

## ABSTRAK

Raka Septian Danuwarta, 2019, Perbaikan Jadwal Perawatan Mesin *Ball Mill* Dengan Pendekatan RCM Pada Produksi Barit Di PT.UnichemCandi Indonesia, Progam Studi: Teknik industri Universitas PGRI Adi Buana Surabaya, Ir. Titiek Koesdijati, MT.

Bagi perusahaan PT.UnichemCandi Indonesia keberadaan mesin ball mill sangat penting dalam produksi Barit. Kondisi mesin ball mill sendiri harus dalam keadaan baik, agar pelaksanaan proses produksi berjalan dengan lancar dan target produksi dapat tercapai . Oleh karena itu perlu dilakukan pemeliharaan mesin secara rutin dan terjadwal. Reliability Centered Maintenance (RCM) adalah metode yang dapat di gunakan untuk pemeliharaan mesin. Tahapan dalam metode RCM ini adalah kegagalan fungsi komponen ditinjau dari Failure Mode and Effect Analysis (FMEA), Penilaian resiko di dapatkan dari perhitungan Risk Priority Number (RPN), selanjutnya perhitungan nilai MTBF dan MTTR, dan yang terakhir menentukan interval waktu perawatan. adapun hasil yang diperoleh yaitu, dalam perhitungan FMEA didapat tiga komponen risk priority yaitu Motor, Copel dan reducer. Interval perawatan pada komponen motor dengan interval perawatan 30,5 jam, copel dengan interval perawatan 30.90 jam, dan reducer dengan interval perawatan 31.03 jam. hasil dari penelitian ini didapat usulan yaitu terdapat tiga komponen yang mempunyai tingkat kegagalan yang tinggi dan harus mendapatkan perawatan yang terjadwal untuk mengurangi kegagalan mesin Ball mill.

Kata Kunci: Mesin Ball mill, Realibility Centered Maintenance (RCM), Failure Mode And Effect Analysis (FMEA)

## **ABSTRACT**

*Raka Septian Danuwarta, 2019, Improvement of Ball Mill Machine Maintenance Schedule with RCM Approach at Barite Production at PT. Unichemandi Indonesia, Program Study: Industrial Engineering University of PGRI Adi Buana Surabaya, Ir. Titiek Koesdijati, MT.*

*For the company PT.UnichemCandi Indonesia the existence of ball mill machines is very important in the production of Barit. The condition of the ball mill itself must be in good condition, so that the implementation of the production process runs smoothly and production targets can be achieved. Therefore it is necessary to do routine and scheduled engine maintenance. Reliability Centered Maintenance (RCM) is a method that can be used for engine maintenance. The stages in this RCM method are the failure of component functions in terms of the Failure Mode and Effect Analysis (FMEA), the risk assessment is obtained from the calculation of Risk Priority Number (RPN), then the calculation of MTBF and MTTR values, and finally the maintenance time interval. As for the results obtained, in the calculation of FMEA, three risk priority components are obtained, namely Motor, Copel and Reducer. Maintenance intervals on motor components with 30.5 hour maintenance intervals, copel with 30.90 hour maintenance intervals, and reducers with 31.03 hour maintenance intervals. the results of this study obtained a proposal that there are three components that have a high failure rate and must get scheduled maintenance to reduce Ball mill engine failures.*

*Keywords: Ball mill machine, Reliability Centered Maintenance (RCM), Failure Mode And Effect Analysis (FMEA)*