

Analysis of Crewing Roles and Functions in Preparing Ship Crews at PT Pelayaran Andalas Bahtera Baruna, West Jakarta Branch

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ABSTRACT

A ship's crew member is a person who works or is employed on board a ship by the owner or operator of the ship to perform duties on board in accordance with the position listed in the crew list (sijil). Under maritime law, the crew comprises all persons who work on board and are tasked with operating, maintaining, and safeguarding the ship and its cargo, with the exception of the master. This study aims to analyze the roles and functions of the crewing department in preparing ship crews at PT Pelayaran Andalas Bahtera Baruna, West Jakarta Branch, and the obstacles it faces. A descriptive qualitative approach was used. The research was conducted over nine months, and data were obtained directly at the research site through observation and interviews with the crewing executive department, supported by documentation and a literature study. The results show that the crewing department has carried out the planning, organizing, actuating, and controlling functions in accordance with procedures; however, the preparation of the ship's crew at the time of crew change (sign on/sign off) has not been optimal because of delays in certificate revalidation and medical check-ups, which causes losses in terms of time, effort, and company funds. An integrated, database-based monitoring system and improved crew discipline in meeting administrative requirements are recommended.



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1. INTRODUCTION

The shipping industry is one of the main pillars of the national transportation system and plays a strategic role in supporting economic growth, logistics distribution, and the integration of archipelagic areas. In the context of Indonesia as a maritime country, strengthening the shipping sector is an inevitable need. This is in line with the mandate of Law Number 17 of 2008 concerning Shipping, which emphasizes that shipping is a system comprising transportation in waters, ports, safety and security, and maritime environmental protection. The regulation places safety and security as fundamental elements in the implementation of shipping (Agus et al., 2025).

Over time, a shift has occurred in developed countries, where citizens are less willing to become seafarers and prefer to work in business and industry. As a result, companies in developed countries are looking for seafarers from developing countries with large seafarer workforces, including Indonesia, a maritime country with abundant seafarer human resources (Afidah et al., 2025).

Conceptually, shipping as a marine transportation system depends not only on the fleet and port infrastructure, but also on the quality of the human resources that operate it. According to human resource management (HRM) theory, human resources are strategic assets of the organization that determine the effectiveness and efficiency of achieving goals (Hasibuan, 2007). Seafaring is a profession that plays an important role in developing the national maritime industry, and crew members are key human resources in ship operations (Amrullah, 2023). From this perspective, the crew is not merely operational personnel, but a key actor who ensures shipping safety, smooth operations, and the protection of cargo and the marine environment.

Article 135 of Law Number 17 of 2008 concerning Shipping stipulates that the crew on board a ship is obliged to meet qualifications and competencies in accordance with national and international provisions (Lutfi, 2017). A crew member is a person who has been certified to work on a ship and is employed on board by the owner or operator of the ship to carry out duties and responsibilities according to his or her position (Muslim et al., 2022).

In international law and regulation, the competence of seafarers is regulated through the STCW Convention and its amendments (the 2010 Manila Amendments), which set standards for training, certification, and watchkeeping for seafarers. These standards require every crew member to hold a valid Certificate of Competency (CoC) and Certificate of Proficiency (CoP). Thus, the fulfillment of administrative and competency requirements is an absolute prerequisite before a crew member can serve on board.

Theoretically, crew management can be analyzed through the classic management functions of planning, organizing, actuating, and controlling (Terry & Rue, 2019). In the context of crewing, the planning function includes planning crew needs according to the type and number of ships in the fleet; organizing relates to crew placement based on qualifications; actuating includes the recruitment, selection, and placement process; and controlling takes the form of monitoring the validity of certificates, Sea Employment Agreements (*Perjanjian Kerja Laut*, PKL), and the completeness of other documents. If one of these functions does not run optimally, it may cause delays in crew changes, cost overruns, and even risks to shipping safety. For the smooth operation of the ship, competent operational personnel on deck are needed,

especially officers who are responsible for supervising cargo operations properly and efficiently (Agustyna & Kismantoro, 2017).

In practice, shipping companies form a special division known as the crewing or crew management department. According to the concept of crew management in maritime economics (Stopford, 2009), crew management includes recruitment, certification administration, employment contract arrangements, rotation, and performance evaluation. This process must be carried out systematically and documented to ensure compliance with national and international regulations. So that crew members are not disadvantaged when agreeing to the employment contract, the company must explain the contract in detail, including the name of the ship on which the crew member will work, the start and end dates of the work, the length of service, and the salary corresponding to the position (Hanik et al., 2024). The recruitment and replacement divisions prepare a crew rotation plan for the company's own ships and those of all principals in accordance with the PKL held by the crew members who will join the ship. Therefore, crewing agents are required to carry out crew changes effectively so that the operations team can cooperate better with ship owners, supported by human resources that meet the required specifications (Anshori et al., 2025).

As a national shipping company, PT Pelayaran Andalas Bahtera Baruna, which operates in West Jakarta, has a fleet of tugs, barges, and cement carriers that require an adequate number of competent crew members (Figure 1). With a relatively large fleet, the complexity of crew management has become higher, especially in controlling the validity of certificates, carrying out medical check-ups (MCU), and managing documents such as seafarers' books and PKL. Administrative unpreparedness or delays in certificate revalidation can delay the joining process and affect the company's operational efficiency.



Figure 1. MV Iriana, a ship operated by PT Pelayaran Andalas Bahtera Baruna

Based on the theory of organizational effectiveness (Steers, 1985), an organization is effective if it is able to achieve its goals with optimal use of resources. In this context, the effectiveness of the crewing department can be measured by the smoothness of crew change and placement without causing loss of time, effort, or cost. However, obstacles remain in the process of preparing ship crews, such as delays in certificate revalidation and health checks, which reduce the effectiveness of the crewing function.

From the general description of the shipping system, human resource management theory, and the concept of crew management, it can be understood that the role and function of crewing have a strategic position in ensuring the smooth operation of ships. Therefore, a more in-depth study is needed on how the role and function of crewing are carried out in preparing ship crews and what obstacles are faced in practice (Yasin et al., 2025).

Based on this background, this research focuses on the analysis of the role and function of crewing in preparing ship crews at PT Pelayaran Andalas Bahtera Baruna, West Jakarta Branch, to determine the extent to which the crewing management functions have been implemented effectively and the efforts that can be made to overcome existing obstacles.

2. METHODS

This research uses a descriptive qualitative approach, which aims to understand in depth the role and function of the crewing department in preparing ship crews. The qualitative approach was chosen because this research focuses on the processes, meanings, and dynamics that occur naturally in the company's work environment. The descriptive method is used to systematically describe the real conditions in the field without manipulating the research variables.

The research was carried out at PT Pelayaran Andalas Bahtera Baruna, West Jakarta Branch for approximately nine months, from January to September 2023. The location of the port served by the company is shown in Figure 2.



Figure 2. Location of Tanjung Priok Port

The research subjects included the Crewing Manager, Crewing Executive staff, HR Crewing staff, and several crew members who were joining or about to join a ship. The object of the research was the crew preparation process, the role and function of crewing, and the obstacles faced in fulfilling document and certification requirements.

Data were collected through observation, interviews, and documentation. Observations were made directly of the crewing department's activities in the recruitment process, document checking, management of Sea Employment Agreements (PKL), and coordination of medical check-ups (MCU). Semi-structured interviews were conducted to obtain in-depth information about work procedures, administrative constraints, and problem-solving efforts. Documentation was used to examine the completeness of documents such as certificates of competency, seafarers' books, and PKL, as well as compliance with the STCW Convention and applicable national regulations.

Data analysis was carried out in a qualitative descriptive manner through the stages of data reduction, data presentation, and conclusion drawing. The collected data were selected and focused on aspects relevant to the research, then presented in the form of narrative descriptions and process charts. To maintain the validity of the data, this study used source and technique triangulation, as well as member checking with informants.

3. RESULTS AND DISCUSSION

3.1. Results

The research at PT Pelayaran Andalas Bahtera Baruna, West Jakarta Branch found that the crewing department plays a central role in ensuring the administrative readiness, competence, and legality of crew members before they join a ship. The analysis shows that the role of crewing is not only administrative, but also includes planning marine labor needs, controlling the completeness of documents, and connecting the company's management with

crew members and related agencies. In this context, the crewing department acts as the main coordinator that ensures each crew member meets the competency requirements of his or her position, the validity period of certificates, and the provisions of shipping law.

Operationally, the role of crewing can be described in four main aspects. First, crew needs planning (manpower planning), namely preparing a rotation schedule based on work contracts and fleet needs so that there are no vacancies on board. Second, selection and verification, namely checking the validity of the Certificate of Competency and Certificate of Proficiency, seafarer's book, endorsements, and other supporting documents before the crew member is declared ready to depart. Third, facilitation and coordination, namely arranging the medical check-up (MCU), preparing the Sea Employment Agreement (PKL), and coordinating with the harbor master (Syahbandar) and related agencies. Fourth, administrative supervision, in the form of monitoring the validity period of documents and certificates so that they remain in accordance with the STCW Convention and national regulations.

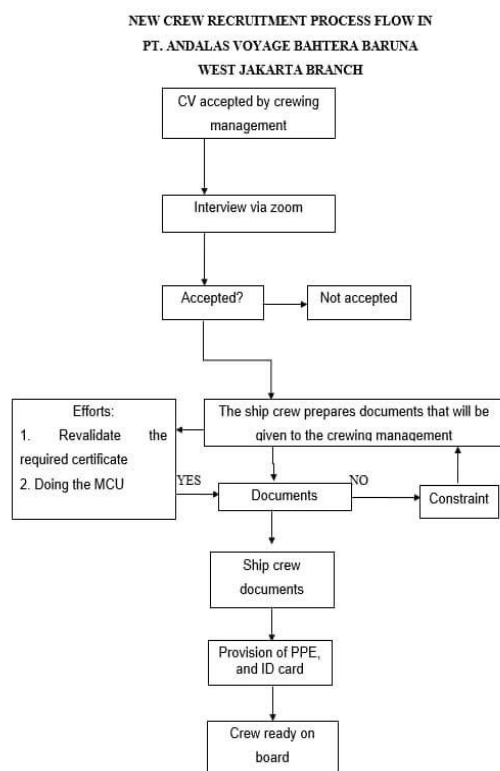


Figure 3. Recruitment process flow

BIO DATA CREW KAPAL

TB: / Jabatan: Tempel Pas Photo 3 x 4 Tempel Pas Photo 3 x 4

I. Data Pribadi:

1. Nama:	
2. No. & TP Elektrik:	
3. Tempat Tgl. Lahir:	Expired Tgl:
4. Kelembagaan:	
5. No. buku Pelaut:	Expired Tgl:
6. No. MCU:	Expired Tgl:
7. Pas. & ID:	Expired Tgl:
8. No. Telepon, HP:	
9. No. NIK Bukukan:	Nama di rek:

II. Riwayat dan Sertifikat Keperluan:

No.	No. & No. shulan Sertifikat	Isilah/Sertifikat (ANT/ATT)	Place Issued	Date Issued	Expired Tgl.
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

III. Data keluarga:

1. Nama Ibu Kandung:	
Nama Ayah:	
No. Telepon/HP:	
2. Nama Istri/Suami:	Tempat Tgl. Lahir:
No. Telepon/HP Istri/Suami:	
3. Nama Anak 1:	Tempat Tgl. Lahir:
4. Nama Anak 2:	Tempat Tgl. Lahir:
5. Nama Anak 3:	Tempat Tgl. Lahir:

IV. Pengalaman Kerja (empat perusahaan terakhir)

No.	Nama Perusahaan	Awal Kerja	Tgl. Akhir Kerja	Alasan Keluar
1.				
2.				
3.				
4.				

Ditentukan biodata ini saya buat dengan sebenarnya. Samarinda, ...

* Form biodata harap diisi dengan selengkap lengkapnya
** Lampirkan
1. Foto copy KTP Elektrik & Kartu Keluarga (KK)
2. Foto copy Buku Pelaut, Ujazah dan Sertifikat Penunjang lainnya
*** Pas foto berwarna ukuran (3 x 4) = 2 (dua) lembar.

Nama & TTD Crew

Figure 4. Ship crew biodata form

Based on the flow in Figure 3, recruitment activities start with the applicant submitting an application file and end with an interview with the company, using the biodata form shown in Figure 4. At this stage, the crewing department conducts an administrative selection by assessing the completeness of documents, the suitability of professional certificates, and the

skills acquired through education, training, and previous work experience. This process is in line with Rohmah et al. (2017), who state that the selection of personnel must consider formal qualifications, technical competence, and track record of experience as indicators of job readiness.

In terms of managerial functions, the results show that the crewing department has implemented the management functions systematically. In the planning function, crewing arranges crew needs based on the number of active ships and the sign-on and sign-off schedules. In the organizing function, crew placement is carried out according to position, experience, and certificate qualifications. In the actuating function, crewing carries out the administration, communication, and document management processes directly. In the controlling function, periodic checks are carried out on the validity period of certificates, the MCU results, and the readiness of documents before the PKL is issued.

The observations show that, procedurally, the crew preparation mechanism has been carried out in accordance with the company's operational standards and refers to the STCW Convention and applicable national regulations. However, the study also found several obstacles that affect the optimization of these roles and functions. Delays in certificate revalidation, documents whose validity is about to expire, and MCU that are not carried out on time are inhibiting factors in the crew preparation process. This shows that even though the system runs according to procedures, supervision and crew discipline still need to be improved. Therefore, it is necessary to strengthen an integrated, database-based monitoring system and improve preventive communication with crew members so that the controlling function can run more effectively.

3.2. Discussion

The results of the research at PT Pelayaran Andalas Bahtera Baruna, West Jakarta Branch show that the effectiveness of ship crew preparation is greatly influenced by the integration of the planning, organizing, actuating, and controlling functions in crew management. This finding is in line with Kinanti et al. (2025), who confirm that the effectiveness of crew document monitoring is largely determined by a structured Crew Management System (CMS). Although the company in this study does not yet use a fully integrated CMS, its practices of monitoring the validity of certificates and MCU reflect the principles of document control recommended in that study. This shows that the controlling function is key to maintaining the legality and competence of the crew.

In the planning function, the crewing department prepares manpower needs based on rotation schedules, contract periods, and fleet needs. This planning is in line with the findings of Mulyono et al. (2025), which state that crew performance is influenced by placement management and administrative readiness before duty. With systematic rotation planning, the company is able to minimize vacancies and maintain the continuity of ship operations. Thus, planning is not only administrative, but also strategic in maintaining the performance of shipping organizations.

In the organizing function, the division of tasks between the Crewing Manager and administrative staff shows a clear work structure in the process of selection, verification, and issuance of employment contracts. Crew placement is based on the suitability of the Certificate of Competency (CoC), sailing experience, and the type of ship to be manned. This practice is in line with Tanjung et al. (2024), who emphasize the importance of systematic administrative governance of crew sign-on and sign-off so that no operational and administrative obstacles occur. Organizing in this context acts as a mechanism to ensure the match between the needs of the ship and the competencies of individual crew members.

Meanwhile, the actuating function is reflected in the implementation of interviews, document verification, MCU management, and the issuance of PKL. At this stage, the crewing department acts as a policy implementer as well as a facilitator between the crew and management. This implementation is also related to work safety, as emphasized by Mashartanto et al. (2023), who state that the readiness of safety equipment and crew competence are important factors in ensuring shipping safety. By ensuring the completeness of safety certificates and the medical fitness of crew members before they join the ship, the actuating function contributes directly to safety management.

The controlling function is the most significant finding in this study. Supervision of the validity period of certificates, seafarers' books, and MCU results is carried out before the crew member is declared ready to depart. However, delays in document revalidation show that control is still administrative and not fully preventive. In comparison, Kinanti et al. (2025) show that a digital monitoring system increases the effectiveness of document supervision. Therefore, this study reinforces previous results that strengthening the controlling system, especially through the digitization of document monitoring, is a strategic factor in increasing the effectiveness of crew management.

From the perspective of human resource management theory, organizational effectiveness is greatly influenced by the readiness and competence of the workforce. At PT Pelayaran Andalas Bahtera Baruna, West Jakarta Branch, incomplete documents and delays in certificate

revalidation show that the management of crew administration has not been fully optimal in terms of control. The impact is not only administrative but also operational, because delays in crew delivery can disrupt the sailing schedule and cause losses of time and costs. These findings are in line with Indriyani et al. (2024) and Pradana et al. (2025), who emphasize that the effectiveness of crew recruitment and selection depends on the accuracy of document verification and the match between competencies and the needs of the ship. Weaknesses in the administrative stage therefore have a direct impact on the operational performance of shipping companies.

Furthermore, delays in certificate revalidation are also related to the crew replacement mechanism. Maharani et al. (2025) state that poorly coordinated management of crew documents can hinder the replacement process and slow down ship operations. This is strengthened by Nisa et al. (2024), who emphasize that the crew change mechanism must comply with safe manning provisions so that no vacancies arise that endanger safety and regulatory compliance. Thus, the findings of this study confirm that document readiness is not just an administrative matter, but part of an operational safety and compliance management system.

To overcome these problems, the crewing department has made several improvements, such as providing a pre-embarkation checklist after the contract period ends, giving early notification of certificate expiry dates, and arranging the medical check-up schedule through the company's partner clinics. These steps show that the controlling function is beginning to move towards a preventive approach. However, in line with the recommendations of Maharani et al. (2025) and Pradana et al. (2025), control will be more effective if it is supported by an integrated digital monitoring system.

Therefore, the development of a digital database with an automatic reminder feature (early warning system) for the validity period of certificates, seafarers' books, and MCU is a relevant strategy. Such a system not only strengthens the controlling function, but also supports a smooth replacement mechanism, maintains compliance with safe manning, and continuously improves the company's operational efficiency. Overall, the results show that the implementation of the role and function of crewing is in accordance with regulations and management theory, but still requires improvement in supervision and crew discipline to support the smooth operation of shipping in a sustainable manner.

4. CONCLUSION

Based on the results of the research at PT Pelayaran Andalas Bahtera Baruna, West Jakarta Branch, it can be concluded that the crewing department has a strategic role in preparing ship crews through recruitment, selection, document verification, medical check-ups (MCU), and the preparation of Sea Employment Agreements (PKL), in accordance with the STCW Convention and applicable national regulations. The management functions of planning, organizing, actuating, and controlling have generally been implemented well, especially in planning crew needs and placement according to qualifications. However, obstacles remain in supervision, in the form of delays in certificate revalidation and health checks, which delay the crew joining process. Therefore, a more integrated monitoring system and improved crew discipline in meeting administrative requirements are needed to support the effectiveness of human resource management and the smooth operation of shipping.

5. DECLARATIONS

Author contributions: A.P.: Conceptualization, Methodology, Writing – review & editing; M.I.: Supervision, Validation; F.Z.: Investigation, Data curation, Formal analysis, Writing – original draft. The final manuscript was read and approved by all authors.

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AI usage statement: The authors wrote and edited this manuscript themselves; no generative AI application was used at any stage of the research or writing.

Ethical approval: The Crewing Manager, crewing staff, and crew members who were interviewed gave their consent to participate. Personal data contained in the crew documents examined are not disclosed.

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Data availability: Interview records and the anonymised summary of crew document checks are available from the corresponding author on reasonable request; company documents cannot be shared publicly.

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