

## ABSTRAK

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Judul Laporan Skripsi : Implementasi Metode DMAIC untuk Perbaikan *Defect* Produksi *Preform* pada Perusahaan Manufaktur *Injection Plastic*  
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Penelitian ini dilakukan di industri manufaktur *Injection Plastic*, penelitian ini membahas studi kasus pengendalian kualitas pada produk *Preform*, dengan cara mengidentifikasi *Defect* produk *Preform* pada proses *injection*, perusahaan memiliki standar *Defect* yaitu sebesar 3%. Dari semua produk yang diproduksi oleh perusahaan, ada produk yang melebihi standar *Defect* yaitu produk *Preform* 14.20 gram sebesar 4.32% atau 29,399 pcs yang terdiri dari *Black specks/contamination* 11,200 pcs, *Short shot* 6544 pcs, *Bubble* atau *Void* 6222 pcs, dan *Flash* 5433 pcs. Penelitian ini berfokus pada *Defect Black specks/contamination* yang menjadi *Defect* terbanyak sebesar 38%. Berdasarkan hasil penelitian, dengan implementasi Metode DMAIC (*Define, Measure, Analyze, Improve, Control*) akar penyebab masalah *Defect Black specks/contamination* dapat teridentifikasi, yaitu belum dilakukan *Preventive maintenance* secara berkala, sehingga berakibat *thermo couple* tidak berfungsi dan mesin *overheat* pada saat proses *injection* sehingga menyebabkan material PET tidak terinjeksi dengan sempurna. Dari hasil perbaikan yang sudah dijalankan menggunakan Metode DMAIC (*Define, Measure, Analyze, Improve, Control*), yaitu membuat *checksheet Preventive maintenance* supaya perawatan dilakukan secara berkala, *Defect Black specks/contamination* mengalami penurunan menjadi 32%.

**Kata Kunci:** Pengendalian Kualitas, *Preform*, DMAIC, FMEA.

## **ABSTRACT**

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*Title of Thesis Report* : *Implementasi Metode DMAIC untuk Perbaikan Defect  
Produksi Preform pada Perusahaan Manufaktur  
Injection Plastic*  
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*This research was conducted in the plastic injection Manufacturing industry, this research discusses a case study of quality Control in Preform products, by identifying Preform product defects in the injection process, the company has a Defect standard of 3%. Of all the products produced by the company, there are products that exceed the Defect standard, namely 14.20 gram Preform products by 4.32% or 29,399 pcs consisting of Black specks/contamination 11,200 pcs, Short shot 6544 pcs, Bubble or Void 6222 pcs, and Flash 5433 pcs . This research focuses on the Black specks/contamination Defect which is the largest Defect at 38%. Based on the research results, by implementing the DMAIC method (Define, Measure, Analyze, Improve, Control) the root cause of the Black specks/contamination Defect problem can be identified, namely that Preventive maintenance has not been carried out regularly, resulting in the thermo couple not functioning and the machine overheating during the process. injection, causing the PET material to not be injected completely. From the results of Improvements that have been carried out using the DMAIC (Define, Measure, Analyze, Improve, Control) method, namely creating a Preventive maintenance checksheet so that maintenance is carried out regularly, Black specks/contamination defects have decreased to 32%.*

**Keywords:** *Quality Control, Preform, DMAIC, FMEA.*