Universitas Bina Nusantara

Jurusan Teknik Industri
Tugas Akhir
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PENERAPAN METODE *STATISTICAL QUALITY CONTROL* DAN *FAILURE MODE AND EFFECT ANALYSIS* DALAM MEMINIMASI PERSENTASE JUMLAH CACAT PRODUK KALENG *AEROSOL*
(Studi Kasus PT. Multi Makmur Indah Industri)

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Abstrak

Penelitian ini dilakukan di PT. Multi Makmur Indah Industri dengan membahas pengendalian kualitas untuk produk kaleng aerosol sebagai produk dengan persentase cacat terbesar bila dibandingkan dengan produk kaleng general, kaleng blek, kaleng elegance, kaleng RSG, kaleng pail, dan kaleng jamu bersalin sebesar 2.64%. Penelitian dilakukan dengan tujuan mengurangi persentase jumlah cacat yang ada pada proses produksi kaleng aerosol. Penggunaan metode statistical quality control (SQC) bertujuan untuk mengetahui kapabilitas proses serta untuk mengidentifikasi penyebab cacat yang timbul. Sedangkan penggunaan metode failure mode and effect analysis (FMEA) bertujuan untuk mengukur resiko penyebab cacat serta menentukan rekomendasi pengendalian yang dapat dilakukan. Dari hasil pengamatan dan pengolahan data, dapat diketahui bahwa keseluruhan tahapan proses memiliki nilai kapabilitas proses di atas 99%. Cacat pada produk kaleng aerosol, 80% terjadi pada saat proses can making, component making dan printing. Sedangkan penyebab cacat yang paling beresiko menimbulkan cacat pada proses-proses tersebut adalah rusaknya mesin coating B pada proses printing (RPN=245) serta kualitas kawat las yang digunakan pada proses can making (RPN=160). Solusi yang dapat digunakan untuk mengurangi persentase cacat adalah mengganti mesin coating B yang rusak pada proses printing serta mengganti kawat las yang digunakan dari KW 3 menjadi KW 1 pada proses can making yang dapat mengurangi loss sale sebesar 7.22% (Rp.111,201,675,00) per bulan.

Kata Kunci
statistical quality control (SQC), failure mode and effect analysis (FMEA), can making, component making, printing, PT. Multi Makmur Indah Industri.

Universitas Bina Nusantara

Department of Industrial Engineering
Final Project
Even Semester 2009/2010

APPLICATION STATISTICAL QUALITY CONTROL AND FAILURE MODE AND EFFECT ANALYSIS METHODS TO MINIMIZE THE PERCENTAGE OF TOTAL DEFECTS AEROSOL CANS PRODUCT
(Case Study PT. Multi Makmur Indah Industri)

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Abstract

This research was conducted at PT. Multi Makmur Indah Industri with a discussion of quality control for aerosol cans product as a product with the largest defects percentage when compared with general cans product, tin cans product, elegance cans product, RSG cans product, pail cans product, jamu bersalin cans product of 2.64%. The study was conducted with the goal of reducing the percentage of defects that exist in the production process of aerosol cans. The use of statistical quality control (SPC) methods aims to determine the process capability and to identify causes of defects that arise. While the use of failure mode and effects analysis (FMEA) methods aims to measure risk the cause of defect and determine control recommendations that can be done. From the result of observation and data processing, it is known that the overall phase of the process has a process capability value above 99%. Defects in the aerosol cans product, 80% occurred during the can making process, component making process and printing process. While the causes of defects are most at risk of causing defects in these processes is the destruction machine coating B in printing process (RPN = 245) and the quality of welding wire that used in can making process (RPN = 160). Solutions that can be used to reduce the percentage of defects is to replace the damaged machine coating B on printing process and replace welding wire from a Q3 to Q1 in can making process which can reduce the loss sale for 7.22 % (Rp.111,201,675,00) per month.

Keywords
statistical quality control (SQC), failure mode and effect analysis (FMEA), can making, component making, printing, PT. Multi Makmur Indah Industri.