

**PERANCANGAN SOP PERAWATAN MESIN CUTTING  
MENGUNAKAN METODE *RELIABILITY CENTERED MAINTENANCE*  
DAN *MANUFACTURING VALUE STREAM MAPPING***

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**ABSTRAK**

Kegiatan perawatan di PT. Lion Superior Electrodes menggunakan preventive maintenance, namun dalam pelaksanaannya tidak berjalan dengan baik. Masalah yang terjadi ialah tingginya waktu downtime yang disebabkan oleh tidak adanya *Standard Operational Procedure* (SOP) yang dijalankan sehingga menyebabkan banyak mesin – mesin tiba – tiba berhenti. Maka untuk memecahkan masalah ini dilakukan penelitian menggunakan metode Reliability Centered Maintenance (RCM) dan Maintenance Value Stream Mapping (MVSM). Pada penelitian ini difokuskan pada mesin *cutting* karena memiliki waktu downtime yang paling tinggi yaitu 239 jam dalam jangka waktu Agustus hingga Oktober 2018. Mesin *cutting* ialah Gulungan kawat yang ditarik kemudian diluruskan dan dipotong menjadi kawat potong sesuai dengan standar yang ada. Metode RCM yang digunakan terdiri dari *Failure Mode Effect Analysis* (FMEA), Pareto Diagram, dan *Decision Worksheet*, sedangkan metode MVSM menggambarkan aktivitas aktual pemeliharaan mesin. Pada metode RCM diketahui komponen kritis pada mesin *cutting* yaitu *electromotor*, panel box, palu – palu potong, *roll cutting*, *stopper* dan *roll wire*, serta *straightening*. Selain itu diketahui pula tindakan perawatan yang tepat untuk setiap komponen kritis. Pada metode MVSM hasil yang diperoleh berupa usulan SOP perawatan bila terjadi mesin rusak sehingga perusahaan dapat mengurangi waktu downtime.

**Kata Kunci** : RCM, FMEA, *Decision Worksheet* RCM, MVSM, SOP.

# DESIGN OF CARE SOP CUTTING MACHINE USING RELIABILITY CENTERED MAINTENANCE AND MANUFACTURING METHOD VALUE STREAM MAPPING

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## ***ABSTRACT***

*Treatment activities in pt. Lion Superior Electrodes using preventive maintenance, but in practice did not go well. A problem that occurs is the high time of downtime caused by lack of a Standard Operational Procedure (SOP) that run so that caused a lot of machines – machine arrived – arrive to stop. So to solve this problem do research using the method of Reliability Centered Maintenance (RCM) and the Maintenance of Value Stream Mapping (MVSM). This research is focused on cutting machines for having the highest downtime time i.e. 239 hours within the period of August to October 2018. Cutting wire Roll is drawn then straightened and cut into the wire cut into compliance with existing standards. The RCM method used consists of a Failure Mode Effect Analysis (FMEA), Pareto diagrams, and Decision Worksheet while describing the actual activity MVSM method engine maintenance. On the methods to critical components in the RCM known to cut i.e. electromotor, panel boxes, hammer – hammer cut, cutting, roll stopper and wire, as well as straightening roll. In addition, it is known the action proper care for every critical component. MVSM methods on the results obtained in the form of the proposed SOP treatment if there is a damaged machine so that the company can reduce the time of downtime.*

***Keywords:*** RCM, FMEA, Decision Worksheet RCM, MVSM, SOP.