

Application of Reliability Engineering Method in Sugar Refinery Industry

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Abstract

Problems that appear in a company that produces refined sugar, the production floor has not reached the level of critical machine availability because it often suffered damage (breakdown). This results in a sudden loss of production time and production opportunities. This problem can be solved by Reliability Engineering method where the statistical approach to historical damage data is performed to see the pattern of the distribution. The method can provide a value of reliability, rate of damage, and availability level, of an machine during the maintenance time interval schedule. The result of distribution test to time inter-damage data (MTTF) flexible hose component is lognormal distribution while component of teflon cone lifthing is weibull distribution. While from distribution test to mean time of improvement (MTTR) flexible hose component is exponential distribution while component of teflon cone lifthing is weibull distribution. The actual results of the flexible hose component on the replacement schedule per 720 hours obtained reliability of 0.2451 and availability 0.9960. While on the critical components of teflon cone lifthing actual on the replacement schedule per 1944 hours obtained reliability of 0.4083 and availability 0.9927.

Keywords

Reliable, Reliability, Maintenance