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Roadmap Concept Increasing The Competence of TNI AL Surveyor Personel With AHP and SWOT Methods

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ABSTRACT

One of the defense equipment that determines the readiness of the Navy in maintaining the integrity of the Republic of Indonesia is the Republic of Indonesia Warship (KRI). The worthiness of the KRI is of course the main parameter that is always integrated with the condition that it is always ready to fight to maintain Indonesia's sovereignty at sea . The readiness of the KRI is assessed from the aspect of equipment feasibility as a benchmark to determine the level of readiness and capability of the warship. This research aims to analyze the concept of increasing the competence of the Navy surveyor personnel. The research method used is the AHP and SWOT methods. The results of the study indicate that the appropriate strategy to be applied by the Navy in order to achieve sustainable competitive advantage is by : a) increasing the competence of the Navy with formal and informal course activities, b) increasing cooperation with external institutions, c) increasing standardization socialization. operational test equipment to increase the ability to operate test equipment owned by the Indonesian Navy's airworthiness personnel, d) add equipment in accordance with the update on the development of defense equipment, and e) improve the coaching program for both tour of duty and tour of area.

Keywords: KRI, Indonesian Navy, Strategy, Competence

PRELIMINARY

Background

The readiness of the Alutsista (Main Equipment of the Indonesian National Armed Forces Weapon System) is the main key in the security and defense of the Unitary State of the Republic of Indonesia (NKRI). The strength of defense equipment that is on standby both operationally and administratively shows the level of responsibility of the Indonesian Navy (TNI AL) personnel in showing the capability of military equipment which is ready to fight at any time in any condition and situation. One of the defense equipment that determines the readiness of the Navy in maintaining the integrity of the Republic of Indonesia is the Republic of Indonesia Warship (KRI). The role of the KRI is to maintain the security and defense of Indonesia's maritime territory and to protect all of Indonesia's bloodshed from threats, disturbances and challenges from external parties, either directly or indirectly.

The worthiness of the KRI is of course the main parameter that is always integrated with the condition that it is always ready to fight to maintain Indonesian sovereignty at sea. Of course combat readiness The integrated KRI requires the role of a professional *surveyor* . At present, the competence of the TNI AL's technical corps personnel is not in accordance with the *standard class* , such as the ability to know about airworthiness, the expertise of aeronautical personnel, how to act in making decisions in measuring values and the competency standards of airworthiness personnel can not be standardized against *the Surveyor class* . so that it is directly proportional to the readiness of defense equipment . The demand for the readiness of the KRI and its technical conditions must always be ready to support the implementation of these tasks. The readiness of the KRI is assessed from the aspect of equipment feasibility as a benchmark to determine the level of readiness and capability of the warship.

This research will raise combat readiness as a form of cumulative readiness of the *platform* and Sewaco *aspects (sensor, weapon and command)* with the level of competency of *Surveyor personnel* according to standards . The feasibility of the KRI is influenced by the condition of the material feasibility. The increasing number and age of KRIs that require the condition of the KRI's worthiness in accordance with their basic functions to carry out TNI AL operations, so that a professional TNI AL *Surveyor is needed* in determining the KRI's worthiness, both from the results of maintenance and repairs.

Formulation of the problem

Based on the background that has been stated, the formulation of the research problem is as follows:

a) How to determine the criteria that affect the selection of *Standard Class* ?
b) How to choose the priority *class* that will be used as input for improving the standards of the Indonesian Navy *Surveyor personnel* ?
c) How to formulate the competency of TNI AL *Surveyor personnel based on* the selected *class* ?

d) What is the strategy for increasing the competence of the Indonesian Navy *Surveyor personnel that has been determined?*

Research purposes

The objectives to be generated by the authors in this study are as follows:

a) Analyze determination of criteria in the selection of *Standard Class*.
b) *class* priorities that will be used as input to the Indonesian Navy
c) Analyzing the results of the formulation of the competence of the Indonesian Navy *Surveyor personnel based on* the selected *Standard Class*.
d) Analyzing the strategy of increasing the competence of the Indonesian Navy personnel from the results of the determination of the use of the selected *Standard Class.*

LITERATURE REVIEW

Human Resources (HR)

This study raises the need for the use of human resources that can be optimized in increasing the competence of *surveyor personnel* within the Indonesian Navy. According to Priyono (2010) human resource development can be in the form of education, training and other HR development programs. Generally, HR development activities are directed at achieving mastery of *skills*, *knowledge* and *abilities* .

Performance assessment

According to Alewine stating that performance appraisal is to make employees see themselves as they are, recognize the need for improving work performance and to participate in making performance improvement plans.

a. As a means of motivating achievement-oriented personnel.
b. As a basis for providing rewards (salary increases), compensation, incentives, service gifts, vacations and promotions.
c. As a basis for discipline (permanent employment status, demotion, dismissal).
d. As a guideline for personnel training and development requirements.

Surveyor

Surveyor is someone who conducts inspection or supervises and observes another job. In the world of work, the term *Surveyor* mostly refers to the field world which will later become the main object in terms of carrying out their duties.

Quoted from the Indonesian National Performance Competency Standards (SKKNI), the duties of the *Surveyor* include:

1. Analyze jobs.
2. Make decision
3. Carry out measurements.
4. Process / calculate data.
5. Performing the depiction / presentation of data.
6. Doing peg / pegging.

Competence

According to Wibowo (2014) , competence is an ability to carry out or perform a job or task that is based on skills and knowledge and is supported by the work attitude required by the job. According to George Klemp in Edison (2016) competence is a characteristic that underlies a person that results in

effective work and/or superior performance .

Competency Indicator

Indicators are used to determine the level of achievement of knowledge competence, skills and influential parameters. According to Wibowo (2014) there are five competency indicators, including the following:

a. A motive is something that people consistently think or want that causes an action.
b. Traits are physical characteristics and consistent responses to situations or information.
c. Self-concept is a person's attitudes, values, or self-image.
d. Knowledge is information that people have in a specific field.
e. Skills are the ability to perform certain physical or mental tasks.

According to Moeheriono (2012) in detail there are five dimensions of competence that must be possessed by all individuals, namely as follows:

a. *Task skills* , namely the skills to carry out tasks in accordance with standards in the workplace.
b. *Task management skills* , namely the skills to manage a different set of tasks that arise in the job.
c. *Contingency management skills* , namely the skills to take quick and appropriate action when a problem arises at work.
d. *Job role environment skills* , namely the skills to work together and maintain a comfortable work environment.
e. *Transfer skills* , namely skills to adapt to a new work environment

***Analytical Hierarchy Process* (*AHP*) Method**

method is a general theory of measurement. Four kinds of measurement scales that are usually used sequentially are nominal, ordinal, interval and ratio scales. A higher scale can be categorized into a lower scale, but not vice versa. Ratio-scale monthly income can be categorized into ordinal-scale income levels or categories (high, medium, low) on nominal scale. On the other hand, if at the time of measurement the data obtained were categorical or ordinal, data with a higher scale could not be obtained. AHP overcomes some of these problems (Saaty *et al* , 2001) . AHP is used to derive the ratio scale from several discrete or continuous pairwise comparisons. Pairwise comparisons can be obtained through actual measurements or relative measurements of the degree of liking, or interests or feelings. Thus this method is very useful to help get the ratio scale of things that were originally difficult to measure such as opinions, feelings, behaviors and beliefs (saaty *et al* , 2001). The use of AHP begins with creating a hierarchical structure or network of the problems to be studied. In the hierarchy there are main objectives, criteria, sub-criteria and alternatives that will be discussed.

The AHP method was developed by Prof. Thomas Lorie Saaty from *Wharston Business school* to find a *ranking* or priority order of various alternatives in solving a problem. In everyday life, a person is always faced with making choices from various alternatives. Prioritization and consistency testing are needed for the choices that have

been made. In complex situations, decision-making is not influenced by one factor alone, but by multiple factors and includes various levels and interests.

Basically AHP is a general theory of measurement that is used to find the ratio scale of both discrete and continuous pairwise comparisons. These comparisons can be taken from actual measures or basic scales that reflect the strength of feelings and relative preferences.

The stages of decision making in the AHP method basically include:

a. Define the problem and determine the desired solution
b. Create a hierarchical structure that begins with general goals, followed by criteria, sub-criteria and alternative choices to be ranked
c. Forming a pairwise comparison matrix that describes the relative contribution or influence of each element on each goal or criterion at the level above. Comparisons are made based on the choice or " *judgment* " of the decision maker by assessing the level of importance of an element compared to other elements
d. Normalizing the data is by dividing the value of each element in the paired matrix by the total value of each column
e. Calculate the *eigenvector value* and test its consistency, if it is not consistent, the data taker (*preference*) needs to be repeated. The *eigenvector value* in question is the *maximum eigenvector value* obtained using *matlab* (data programming language) or manual.
f. Repeat steps 3,4, and 5 for the entire hierarchy level.
g. Calculate the *eigenvector* of each pairwise comparison matrix. The *eigenvector value* is the weight of each element.
h. This step synthesizes the choice and prioritization of elements at the lowest hierarchical level until the goal is achieved
i. Test the hierarchical consistency . If it does not meet the CR < 0.100 then the assessment must be repeated.

***Strength Weakness Opportunity and Threat Analysis* (SWOT)**

SWOT analysis is identification as a factor to formulate an organization's strategy. This analysis is based on logic that can maximize strengths *and* opportunities , but collectively can minimize *weaknesses* and *threats* .

Organizational strategic decisions need to consider internal factors that include strengths and weaknesses as well as external factors that include opportunities and threats. Therefore, there are important considerations for SWOT analysis.

RESEARCH METHODS

1. Types of research

The qualitative research in question is to understand the phenomena of what is experienced by research subjects *holistically* by descriptive in the form of words and language in a context, especially natural ones by utilizing various natural methods (Sugiyono, 2013).

2. Research Object

The object of this research is *the* Indonesian Navy Surveyor

personnel . In this study, the determination of the source of information or informants to the interviewees was carried out by *purposive sampling* , which was selected based on certain considerations and objectives.

3. Source and Type of Data

The data used in the study consists of primary and secondary data with the following explanation.

a. Primary data is data obtained or collected by a researcher directly from his data source. Primary data is also referred to as original data or new data that has an up to date nature. To obtain the primary data, researchers collected them directly. In the context of this study, primary data were obtained from people who had information and knowledge related to the problem and focused research on the competence of Navy airworthiness personnel to the competence of Surveyor personnel of the class.

b. Secondary Data is data obtained or collected by researchers from various existing sources (researchers as second hand). Secondary data can be obtained from various sources such as the Central Statistics Agency (BPS), books, reports, journals, and others. Meanwhile, secondary data that is macro in nature is mostly obtained through documents released by the Navy's Material Eligibility Service (Dislaikmatal).

4. Research Instruments

In qualitative research, the research instrument or research tool is the researcher himself. In conducting research, researchers are assisted with interview guidelines, questionnaires, cameras to record the required images, and *audiovisual recording devices*

5. Data Collection and Processing Techniques

The data in this study consisted of primary data and secondary data. Primary data is data obtained directly by means of measurement, observation and interviews. Primary data collection was chosen because researchers need to obtain data directly. While secondary data is data obtained indirectly. This data is obtained from literature studies and supporting documents at the institutions that play a role.

6. Data analysis technique

The data analysis used is AHP to determine the selection of Surveyor class competencies that will be used as a reference for Surveyor competencies in the Indonesian Navy (Lloyd's Register (LR) , Bureau Veritas (BV), Det Norske Veritas-Germanisher Lloyd (DNV-GL) or PT Biro Classification Indonesia (BKI)) as criteria. The data used is AHP to determine the selection of Surveyor class competencies that will be used as a reference for Surveyor competencies in the Indonesian Navy (Lloyd's Register (LR) , Bureau Veritas (BV), Det Norske Veritas-Germanisher

Lloyd (DNV-GL) or PT Biro Classification Indonesia (BKI)) as criteria.

RESEARCH RESULT

1. Hierarchy Process Analysis (AHP)

Based on the results of the Analytical Hierarchy Process (AHP) analysis above, it can be seen that the priority of the main criteria in determining the Surveyor Class is the Experience Criteria. Surveyor Class experience in conducting inspections of the technical requirements that must be met by a ship before sailing is the main reason for determining the Surveyor Class. While the criteria for Motivation and Intellectual Ability are the second and third priorities in determining the Surveyor Class.

In addition, it can be seen that the Surveyor Class Lloyd Register (LR) is the Surveyor Class the main priority in determining the Surveyor Class based on the criteria of Experience, Motivation and Intellectual Ability. This is because the Surveyor Class Lloyd Register (LR) has the largest coefficient value in each criterion. Meanwhile the Surveyor Class Bureau Veritas (BV), Det Norske Veritas-Germanisher Lloyd (DNV-GL) and the Indonesian Classification Bureau (BKI) are the second, third and fourth priorities in determining the Surveyor Class determination.

2. SWOT analysis

Based on the results of the SWOT analysis, it can be seen that there are 19 *Strenghts* (Strengths) , 21 Weakness factors *(* Weaknesses), 22 *Opportunities* (Opportunities) and 18 *Threats* (Threats) factors in the Competence of the Indonesian Navy *Surveyor Personnel.* The total weighting of the Strength and Weakness Factors is 0.483 for the Strength factor and 0.517 for the Weakness factor. While the total weighting of the Opportunity and Threat factors is 0.562 for the Opportunity factor and 0.438 for the Threat factor.

After the results of the weighting are multiplied by the rating value, the value of the *Internal Factors Evaluation* (IFE) matrix and the *External Factors Evaluation* (EFE) matrix will be obtained. The IFE matrix value in the form of Strength and Weakness factors shows a score of 2,435 for the Strength factor and a score of 1,608 for the Weakness factor, so that the difference between the Strength and Weakness Factors scores to 0.827. While the EFE Matrix Value in the form of Opportunity and Threat Factors shows a score of 2,056 for the Opportunity Factor and 1,998 for the Threat Factor, so the difference between the Opportunity and Threat Factors is 0.058. Based on this, the coordinates (0.827; 0.058) can be obtained .

In addition, from the results of the calculation of the IFE value, it is also known that the internal factor that has the main strength with the highest score of 0.129 is the factor " Superiority of coaching in the Navy based on linearity of abilities in each material feasibility test " . Then followed by internal

factors with the lowest score of 0.077, namely the factor of " Strong regeneration and periodic training of fitness "As for the Internal factor which has a major weakness with the highest score of 0.125, namely the factor " Development of the TNI AL organization ". which continues to grow" . This is followed by the internal factor which has the lowest weakness with a score of 0.064, namely the " lack of training " factor. The total value of IFE on the strength factor has a total value of 2.122 and the weakness factor has a total value of 1.926. From these two values, it can be seen that the total score on the IFE matrix is 2.122 > 1.926, which means that internal conditions have the strength to overcome existing situations and weaknesses.

From the results of the calculation of the EFE value, it is also known that the external factor that has the main opportunity with the highest score of 0.128 is the " Procurement of new testing equipment " factor . Then followed by external factors with the lowest chance of having a score of 0.073, namely the factor " The equipment owned is always strived to be updated " . As for the external factor that has the main threat with the highest score of 0.123, namely the factor " Disagreement in how to make decisions by the Navy surveyors against the Surveyor class " . Then followed by external factors that have the lowest threat with a score of 0.06 3 , namely the " Budget " factor . The total value of EFE on the Opportunity factor has a total value of 2.121 and the Threat factor has a total value of 1.599. From these two values, it can be seen that the total score on the IFE matrix is 2.12 1 > 1.599 , which means that external conditions have the opportunity to overcome existing threats.

By obtaining the results of the IFE-EFE matrix, the coordinates of the IFE matrix from the difference in scores between the Strengths and Weakness factors are 0.196, while the coordinates of the EFE matrix from the difference in scores between the Opportunities and Threats factors are 0.522. Based on this, the coordinates (0.196; 0.522) can be obtained.

In determining the strategy to increase the competence of the Indonesian Navy *Surveyor personnel that has been determined, there are several appropriate strategies to be applied by the* Navy in order to achieve sustainable competitive advantage, namely :

a. Improving the competence of the Indonesian Navy with both formal and informal course activities.
b. Increase cooperation with external institutions.
c. Improving the socialization of operational standards of test equipment to increase the ability to operate test equipment owned by the Indonesian Navy's airworthiness personnel.
d. Adding equipment in accordance with the update on the development of defense equipment.
e. Improvement of coaching programs, both tour of duty and

tour of area

Table 1. SWOT Matrix

Internal factors / External Factors	Strength (S)	Weakness (W)
	1. Competencies possessed by Indonesian Navy personnel have legality 2. Competence of Indonesian Navy surveyors by profession 3. Accurate and precise assessment in every material suitability test 4. The superiority of coaching in the Indonesian Navy is based on the linearity of capabilities in each material feasibility test 5. The advantages of competence capabilities possessed by the Indonesian Navy Surveyor are skills, training and courses 6. The test equipment is very complete in the Indonesian Navy, where the latest test equipment updates are in Machining performance testing 7. Strong regeneration and periodic training of valiant 8. Tour of Duty and Tour of Area precisely to strengthen the personnel's worthiness 9. The advantages of the competence capabilities possessed by the Indonesian Navy Surveyor are experience, Intellectual and Personality 10. The test equipment for testing Alutsista is complete for feasibility testing 11. The advantages of coaching in the Indonesian Navy are structured (routinely) functionally clear 12. The advantages of the Indonesian Navy Surveyor are able to cover all fields of defense equipment and non-defense equipment 13. TNI AL surveyors only have internal materials in the Navy 14. Indonesian Navy surveyors have experience both in various fields and in various placements (Professionalism in the Navy) 15. The equipment owned by the Indonesian Navy has the latest and most updated test equipment 16. Guidance in the Indonesian Navy surveyor environment is influenced by rank, not only having specialist inspection capabilities in one field but also in various fields of competence within the Indonesian Navy. 17. Airworthiness of the Indonesian Navy has been able to carry out the Certification of Feasibility of Alutsista and Non-Alutsista Materials 18. Standard ship platform test equipment 19. Sewaco test kits, Navcom, Ranpur, Weapons, Limited special tools	1. Lack of training 2. The development of the Navy Organization that continues to grow 3. Alutsista and Non-Alutsista are increasing while surveyor personnel in the Indonesian Navy are not increasing 4. Many test equipment that has not been accommodated (not fully owned) 5. The need for improvement of the feasibility test equipment 6. A partnership partner is needed by conducting an MoU with a feasibility agency outside the Indonesian Navy (Marine surveyor) 7. Training is still limited due to budget 8. In the future, validation technology and organizational developments continue to evolve 9. Less budget 10. No standardization and equipment updates 11. No courses and training 12. Lack of Tour of Duty coaching (Assignments elsewhere) 13. There is no formal surveyor competency budget 14. There is no intensive training in mastering the operation of test equipment 15. Test equipment calibration is less of a concern 16. Indonesian Navy surveyors lack the skills, intellectual abilities, and specification capabilities 17. Lack of capacity building in the field of training and refresher of feasibility knowledge 18. Lack of understanding in the operational field of test equipment 19. Never update the equipment owned by the Indonesian Navy for defense and non-defense equipment 20. The competence of the Indonesian Navy Surveyor lacks courses, training, and workshops 21. Lack of test equipment for rentalco, Navcom, Combat Vehicles, Weapons and Special Tools
Opportunity (O) 1. Cooperation with outside	SO Strategy 1. Improving the competence of the Navy	WO Strategy 1. Create training programs

institutions 2. Upgrade courses (informal) and Training (formal) 3. Procurement of goods and services 4. Implementation of calibration of test equipment equipment in Dislaikmatal and Satlaikmatbar or Satlaiakmattim 5. Surveyor Class carries out based on class standards while TNI AL surveyors are multi-talented 6. Socialization of standards and rules to be the same as class standards 7. Cooperation with institutions outside the Navy (Class) 8. New procurement in the field of non-defense equipment 9. Calibration of test equipment in all agility satkers (Dislaik and Satlaik) 10. Overall organizational setup (not Tour of Duty) 11. Functional positions that do not move around 12. Improving competence through formal and informal courses 13. There is attention to the increasing need for defense equipment 14. Procurement of new Testing equipment 15. Improved equipment calibration 16. There is software about surveyor standardization 17. Good competence will be directly proportional to the quality being checked so that the valor that is acted on by the TNI AL surveyors will show professionalism as expected. 18. The equipment you have is always trying to be updated 19. Prepare calibrated and accredited test equipment 20. The operation of the test equipment owned must be mastered by the surveyor crew in operating it 21. Need courses, training and workshops with related institutions outside the Navy 22. Strengthening competence encourages quality improvement from the professionalism of the Indonesian Navy Surveyor's ability	with both formal and informal course activities 2. Increase collaboration with external institutions 3. Carry out calibration of test equipment 4. Improving the completeness of test equipment and equipment, both defense and non-defense equipment 5. Improving professional certification for Indonesian Navy personnel 6. Disseminate standard rules so that they are the same as class standards.	both formal and informal 2. Improving the socialization of test equipment operational standards 3. Adding equipment in accordance with the update on the development of defense equipment. 4. Added test tools for Sewaco, Navcom and custom tools. 5. Improving the competence of Navy surveyors with training programs/courses 6. Carry out clearer coaching regarding assignments in other places
Threat (T) 1. Disagreement in how to make decisions by the Indonesian Navy surveyor against the Surveyor class 2. TNI AL test equipment is not inferior to surveyor class 3. Tour of Duty and Tour of Area within the Indonesian Navy	ST strategy 1. Improve the development of the Navy surveyors. 2. Increase socialization to increase the ability to operate test equipment owned by the Indonesian Navy's airworthiness personnel 3. Aligning the qualifications of the Indonesian Navy surveyors to suit their profession.	WT Strategy 1. Aligning the capabilities of the Indonesian Navy surveyor with the surveyor class. 2. Adding Indonesian Navy surveyor personnel 3. Improvement of coaching programs, both tour of duty and tour of area 4. Adding budget funds for

4. The budget for the development of the Indonesian Navy surveyor personnel is very limited 5. The existence of Tour of Duty and Tour of Area 6. A storied and continuous operation cannot be expected 7. The competence of the Indonesian Navy surveyor has not been developed properly (not optimal) 8. Test equipment technology operation is not optimal 9. Personnel development (Tour of Duty and Tour of Area) 10. Budget 11. The qualifications of many Indonesian Navy surveyors are not linear in their profession 12. There is a professional principle that a TNIAL is only a maximum of 2 years in the area where he works, so he must carry out the Tour of Duty and Tour of Area 13. The low ability to operate test equipment owned by the Indonesian Navy's airworthiness personnel 14. Duty and Tour of Area problems 15. Level of confidence 16. Recognition of the validity of survey results 17. HR capabilities that must be equivalent to Surveyor class 18. The quality of formal education, verification skills training and surveyor experience are not linear	4. Open a discussion room so that there are no misunderstandings in making decisions between TNI surveyors and Class surveyors. 5. Improve the operation of test equipment technology for optimal	coaching and procurement of goods 5. Improve equipment and maintenance of defense equipment

Conclusion

Based on the results of the research that has been done, several conclusions can be drawn, including:

1. The main criteria that influence the selection of *Standard Class* are the Experience criteria. While the motivation criteria are the second priority and the Intellectual Ability criteria are the third priority.
2. The main priority *class that will be used as input for improving the standards of* TNI Al *Surveyor* personnel is the *Class* Lloyd Register (LR). While *Class* BV is the second priority, *Class* DNV-GL is the third priority and *Class* BKI is the fourth priority.
3. The formulation of the competence of the TNI AL *Surveyor personnel based on* the selected *class , namely the TNI AL Personal Surveyor Competence*, is in quadrant I, namely the quadrant between *Strengths* and *Opportunities* (SO Quadrant).
4. Indonesian Navy *Surveyor* personnel that has been determined can use the strategy of increasing the competence of the Navy with both formal and informal course activities, Increasing cooperation with external institutions, Increasing the socialization of

operational standards for testing equipment to increase the ability to operate test equipment owned by Indonesian Navy personnel . , The addition of equipment in accordance with the update on the development of defense equipment and improvement of the coaching program for both the tour of duty and the tour of the area .

Suggestion

Suggestions that can be given from this research include:

1. The need for recommendations for the selection of *Standard Class* based on Experience Criteria as the main consideration.
2. The need for a recommendation for the main priority *class* that will be used as input for improving the standards of the TNI Al *Surveyor personnel, namely the Class* Lloyd Register (LR).
3. The need to formulate the competence of the Indonesian Navy *Surveyor based on the selected class* by increasing the items of strength (*strengths*) and making opportunities (opportunities *)* into a force that supports the competence of personnel within the Navy.
4. necessary to implement a strategy to increase the competence of the Indonesian Navy *Surveyor personnel that has been determined by using the strategy of increasing* the competence of the Navy with formal and informal course activities, Increasing cooperation with external institutions, Increasing socialization of operational standards of test equipment to increase the ability to operate test equipment owned by TNI airworthiness personnel A, The addition of equipment in accordance with the update on the development of defense equipment and improvement of the coaching program, both tour of duty and tour of area .

REFERENCES

Edison, E., Yohny A., and Imas K. 2016. *Human Resource Management* . Alphabeta , Bandung.

Moeheriono. 2012. *Competency-Based Performance Measurement.* PT Raja Grafindo Persada, Jakarta.

Moleong, LJ 2017. *Qualitative Research Methods* . PT. Rosdakarya Youth, Bandung.

Priyono.2010. *Human Resource Management.* Zifatama Publisher, Surabaya.

Saaty, TL and Vargas, LG 2001. *Models, Methods, Concepts and Applications of the Analytic Hierarchy Process* . Kluwer Academic Publishers, Norwell.

Sugiyono. 2013. *Educational Research Methods Qualitative Approaches and R&D* , 222.

Wibowo. 2010. *Performance Management* . Rajawali Press, Jakarta.

Wibowo . 2014. *Behavior in Organizations i.* Rajawali Press , Jakarta

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