

Abstrak

PT. XYZ adalah salah satu perusahaan sepatu di Indonesia yang memproduksi sepatu olahraga, dengan hasil produksi berupa Sepatu jenis NA17, NA18, NB14, NB15, NC21, dan NC22. Selama produksi pada bulan bulan Juni 2021 – Mei 2022, terdapat cacat produk yang paling dominan yaitu *defect* pada produk Sepatu NB15 sebesar 3.84%, persentase *defect* tersebut melebihi target yang ditetapkan oleh PT. XYZ yaitu sebesar 3%. Dengan adanya *defect* tersebut maka penelitian ini bertujuan untuk mengetahui jenis *defect* dan penyebab *defect* tertinggi pada produk Sepatu NB15, serta memberikan rekomendasi menggunakan metode DMAIC (*Define, Measure, Analyze, Improve, Control*). Dari tahap *define* dengan mengidentifikasi CTQ diketahui bahwa penyebab *defect* produk Sepatu NB15 adalah *Stain Upper, Bonding, Overcement, Bond Gap, Over Buffing, Stain Outsole, Over Attaching* dan *Rathole*. Pada tahap *measure* diketahui nilai DPMO sebesar 4192 dan nilai *sigma* sebesar 4.09. Pada tahap *analyze* digunakan diagram sebab - akibat untuk menganalisa sebab - sebab suatu masalah dan diketahui bahwa penyebab *defect* terbesar pada produk Sepatu NB15 adalah *Stain Upper* dengan persentase *defect* sebesar 40% dan *Bonding* dengan persentase *defect* 21%. Pada tahap *improve* ini digunakan metode *Potential Failure Mode Effect and Analysis* dari jenis *defect* terbesar. Pada tahap *control* pengendalian menggunakan DPMO dan *Control P*. Berdasarkan hasil perbaikan pada penelitian ini, bahwa hasil sebelum dan sesudah perbaikan ada perbedaan yaitu nilai DPMO sebelum perbaikan sebesar 4817 setelah perbaikan sebesar 4192, ini berarti ada penurunan nilai dari DPMO yaitu sebesar 625 sedangkan nilai *sigma* sebelum perbaikan sebesar 4.09 setelah perbaikan sebesar 4.14 artinya nilai *sigma* naik sebesar 0.05 *sigma*.

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Kata Kunci : Pengendalian Kualitas, Produksi Sepatu Olahraga, RPN, DMAIC.

Abstract

PT. XYZ is a shoe company in Indonesia that produces sports shoes, with products of the NA17, NA18, NB14, NB15, NC21, and NC22 shoe types. During production in June 2021 - May 2022, there was a product defect that was most dominant, namely a defect in the NB15 Shoes product of 3.84%, the percentage of these defects exceeded the target set by PT. XYZ is 3%. Given these defects, this study aims to determine the type of defect and the cause of the highest defect in the NB15 shoe product, as well as provide recommendations using the DMAIC (Define, Measure, Analyze, Improve, Control) method. From the define stage by identifying the CTQ it is known that the causes of defects in the NB15 Shoe product are Stain Upper, Bonding, Overcement, Bond Gap, Over Buffing, Stain Outsole, Over Attaching and Rathole. At the measure stage it is known that the DPMO value is 4192 and the sigma value is 4.09. At the analyze stage a cause - effect diagram is used to analyze the causes of a problem and it is known that the biggest cause of defects in the NB15 Shoe product is Stain Upper with a defect percentage of 40% and Bonding with a defect percentage of 21%. At the improve stage, the Potential Failure Mode Effect and Analysis method is used for the largest type of defect. At the control stage the control uses DPMO and Control P. Based on the results of the improvement in this study, there is a difference in the results before and after the repair, namely the DPMO value before the repair is 4817 after the repair is 4192, this means that there is a decrease in the value of the DPMO which is equal to 625 while the sigma value before the improvement of 4.09 after the improvement of 4.14 means that the sigma value has increased by 0.05 sigma

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Keywords: Quality Control, Shoe Sport Production, RPN, DMAIC.