

## ABSTRACT

**Danang Dwi Setyo Nugroho**, NIT : 51145310.T, 2018” *Influence of spare parts availability and pump maintenance to main cooling sea water pump performance and performance optimization strategy of cooling sea water pump in MV. KT 05* ”, Diploma IV Program, Teknikal Program, Politeknik Imu Pelayaran Semarang, Head of Community Service Development Center, Counselor I: Dr. A. Agus Tjahjono, M.M., M.Mar.E, and Advisor II: Capt. Ali Imran Ritonga, M.M., M.Mar.

The purpose of this study is to find out how significant the influence of spare parts availability on the performance of cooling sea water pump in MV. KT 05, to test how significant the effect of pump maintenance on the performance of main cooling sea water pump in MV. KT 05, to find out how significant the influence of spare parts availability and maintenance of pump performance of cooling sea water pump in MV. KT 05, to analyze strategy / effort to optimize performance of cooling sea water pump in MV. KT 05

Data collection techniques with observation, interviews, and questionnaires. The sample in this research are 69 cadets of Semester VIII Technical department. The variables in this research are spare parts availability ( $X_1$ ) and pump maintenance ( $X_2$ ) to performance of cooling sea water pump ( $Y$ ). analysis using SPSS program and SWOT analysis method to be able to identify various factors systematically to strength (Strengths), Weaknesses, Opportunities and Threats to formulate problem solving strategy.

The availability of spare parts has a positive effect on the performance of main cooling sea water pump by 31.4%, the availability of spare parts to the performance of cooling water pump is weak. Pump treatment has a positive effect on the performance of main cooling sea water pump of 59.8%, pump maintenance effect on the performance of main cooling sea water pump is medium. The performance of main cooling sea water pump can be explained by the availability of spare parts and maintenance of pumps of 55.3%, the availability of spare parts and maintenance of the pump on the performance of cooling water water pump is moderate. Strategy / effort to optimize performance of ccooling sea water pump in MV. KT 05 is to request spare parts before running hours runs out so the company has plenty of time to process doubling spare parts, requesting more than one spare parts, using pumps in turn.

**Keywords:** Spare Parts Availability, Pump Treatment, Main Cooling Sea Water Pump