Analisis Kehandalan dan Overall Equipment Effectiveness-Machine Effectiveness pada Crawler Crane SCX 1200 untuk meningkatkan Maintenance Performance Level (MPL) = Reliability Analysis and Overall Equipment Effectiveness-Machine Effectiveness Crawler Crane SCX 1200 to Increase Maintenance Performance Level (MPL)

Tiara Shinta Raharkandi, author

Abstrak

Proses pemeliharaan adalah suatu kegiatan yang mengacu pada serangkaian proses dan praktik yang bertujuan untuk memastikan pengoperasian mesin, peralatan, dan jenis aset lainnya yang berkelanjutan dan efisien yang biasanya digunakan dalam bisnis. Reliability, Availability, Maintainability sebagai tujuan utama dilakukan proses pemeliharaan. Penelitian ini bertujuan untuk mendapatkan Sistem Kritis pada Crawler Crane akan ditentukan menggunakan Diagram Pareto. Lalu dibuatlah Diagram Blok untuk membantu melakukan analisis. Analisis Kualitatif menggunakan Failure Mode Effect Analysis (FMEA) untuk mendapatkan rekomendasi pemeliharaan dan Analisis Kuantitatif menggunakan Analisis Kehandalan dan Overall Equipment Effectiveness–Machine Effectiveness untuk mendapatkan interval yang optimal dari pemeliharaan Crawler Crane guna meningkatkan Maintenance Performance Level. Jadi, perbedaan dari Ketersediaan saat ini dibandingkan dengan M (120) terdapat kenaikan data ketersediaan pada komponen LS (Lower Structure) yaitu 0.48%, ESE (Electrical Safety Equipment) yaitu 0.57%, US (Upper System) yaitu 0.95% dan Ketersediaan Sistem yaitu 0.66%. Dalam penelitian ini, kinerja keseluruhan alat Crawler Crane belum diperhatikan, dan evaluasi kinerja hanya berdasarkan perhitungan ketersediaan dan penggunaan. Penelitian selanjutnya sebaiknya mencakup pengukuran Key Performance Indicator (KPI) dengan Maintenance Performance Level (MPL).

.....The maintenance process is an activity refers to a set of processes and practices which aim to ensure the continuous and efficient operation of machinery, equipment, and other types of assets typically used in business. Reliability, Availability, Maintainability as the main objectives of the maintenance process. This study aims to obtain Crawler Crane Maintenance with the Reliability Analysis Method and OEE-ME (Overall Equipment Effectiveness-Machine Effectiveness) to increase Maintenance Performance Level (MPL). Critical System on Crawler Crane will be determined using Pareto Diagram. Then a Block Diagram is made to help carry out the analysis. Qualitative Analysis with Failure Mode Effect Analysis (FMEA) will determine the maintenance recommendations and Quantitative Analysis with Reliability Analysis and Overall Equipment Effectiveness-Machine Effectiveness to obtain optimal intervals for Crawler Crane maintenance to increase Maintenance Performance Level. Thus, the difference obtained from Current Availability compared to M (120) is that there is an increase in Availability for LS (Lower Structure) obtained a value of 0.48%, ESE (Electrical Safety Equipment) obtained a value of 0.57%, US (Upper System) obtained a value of 0.95% and Availability System of 0.66%. In this study, the overall performance of the Crawler Crane has not been considered, and performance evaluation is only based on availability and usage calculations. Future research should include measuring key performance indicators (KPI) with Maintenance Performance Level (MPL).