

**CRITICAL PART ANALYSIS ON TELESCOPIC CONVEYOR PROTOTYPE  
USING FAILURE MODE AND EFFECT ANALYSIS (FMEA) METHOD**

**ABSTRACT**

*The development of technology is currently very fast because the government wants to apply technology 4.0, which means that all processes will be automation-based to reduce the potential for work accidents and the more modern technology in Indonesia besides reducing the potential for accidents, this automation system can also speed up the process of making a product. one of the tools is a telescopic conveyor. Process failure risk analysis is an effort that can be made to detect any risks that affect the failure of the process, especially the production process, which in turn will affect the failure of a system. From this analysis, it will be used as a reference to deal with risks that arise in the future and can also be used to repair or eliminate failures before system performance has decreased. This study focuses on the FMEA (Failure Mode Effects Analysis) method which is useful for identifying the failure of a production process by analyzing the critical level of a part on a telescopic conveyor. The variables measured in this study were occurrence (frequency of occurrence), severity (impact) and detection (detection or prevention) of each failure mode. The purpose of this study is to analyze the failure mode that causes a production to stop using the FMEA method, to get the largest risk of failure in the production process in the RPN (Risk Priority Number) value, the greater the RPN value obtained, the greater the critical level of the part. From the results of this study, it was found that the highest RPN value was for the tensile spring type part with an RPN value of 98, repair / replacement had to be prioritized on the spring if the conveyor was to be used for a long service life. Preventive method uses periodic checks according to the repair / replacement schedule so that it is detected if there is a problem with the spring.*

**Keywords:** telescopic conveyor, critical part, FMEA method, RPN (Risk Priority Number), preventive