

ABSTRAK

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Program Studi : Teknik Industri
Judul Skripsi : Usulan Perbaikan pada Kualitas Produk Ban dengan Metode DMAIC di Mesin BTC.02.TC.01 Plant B Perusahaan Manufaktur
Pembimbing : Bonitasari Nurul Alfa, S.T., M.M., M.Sc.

Penelitian ini dilakukan di industri manufaktur produsen ban, penelitian ini membahas studi kasus pengendalian kualitas produk ban, dengan mengidentifikasi *defect* produk ban pada proses pemasakan ban (*Curing Tire*). Total *defect* di Plant B sebesar 6797 pcs yang terdiri dari *defect internal under cure* 3893 pcs, *External & Internal Under Cure* 1851 pcs, *External Under Cure* 407 pcs, *Buckle Bladder* 352 pcs, dan *Leaky Bladder* 294 pcs. Penelitian ini berfokus pada *defect internal under cure* yang menjadi *defect* terbanyak sebesar 57% dengan nilai RPN 250. Observasi lapangan dan pengumpulan data hasil produksi serta data *defect* produk sebagai metode pengumpulan data. Berdasarkan hasil penelitian, dengan implementasi Metode DMAIC (*Define, Measure, Analyze, Improve, Control*) akar penyebab masalah *defect internal under cure* dapat teridentifikasi, yaitu belum ada sistem yang memisahkan air dengan *steam*, sehingga menyebabkan terjadinya kondensasi *supply steam*. Sehingga dari hasil analisis tersebut dapat memberikan usulan perbaikan terhadap *Tire* yang mengalami *defect internal under cure*. Dari hasil perbaikan yang sudah dijalankan menggunakan Metode DMAIC (*Define, Measure, Analyze, Improve, Control*), yaitu merancang bangun sistem yang memisahkan air dan *steam*, *defect internal under cure* mengalami penurunan menjadi 30%.

Kata Kunci: *Tire, Defect, Kualitas, DMAIC*

ABSTRACT

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Title of Thesis Report : *Proposed Improvements to the Quality of Tire Products with the DMAIC Method in BTC.02.TC.01 Machine Plant B Manufacturing Company*
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This research was conducted in the tire manufacturing industry, this research discusses case studies of quality control of tire products, by identifying defects in tire products in the tire Curing process. Total defects in Plant B amounted to 6797 pcs, consisting of 3893 pcs of Internal Under Cure, 1851 pcs of External & Internal Under Cure, 407 pcs of External Under Cure, 352 pcs of Buckle Bladder, and 294 pcs of Leaky Bladder. This study focuses on Internal Under Cure defects which are the most defects at 57% with 250 RPN value. Field observations and data collection on production results and product defect data are used as data collection methods. Based on the results of the study, with the implementation of the DMAIC (Define, Measure, Analyze, Improve, Control) method, the root cause of the problem of Internal Under Cure defects can be identified, namely there is no system that separates water from steam, causing condensation of the supply steam. So that the results of the analysis can provide recommendations for improvements to tires that have internal under cure defects. From the results of the repairs that have been carried out using the DMAIC (Define, Measure, Analyze, Improve, Control) method, namely designing a system that separates water and steam, the under cure internal defect has decreased to 30%.

Keywords: *Tire, Defect, Quality, DMAIC*