ABSTRACT

This research was conducted on the sarong production process in the weaving department of PT. Sukorintex. The weaving department was chosen because it produces the most types of defective products compared to other departments at 71%. The data collection method was carried out by field observations to obtain primary data and secondary data obtained from the company. Data processing is carried out using six sigma method and Failure Mode and Effect Analysis (FMEA). Six sigma method is used to find and overcome the causes of defects that occur by processing data with the define, measure, analyze, and improve (DMAI) stages and FMEA is used to make suggestions for improvements. The results of the study found that there were six types of defects, namely flot defects, damaged edges, barjarang, lysing, color differences, and loose weft in the weaving department which must be prioritized to find the cause. In the flot defect ranking the highest RPN (Risk Priority Number) value is 294, tepi rusak the highest RPN value is 448, barjarang is 280, color difference is 72, lysing is 448, and tepi kendor is 343. Based on the analysis of the FMEA method through ranking the recommended RPN value for repairs is that one of them prioritizes repairs on machine factors such as setting a routine schedule for maintenance and cleaning of machines every week.

Keyword: *Weaving, six sigma*, DMAI, FMEA, RPN.