International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

Operation of the Mardoc Application in the Operational Section of the Ship Certificate Service

Sri Sayekti Lestari[1], Evada Rustina[1*], Dorma Ceria Purba[2], Ufik Deriantoro[3], Endriyatno Sulastomo[4]

[1,2,3] Akademi Ketatalaksanaan Pelayaran Niaga Bahtera Yogyakarta, Dukuh Mj 1/1221, Gedongkiwo, Kec. Mantrijeron, Kota Yogyakarta, Daerah Istimewa Yogyakarta 55142
[4] STIKES AL Islam Yogyakarta, Gedongkiwo, Kec. Mantrijeron, Kota Yogyakarta, Daerah Istimewa Yogyakarta 55142

* Coresponding Author: evadarustina7@gmail.com

Abstract

MARDOC application is software owned by PT. Pelindo Marine Service which is also referred to as Marine Document. The purpose of this study is to find out how the MARDOC application operates and find out the function of the MARDOC application for companies. The method used in this study is a qualitative descriptive research method. Data collection techniques use observation and documentation methods. The results of the study stated that in the operation of the MARDOC application, service users must know the username and password to access the service as needed. The MARDOC application, especially for companies, is to facilitate service and data storage for company operational activities.

Keywords: Mardoc Application, Operational, Service, Ship Certificate

INTRODUCTION

The development of the transportation world is advancing and increasing(Pan & Alouini, 2021; Rustina et al., 2022). This has resulted in a major influence on the development of the transportation sector and the closer relationship between producers and consumers of one country and another(Hertz & Alfredsson, 2003; Rustina et al., 2023). Therefore, transportation facilities play an important role in terms of transportation

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

as a means of connecting producers and consumers who need each other. PT. Pelindo Marine Service is a State-Owned Enterprise which is the largest in the field of port service providers. The operational department of Pelindo Marine Service related to shipping certificate services using an application called the MARDOC application(Litman, 2003).

MARDOC application is software owned by PT. Pelindo Marine Service which is also referred to as Marine Document. In this application, ship documents or certificates can be accessed to facilitate all service processes for Pelindo's ships. The use of the Mardoc application is intended to facilitate service and improve the quality of service for ships that are faster, easy, transparent, and valid to minimize cell costs so that it can increase the competitiveness of ports in Indonesia(Van de Voort, 1986). In its implementation, the application of the MARDOC application is also supported by the Indonesian classification bureau. The Indonesian classification bureau is the only national classification body assigned by the Indonesian government, to carry out the commercial ship Indonesian flag and overseas flagships that are as close as the operates in Indonesia(Dick, 2008). The classification activity is the classification of ships based on the construction of hulls, engines and electricity of the ship and the construction of the ship to the end of the ship for the sail. In this MARDOC application, the ship's letter data is related to where the hull certificate must be adjusted to the class of the Bureau of Classification(Mandal, 2017).

The application can be accessed by all Pelindo Marine Service branches which will be monitored by the Pelindo Marine Service Surabaya head office(Gurning, 2019). The problem is that the management of ship certificates by Pelindo Marine Service branches is very difficult and takes a long time because the distance between the Pelindo Marine Service branch office is quite far from the Pelindo Marine Service head office in Surabaya. So that by using the application, all services can be carried out more effectively and efficiently, in addition to cutting time and reducing costs. Where the branch office can upload ship documents into the application and then it will be monitored by the Head office(Rustina, Nufus, et al., 2023). If there is something that is not appropriate or incomplete, the head office will notify the branch office to immediately complete it or repair it. This can be notified by phone or via WhatsApp according to the contact person of the branch office. Ship certificate service at PT. Pelindo Marine Service uses this application to support the smooth operation of ships and improve the quality of transportation services. The purpose of this study is to find out how the MARDOC application operates and find out the function of the MARDOC application for companies.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

Method

The method used in this study is a qualitative descriptive research method. This method is considered the most appropriate to solve various problems that researchers are researching such as the form of application used for ship certification services, ship certificates contained in the application, and how to operate the application(Lambert & Lambert, 2012). Qualitative research is an activity carried out to observe a subject and present the findings in the form of paragraphs, words that will be explained according to the understanding of the observed field(Mohajan, 2018; Audi et al., 2021).

The data used in this study is primary data taken directly from the source by being researched and observed(Bowen, 2009; Artanti et al., 2022). An example of primary data used in this study is data from companies, and data taken from the MARDOC application that was observed during the study. Data collection techniques use observation and documentation methods. Observation techniques are a complex process, a process composed of various biological and psychological processes. Two of the most important are the process of observation and memory. Observation as a data collection technique has specific characteristics when compared to other techniques, namely interviews and questionnaires. If interviews and questionnaires always communicate with people, then observation is not limited to people, but also objects of others. The observation technique is used in the process of operating the MARDOC Application in the Management of ship certificates.

Documentation According to Supartini et al., (2022) is an effort to obtain data and information in the form of written records or stored images related to the problem under study. Documents are facts and data stored in various materials in the form of documentation. The study of documents is a complement to the use of observation and interview methods in qualitative research. Data analysis used using descriptive analysis, namely from data collected during the implementation of the research and data taken from the application will provide a detailed explanation starting from the application login process and how it operates. So that the results of data processing can be presented in the form of images and captions on the images presented.

Discussion

The Mardoc application is software owned by PT. Pelindo Marine Service which is also called a Marine Document. In this application, ship documents or certificates can be accessed to make all service processes easier for Pelindo's ships. The ship's certificate has the following types: 1. Statutory Certificate is a certificate that must be fulfilled by every ship because it meets the regulations of international conventions and if it does not

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

have a valid certificate it will violate the law. 2. Mandatory Certificate is a certificate that is not related to international conventions but must be fulfilled by ships to conduct international trading in a country.

In the operation of the MARDOC application, service users must know the username and password to access the service as needed. The display for the MARDOC application login can be seen in the following figure 1.



Figure 1. The Display for Login on the MARDOC

The application in Figure 1 is displayed when the first time logging in to the MARDOC application, then the user can access it via https://kalpal.pelindomarines.com/sertifikat/sertifikat.html after entering the username and password and then checking the captcha column then click login to enter the homepage of the MARDOC application. Then you can see the form of service that suits your needs. As in Figure 2, it is a display after successfully logging in to the MARDOC application.

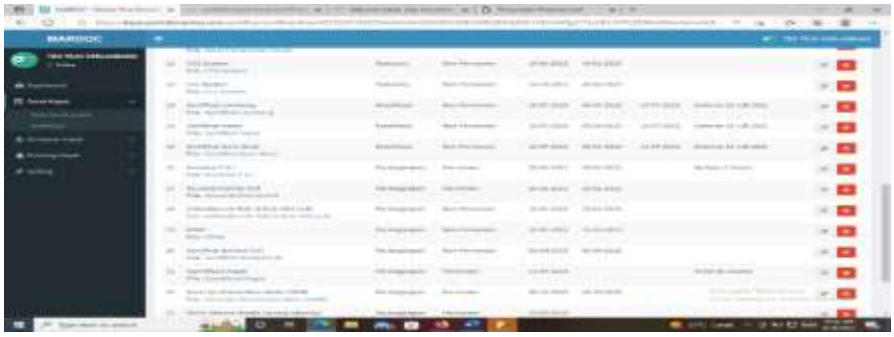
Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR



Figure 2. Display after successfully logging in on the mardoc application

As can be seen in figure 2 there are many red striped embossed on the screen. The box is a marker that the area that has the mark is the working area of the PMS. Before the integration the area was divided into 3, namely PELINDO I, PELINDO 3 AND PELINDO 4, with the changes, currently, Pelindo has been merged into 1 Pelindo II exception). Alpalbila has logged in to the MARDOC application, then click in the left corner of "ship mail" then two options will appear, namely "ship mail data and notifications" then select ship vein data it will appear on the screen as shown above. on the complete display can get ships certificate data served by Pelindo Marine Service. To see the ship's data, look at the action section on the right in blue and then click will appear as shown in figure 3 below.



\

Figure 3. List of Ship Certificates

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

In Figure 3, you can see the shipping data stored in the MARDOC application. One example of a document belonging to KT. JAYAGARA 202. The certificates owned are as follows: Sarpras Permit, Measuring Letter, Sea Letter / Annual Pass, Safe Manning Certificate, Route Pattern Plan, Construction Safety Certificate, Radio Safety Certificate, Pollution Prevention Certificate, Motion Approval Letter, CO2 System, CLC Bunker, Hull Certificate, Engine Certificate, Load Line Certificate, Marine Hull Insurance, Inflatable Life Raft (ILR) and HRU (ILR), APAR, Bolard Pull Certificate, Specifications ship, Radio Communical License, Marine Mobile Service Identity).

The list of certificates above is a certificate owned by one of the ships, namely KT. JAYANEGARA 202. One example of a certificate that must conduct a marine survey is Bollard Pull. Bollard Pull is a measure of the attractiveness of a tugboat by using a tugboat as evidenced by a test certificate. The purpose of testing bollard pull is to find out the maximum power of the ship's engine. The test must also meet several criteria such as water depth, current direction and wind speed. This tester is very important to know the maximum limit of load that a Tug Boat can pull. In addition to knowing the power of the engine, the Bollard Pull test also knows the condition of the machine, so that accidents or losses due to engine damage can be avoided. The test also uses pre-calibrated tools. Bollard Pull test is also common to qualify for Ship Class as shown in Figure 4 below.



Figure 4. Marine Survey Board Pull Kt. Jayanegara 402

In figure 4 above, a bollard pull test is being carried out where the size of the tugboat is stated by two factors, including engine strength (Horse Power) and Tensile strength (Bolad Pull). According to the regulation of the Minister of Transportation of the

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

Republic of Indonesia, Number PM 93 Talhun 2014 about auxiliary facilities and ship guiding infrastructure, in Chapter 1 Article 1, Paragraph 9 it is defined that Bollard Pull is a measure of the attractiveness of tugboats using tugboats as evidenced by the certification of testing (Test Certificate) from classification by the government.

The MARDOC application, also explains the readiness of the ships, indicating that the ship that is ready to operate is proven by valid documents that can be seen in the application. In the MARDOC application, the ship readiness menu is divided into 3, such as Ship Daily Operation Report, Approval and ship readiness. The daily operation report is a report on the overall activity on board the ship from loading goods to unloading goods, from the loading port to the port of unloading or ship to ship. In addition to reports on onboard activities, daily reports also contain reports on weather conditions, reports on average ship speeds, ship operating hours, crew lists, bunkers, ship drafts, freshwater use, and fuel consumption.

In the MARDOC application, there are ship docking data. Ship Docking is the process of moving a ship from water/sea to the top of the dock with the help of docking or dodging support facilities. Before carrying out the ship dodging process, it is necessary to make careful preparations and be carried out carefully. The graphic view of the ship'sdocking plan is shown in the following figure 5.

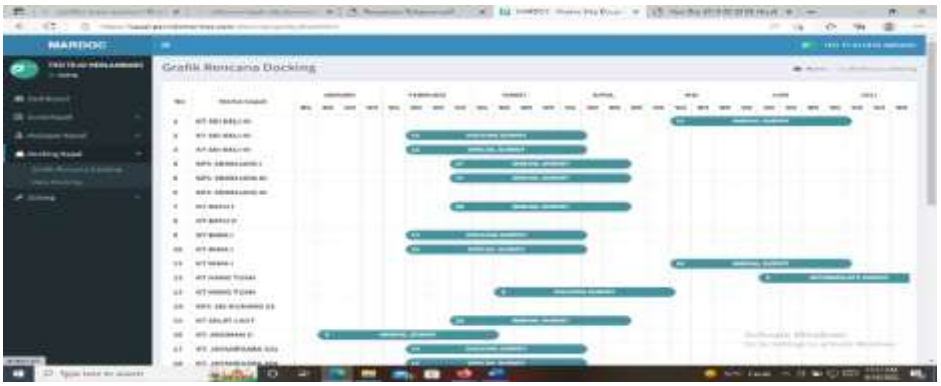


Figure 5. The graphic display of the ship docking plan

Figure 5 is a Ship Docking Plan Graph, so the schedule of ships that will make repairs (dock) can be seen in the MARDOC application in the bottom left menu "Ship Docking". By clicking on the menu, a screen will appear as shown above. In the data,

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

there is the last date the ship boarded the dock and the schedule of the ship that will board the dock.

The function of the MADOC application, especially for corporate activities, is to facilitate the distribution and storage of data for the company's operational activities. The ship's data and documents have a secure and easy-to-search archive at any time. This makes it easier for staff to run the ship as much as possible. With the application, every service process carried out creates a sense of justice in the ship service process. So that the processing of shipping documents will also minimize the costs needed and speed up the completion of the processing of the required documents. The process of servicing ship certificates carried out using the MARDOC application does not always run smoothly as desired. The obstacles faced when ship service using this application are during signal down so that the process of processing documents is hampered and you have to wait for the signal to return to normal to upload and continue ship service. And when the document is finished, it can be uploaded to the application when the signal is normal and the application runs smoothly.

CONCLUSION

In the operation of the MARDOC application, service users must know the username and password so can access the server as needed. The MARDOC application, especially for companies, is to facilitate service and data storage for company operational activities. The ship's data and documents have a secure and easy-to-search archive that is needed at any time. This makes it easier for employees to serve ships according to their needs. With the application, every service process carried out creates a sense of justice in the ship service process. So that the processing of shipping documents will also minimize the costs needed and speed up the completion of the processing of the required documents.

REFERENCES

Artanti, S. N. A., Dekanawati, V., & Astriawati, N. (2022). Distribusi Dan Logistik Hasil Tangkapan Nelayan: Studi Kasus Pada Pelabuhan Perikanan Puger Jember. Jurnal Sains Teknologi Transportasi Maritim, 4(1), 14–21.

Audi, A., Setiyantara, Y., Astriawati, N., & Suganjar, S. (2021). Evaluasi Pelaksanaan Inert Gas System (Igs) Pada Kapal Tanker (Studi Kasus Di Kapal MT. Winson No. 5 Milik Perusahaan Winson Oil Singapore). JURNAL SAINS DAN TEKNOLOGI MARITIM, 21(2), 126–140.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Bowen, G. A. (2009). Document analysis as a qualitative research method. Qualitative Research Journal, 9(2), 27–40.

Dick, H. (2008). The 2008 shipping law: deregulation or re-regulation? Bulletin of Indonesian Economic Studies, 44(3), 383–406.

Gurning, R. O. S. (2019). Determining The Important Factors of Port Digitalization: The Empirical Cases of Indonesian Ports. 9th International Conference on Operations and Supply Chain Management, Vietnam, 1–9.

Hertz, S., & Alfredsson, M. (2003). Strategic development of third party logistics providers. Industrial Marketing Management, 32(2), 139–149.

Lambert, V. A., & Lambert, C. E. (2012). Qualitative descriptive research: An acceptable design. Pacific Rim International Journal of Nursing Research, 16(4), 255–256.

Litman, T. (2003). Measuring transportation. Traffic, Mobility and Accessibility. ITE Journal, 73(10), 28–32.

Mandal, N. R. (2017). Ship construction and welding (Vol. 329). Springer.

Mohajan, H. K. (2018). Qualitative research methodology in social sciences and related subjects. Journal of Economic Development, Environment and People, 7(1), 23–48.

Pan, G., & Alouini, M.-S. (2021). Flying car transportation system: Advances, techniques, and challenges. IEEE Access, 9, 24586–24603.

Rustina, E., Eka, A., & Lestari, S. S. (2022). Analisis Peranan Freight Forwarder Dalam Jasa Pengiriman Barang. Jurnal Sains Teknologi Transportasi Maritim, 4(2), 28–35.

Rustina, E., Fitrianty, R. W., Nufus, R. K., Fathonni, M. S., & Lestari, S. S. (2023). Export-Import Customs Service Through Indonesia National Single Window. International Journal of Economics, Business and Innovation Research, 2(01), 69–80.

Rustina, E., Nufus, R. K., Lestari, S. S., Fathonni, M. S., & Sidiq, M. (2023). Analysis of Ro-Ro Ship Performance Management at the Merak-Bakauheni Crossing Port. Asian Journal of Management, Entrepreneurship and Social Science, 3(01), 344–359.

Supartini, S., Iswanto, I., Astriawati, N., Dekanawati, V., & Alfanzuri, N. K. H. (2022). Pelayanan Jasa Impor Barang Dalam Masa Pandemi. Dinamika Bahari, 3(2), 114–123.

Van de Voort, J. P. (1986). The MARDOC Project of Dutch maritime museums. In Museum Documentation Systems (pp. 257–264). Elsevier.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.