

ABSTRAK

PT Meiwa Kogyo Indonesia telah memproduksi total 151.200 pcs produk tutup oli. Namun, ditemukan sebanyak 5.746 pcs produk cacat, yang menyumbang persentase sebesar 3,8% dari standar mutu di Departemen Machining, di mana standar mutu tersebut seharusnya 1,31% (total) dan 0,05% (internal). Kondisi ini menandakan bahwa perlu dilakukan perbaikan demi meningkatkan kualitas produksi pada Departemen Machining. Implementasi six sigma biasanya mengikuti lima langkah utama diantaranya adalah Define (Definisikan), Measure (Ukur), Analyze (Analisis), Improve (Perbaiki) serta Control (Kendalikan) (DMAIC). Selain itu, penelitian ini juga akan dibantu oleh metode Failure Mode and Effect Analysis (FMEA) untuk menganalisis penyebab cacat lebih mendalam. Dari pengolahan data menggunakan six sigma dan pendekatan FMEA, maka diperoleh kesimpulan nilai rata-rata 7567,9847 untuk DPMO dan rata-rata 3,9332 untuk nilai sigma, sedangkan metode FMEA menghasilkan nilai rata-rata RPN sebesar 302,4. Berdasarkan FMEA, nilai RPN tertinggi sebesar 448 pada defect dimensi dan 392 pada defect oval jauh dari rata-rata RPN yaitu 302,4. Faktor kurang telitid dan mesin yang kurang perawatan menjadi penyebab tingginya nilai RPN kedua defect tersebut.

Kata kunci: Pengendalian Kualitas, Six Sigma, DMAIC, FMEA.



KARAWANG

ABSTRACT

PT Meiwa Kogyo Indonesia has produced a total of 151,200 pcs of oil cup products. However, 5,746 pcs of defective products were found, which accounted for a percentage of 3.8% of the quality standard in the Machining Department, where the quality standard should be 1.31% (total) and 0.05% (internal). This condition indicates that improvements need to be made in order to improve production quality in the Machining Department. Six sigma implementation usually follows five main steps including Define, Measure, Analyze, Improve and Control (DMAIC). In addition, this research will also be assisted by the Failure Mode and Effect Analysis (FMEA) method to analyze the causes of defects in more depth. From data processing using six sigma and the FMEA approach, it can be concluded that the average value is 7567.9847 for DPMO and an average value of 3.9332 for sigma, while the FMEA method produces an average RPN value of 302.4. Based on FMEA, the highest RPN value is 448 for dimensional defects and 392 for oval defects far from the average RPN of 302.4. Inaccurate factors and machines that lack maintenance are the cause of the high RPN values for these two defects.

Keywords: Quality Control, Six Sigma, DMAIC, FMEA



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