ABSTRAK

PT. Batik Danar Hadi merupakan perusahaan manufaktur yang bergerak diindustri tekstil khususnya produk batik, Berdasarkan data produksi selama bulan Mei-Desember 2020 PT. Batik Danar Hadi telah memproduksi 99.702 meter batik *printing* dengan *defect* sebanyak 8.085 meter atau 7% maka, penelitian ini dilakukan dengan tujuan untuk mengetahui jenis *defect* dominan dan factor-faktor yang menyebabkan terjadinya *defect* yang terjadi, memberikan usulan perbaikan dan melakukan implementasi perbaikan agar jumlah *defect* yang terjadi sesuai target yang di tetapkan maksimal 5%. Berdasarkan *pareto chart* terdapat 2 dari 4 *defect* yang memiliki presentase kumulatif di angka 80% yaitu *defect* flek (52%), dan meleset (28%), sehingga perbaikan difokuskan pada kedua jenis *defect* tersebut. Berdasarkan hasil analisa dari metode *Fault Tree Analysis* (FTA) akar masalah dari *defect* flek operator tidak membersihkan meja printing, *lifetime* kain pada plangkan, dan operator terburu buru dalam pengangkatan plangkan, sedangkan dari *defect* meleset yaitu operator terburu-buru dalam melakukan peletakan plangkan, operator tidak fokus pada saat peletakan plangkan, dan lem perekat kain rusak. Adapun usulan perbaikan berdasarkan nilai RPN (*Risk Priority Number*) terbesar dari hasil analisa *Failure Mode and Effect Analysis* (FMEA) untuk *defect* flek adalah melakukan pembersihan pada meja sebelum digunakan untuk proses printing, dan membuat *checklist* kebersihan meja, usulan perbaikan *defect* meleset operator melakukan pengecekan kembali penempatan plangkan sebelum melakukan *printing*. Berdasarkan hasil implementasi, usulan perbaikan pada *defect* flek dan meleset dapat menurunkan presentase *defect*, pada *defect* flek penurunan rata-rata 37.32% *defect* perhari dan penurunan *defect* meleset rata-rata 17.99% *defect* perhari, dengan presentase *defect* secara keseluruhan rata-rata 2,64% *defect* perhari.

Kata Kunci : Batik *Printing,* Diagram *Pareto, Fault Tree Analysis, Failure Mode and Effect Analysis.*

ABSTRACT

PT. Batik Danar Hadi is a manufacturing company engaged in the textile industry, especially batik. Based on production data for May-December 2020, PT. Batik Danar Hadi has produced 99,702 meters of batik printing with defects of 8,085 meters or 7%. This research aims to know the dominant type of defect and the factors that caused the defect, providing suggestions for improvements so that the number of defects reaches the target set at a maximum of 5%. Based on the Pareto chart, there are 2 from 4 defects with a cumulative percentage of 80%, namely spot defects (52%) and misses (28%), so repairs are focused on both types of defects. Based on the Fault Tree Analysis (FTA) method results, the problem is that the operator's spot defect does not clean the printing table, the lifetime of the fabric on the plank, and the operator is in a hurry to lift the plank. Meanwhile, in the missed defect, the operator was in a hurry to place the plank, the operator didn't focus on laying the plank, and the adhesive glue for the fabric was damaged. The suggestion of improvements based on the largest RPN (Risk Priority Number) value from the Failure Mode and Effect Analysis (FMEA) analysis for spot defects is cleaning the table before it is used for the printing process and making a table cleanliness checklist. In the proposed repair of the misses defect, the operator re-checked the placement of the plank before printing. Based on the implementation results, the proposed improvement in spot defects and misses can reduce the percentage of defects for spot defects with an average decrease of 37.32% per day and a decrease in misses defects with an average of 17.99% of defects per day. Thus an overall defect percentage of 2.64 % defects per day.

Keywords: Batik Printing, Pareto Diagram, Fault Tree Analysis, Failure Mode and Effect Analysis