

ABSTRAK

Proses produksi dilakukan secara terus menerus maka akan mengakibatkan kemampuan mesin menjadi menurun. Saat *komponen* pada mesin mengalami kerusakan mengakibatkan proses produksi terganggu, maka kinerja mesin bergantung pada *Reliability* mesin atau *komponen* tersebut. Mesin DMB adalah mesin sortir di PT Etex Building Performance Indonesia, Karena merupakan mesin utama dalam proses produksi dan DMB memiliki *downtime* yang tinggi pada tahun 2019. *Failure Mode effect And Analysis*, bertujuan menentukan faktor kegagalan mesin. *Reliability Block Diagram*, untuk menentukan kehandalan mesin. Hasil Penelitian dengan FMEA adalah *Peunematic* nilai RPN 60, *Deccelarator* nilai RPN 64, *Accelarator* nilai RPN 56, *Hydrolic Table Safety Lock* nilai RPN 48, *Roller* nilai RPN 48 *Bearing Lifting* nilai RPN 36, *Sensor Transfer Dolly* nilai RPN 48, *Motor Transfer Template* nilai RPN 36, *Suxtion Cup* adalah komponen yang memiliki nilai RPN paling rendah dengan nilai 30, dari perhitungan *Reliability Block Diagram* (RBD) didapat nilai peluang kehandalan mesin DMB diantaranya 88.42 % proses produksi selama 23 jam, 42.25 % proses selama 161 jam operasi, dan menurun sebesar 7.70 % apabila digunakan selama 477 jam operasi.

Kata kunci : *failure, preventif maintenance, reliability.*

KARAWANG

ABSTRACT

The production process is carried out continuously, it will result in decreasing machine capability. When a component in a machine is damaged resulting in the production process being interrupted, the machine's performance depends on the Reliability of the machine or the component. The DMB machine is a sorting machine at PT Etex Building Performance Indonesia, because it is the main machine in the production process. DMB has a high downtime in 2019. Failure Mode effect And Analysis aims at determining machine failure factors. Reliability Block Diagram aims at determining machine reliability. The results of research with FMEA are Peunematic with RPN value 60, Deccelarator value RPN 64, Accelarator value RPN 56, Hydrolic Table Safety Lock value RPN 48, Roller value RPN 48 Bearing Lifting value RPN 36, Sensor Transfer Dolly value RPN 48, Motor Transfer Template value RPN 36, the Suxtion Cup is the component that has the lowest RPN value with a value of 30, from the Reliability Block Diagram (RBD) calculation, the probability value of the DMB machine reliability is 88.42% of the production process for 23 hours, 42.25% of the process during 161 hours of operation , and decreased by 7.70% when used for 477 hours of operation.

Keywords: failure, preventive maintenance, reliability