the following problems can be identified; (1) Decrease in the number of inspections and issuance of PSAs; (2) The number of crew members who do not participate in safety training; (3) Lack of safety training, there are still those who violate company regulations; (4) Lack of safety culture on board ships; and (5) There are still work accidents on ships, and companies do not do enough work safety. The aims of this research are: (a) To study and analyze the impact of the Pertamina Safety Approval (PSA) on work safety on PT's fleet of ships. Pertamina International Shipping; (b) To study and analyze the impact of safety training on work safety on PT's fleet of ships. Pertamina International Shipping; (c) To study and analyze the impact of safety culture on work safety on PT's fleet of ships. Pertamina

International Shipping.; and (d) To study and analyze the impact of the Pertamina Safety Approval PSA

Bueger (2015) and Dalaklis (2017) define job security as a good or bad condition for studying, teaching or working (Bueger, 2015; Dalaklis, 2017). Safety hazards are aspects of the work environment that can cause fire, fear of electric shock, wounds, bruises, sprains, broken bones, loss of bodily equipment, vision and hearing. As well, Berg and Maher define work safety as a task that requires care and training (H. P. Berg, 2013; Maher, 2020). Protection for work safety is experienced by workers in the workplace and worker protection against work accidents, while health refers to workers' freedom from physical and mental illness (Dalaklis, 2017; Giovanni et al., 2023; Pamungkas et al., 2023). Occupational safety refers to a workplace where people are safe or protected from suffering, danger, or loss. In providing services, PT Pertamina International Shipping (PIS) always prioritizes competitive and reliable QHSSE aspects for customers, safe ship operations, and environmental protection to ensure there are no injuries, deaths, work-related illnesses, environmental pollution, or property damage and is committed to for: 1). Fully supports PT Pertamina (Persero) K3LL policy. 2) Prioritize active management, establishing clear goals, roles and responsibilities related to QHSSE. 3). Ensure all business and shipping operations comply with applicable laws and regulations as well as industry best practices. 4). Make improvements, increase kinetics and increase customer satisfaction continuously with the active participation of every employee. 5). Prevent work accidents and work-related diseases and ensure a healthy and safe workplace. 6). Avoid environmental pollution and use resources wisely and in a controlled manner. 7). Identify and minimize risks by implementing risk management and providing

protection against all dangerous activities. 8). Develop and implement effective and efficient management systems that provide resources and training to support safe vessel operations and environmental protection. 9). Building credible organizational capabilities with a strong HSSE culture and company values.

Implementation is a decision or action taken from a plan that is made quickly and effectively (Bodin, 2017; Walker et al., 2019). based on activities, attitudes, or mechanisms in a system, and is a system that focuses on activities. Pertamina Safety Approval (PSA) is a document that ensures that a ship meets the standards and criteria of a vetting inspection. Pertamina Functions (SSAP), states that ships can operate between ships to ensure compliance with certain technical standards. Tankers, Self-Propelled Oil Barges, Oil Barges, and Tugboats are popular modes of transportation used by major global oil, gas, and petroleum companies. PSA refers to all ship-to-ship (STS) vessels to ensure the safety of large vessels, operating or exploiting within the scope of PSA. Processing hazardous materials such as liquids and gases poses risks during the shipping process. Vetting inspection is a standard procedure to identify and eliminate these risks (Mandaraka-Sheppard, 2014).

Ship acceptance is determined by Safety Approval (PSA) and risk rating. The first step in an inspection is the Vessel Inspection Report (SIRE) and Vessel Inspection Questionnaire (VIQ), which are used by OCIMF to evaluate the safety of the vessel. Quality, Health, Work Safety and Environmental Protection System Manual or HSEQ System Manual which is INTEGRATED with: 1). ISM Code 2018 edition. 2) ISO 9001:2015 - Quality Management System 3). OHSAS 18001:2007 or ISO 45001:2018. 4).ISO 14001:2015 - Environmental Management Systems 5).

TMSA.6) MLC 2006. 7) Other standards (depending on the Company's own needs).

The ship owner must fulfill the Pertamina Safety Approval (PSA) requirements no later than before handing over the ship. At the time of closing the bid box, the ship owner must make and attach a signed statement on stamp duty containing the information necessary to guarantee that they will fulfill the Pertamina Safety Approval (PSA) requirements before handing over the ship.

Training is the process of teaching young people to perform tasks effectively. This involves using methods to teach young people to perform tasks, such as studying, teaching, and training (Ghosh et al., 2014; Kim & Park, 2019). Training also involves teaching a young person to carry out tasks efficiently. It is a systematic process that involves teaching, training, and learning. This helps young people develop the skills and knowledge to carry out tasks effectively. Training is important for organizations to achieve their goals and contribute to the overall success of the organization. The use of internal and external training methods in their research. Internal training includes on-the-job training (OJT), seminars, workshops, in-company training, and computer-based training (Kidd & McCarthy, 2019). Exterior training includes courses, seminars and workshops.

A training objective that is grateful and ideological, work productivity, work quality, human resource plans, ethical attitudes, optimal professional and work decisions (Munim et al., 2020; Zaderei, 2020). Training and development are individual differences, relationships with job analysis, motivation, positive participation, participant selection, training methods, and development (Zaderei, 2020). Training is a management business function in the organization's resource planning process that aims to increase the improvement of

opportunities and behavior of crew members and achieve the best results and results. The application of the SOLAS Convention constitutes minimum standards for the equipment, construction and operation of ships that are compatible with their safety. One of the responsibilities of the American flag is to ensure that ships under their flag meet the requirements and receive a specified number of certificates (Gavalas et al., 2022).

The concept of occupational safety is a complex interaction between organizational structure and a system of norms and norms. It involves a combination of knowledge, norms, skills, and social practices to ensure working conditions for employees, managers, and society. Safety culture is a combination of knowledge, abilities, norms and practices for employees in organizations that involve a balance between individual, group, and organizational goals, ensuring that work is done efficiently and effectively. Safety culture is part of the company or organization culture. Management commitment; employee engagement; training and competency; communication; compliance with rules; and organizational relationships are the six components that make up safety culture or safety culture (Lei et al., 2017; Svilicic et al., 2019). Broadly speaking, these six components can also be divided into four interrelated structural components of safety culture: safety values, safety leaders, safety attitudes, and safety performance.

In conducting research, the author will compare several previous research results to find out the extent of the truth, clarity and accuracy of a research. The results of research some researchers by show that the capability of marine inspectors has a direct positive and very significant effect on shipping safety performance, ship governance has a direct positive and very significant effect on shipping

safety performance, the capability of marine inspectors has a direct positive and very significant effect on Ship governance and marine inspector capabilities have a positive and very significant indirect effect on shipping safety performance mediated by ship governance Benny J Mairing, Wirawan & Deswandri (2021) research results stated that there was a proportion of respondents with good K3 behavior of 49.02%. Higher levels of education had a significantly higher proportion of K3 behavior ( $p=0.023$ ), while the variables age, gender, length of service and safety culture were not significantly related to K3 behavior ( $p>0.05$ ). Widyanty (2019). Concluded that work culture had a positive effect on occupational health and safety in the Padang City Fire Department which was tested.

Supriadi, Novrikasari, Hamzah Hasyim, Pitri Noviadi (2022) concluded Implementation of occupational safety culture and program effectiveness partially or simultaneously has an influence on the performance achievement of the occupational safety and health management system. Research by D. Lasse & Fatimah (2016) regarding safety training for subordinates, the results showed that there was a positive and significant relationship between safety training on board MVs. Hilir Mas with the operational performance of the ship's crew at PT Tempuran Emas

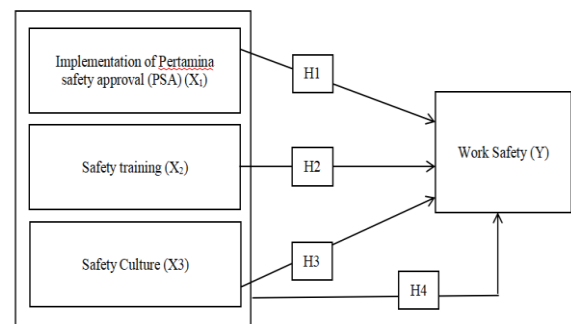


Fig 1. Thinking Framework

Hypothesis; (1) The implementation of the Pertamina Safety Approval (PSA) affects work safety on PT's fleet of vessels. Pertamina International Shipping; (2) Safety training influences work safety on the PT vessel fleet. Pertamina International Shipping; (3) Safety culture influences work safety in the PT vessel fleet. Pertamina International Shipping; (4) The implementation of Pertamina Safety Appraisal (PSA), safety training and safety culture influences work safety in PT's fleet of ships. Pertamina International Shipping.

### METHOD

This research uses a quantitative explanatory approach. According to Sugiyono (2017:13), the aim of this research is to determine the effect of the implementation of Pertamina Safety Approval (PSA) (X1), safety training (X2) and safety culture (X3) on work safety on board the ship fleet (Y). The primary data used in this research are the opinions, opinions and experiences of PT ship crew. Pertamina International Shipping. The main source of this research is a questionnaire instrument distributed to PT crew members. Pertamina International Shipping.

The data collection technique used in this research is called query. This query is used to gather information about respondents' responses to questions. mining based on variables and indicators, allowing a more accurate understanding of the phenomenon. This inquiry was conducted online to collect data and information about the Safety Attestation (PSA) process, safety training and workplace security. Likert scale was used for analysis of the collected data.

A population is a group of people who participate in a research project. This study focuses on the PT population. Pertamina International Shipping, with 174 million passengers on board in 2022. Sample data collected from a population of 90 respondents

using the Slovin formula. The time of the research was carried out from March 2023 to August 2023. In conducting this research the author took the research object of the PIS ship crew who had PSA

### RESULTS AND DISCUSSION

This company has carried out various work safety activities since September 2011, with a total of 10 employees. Contractor companies have carried out K3 activities since January 2013. Contractor companies must ensure safety in every contractor work activity in the company. During the 2017-2020 period, there were no NOA and LTIR ratings, with PIS Paragon and PIS Polaris having First Aid Cases. The safety of workers in ship factories is determined by factors such as the Safety Approval (PSA) process, safety training, and the PT Pertamina International Shipping (PIS) program. The PSA process involves the standards and criteria of a screening examination. improve safety, maintain safety and protect the environment from pollution. Basically the purpose of Vetting Inspection is to ensure that the ship is in good condition and has been maintained by the ship owner. Inspections Inspections refer to the SIRE (Ship Inspection Report) regulations, also issued by OCIMF and carried out by personnel with OCIMF qualifications and requirements. OCIMF (Oil Company International Marine Forum) is an organization of several oil companies throughout the world. In the SIRE Regulations, OCIMF publishes the VIQ (Vessel Inspection Questionnaire), a tool to help inspectors ensure that the most important (important) aspects of the vessel have been inspected.

Safety training on board is very important because the crew's indifference to complying with work safety regulations on the ship is the beginning of indiscipline, except for equipment safety, including care and maintenance. these

tools and variables that humans cannot control, such as bad weather, narrow routes, short distance routes, which shorten safety training time (Mazaheri et al., 2014; Paulica et al., 2013). Internal audits are carried out every three months, and external audits are carried out by inspectors appointed by the competent authority to ensure that all relevant stakeholders and institutions involved in offshore oil drilling have complied with regulations. . In response to this, it is very necessary to develop human resource competencies in the field of maritime transportation who have knowledge, abilities and skills of international standards. The current phenomenon is that based on a preliminary survey conducted by researchers through interviews with training participants, information was obtained that there was dissatisfaction with the quality of services when attending training at training institutions, resulting in the results obtained being not optimal and satisfactory. This study focuses on nuclear installation safety and the role of safety culture in the workplace. Safety culture is a concept that includes attitudes, beliefs and norms within an organization. This is important for maintaining a safe work environment and promoting security among employees.

Research on workplace safety management has been conducted in Indonesia and other countries, but there is a gap in research in Indonesia. Widana et al's (2020) study found that safety leadership and safety culture were positively correlated with safety performance at work sites. Mairing and al (2021) found that the proportion of safety performance in the workplace is positively related to safety performance. This is because the company has a strong commitment to ensuring the safety of their employees. This study also highlights the importance of a safety culture in the workplace, as it helps maintain a safe work environment and

promotes a positive work environment. These findings suggest that organizations

## CONCLUSION

PT Pertamina International Shipping (PIS) has changed to Subholding Integrated Marine Logistics, focusing on professional chartering and international operations. PIS aims to provide competitive energy and financial support to Indonesia, making a positive contribution to the logistics sector in the country. Vetting Inspection is used to improve vessel inspections and compliance with regulations, such as Ship Inspection Reports (SIRE) and VIQ. OCIMF, an international maritime forum, oversees national and international regulations for ship safety, asset management and environmental protection. The significance values (two-tailed) t-values of 1.65 (10% significance level), 1.96 (5% significance level), and 2.58 are used in this t-statistical test. the magnitude of the endogenous variable that can be explained by the exogenous variable. An R2 value of 0.67 indicates strong model strength, 0.33 indicates moderate strength, and 0.19 indicates weak strength.

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