

ABSTRAK

PT Putra Agung Setia, perusahaan yang bergerak di bidang manufaktur karoseri bus, meliputi *big bus*, *medium bus*, dan *micro bus*. Komitmen perusahaan, “*Perfection and Safety is our Commitment*” sebagai acuan dalam melakukan kegiatan produksi, dan sistem produksi yang diterapkan yaitu *Make To Order* (MTO). Pada Februari hingga Maret 2025, PT Putra Agung Setia tercatat mengalami kenaikan produksi dari 10 unit pada Februari dan 15 unit pada Maret. Pada Februari 2025 terdapat data kecacatan bus medium spesifikasi tambang tahap *finishing* sebanyak 86 cacat dengan rata rata kecacatan sebesar 8,6 cacat per unit, sementara rata – rata standar toleransi kecacatan yang ditetapkan perusahaan dalam 1 periode sebesar 5 cacat per unit. Kecacatan dikategorikan diantaranya kebocoran, kelistrikan, fungsional, dan visual. Permasalahan ini mendorong perlunya analisis dan upaya perbaikan kualitas untuk mengurangi tingkat kecacatan.

Penelitian ini menggunakan pendekatan *Statistical Process Control* (SPC) dan *Failure Reporting, Analysis, and Corrective Action System* (FRACAS). Metode *Statistical Process Control* digunakan untuk mengevaluasi kestabilan proses *finishing* secara statistik. Metode FRACAS digunakan untuk penentuan sebab kecacatan dan merumuskan tindakan perbaikan yang tepat. Alat yang digunakan diantaranya, *check sheet*, histogram, diagram pareto, peta kendali U, *fishbone diagram* dan 5W+1H.

Berdasarkan hasil penelitian, rata rata kecacatan sebelum perbaikan sebesar 8,6 cacat per unit dan setelah perbaikan sebesar 2,2 cacat per unit. Hasil ini sebagai salah satu parameter dalam perbaikan kualitas yang dilakukan. Analisis FRACAS ditemukan bahwa penyebab utama kecacatan berasal dari faktor metode manusia, alat, material, dan lingkungan, khususnya ketiadaan SOP inspeksi yang baku serta parameter kualitas yang terukur. Usulan perbaikan berupa penyusunan SOP inspeksi *finishing* dan *form check inspection*. Hasil penelitian ini diharapkan menjadi acuan untuk mengurangi tingkat kecacatan tahap *finishing*.

Kata kunci: Pengendalian Kualitas, *Finishing Body Bus*, *Statistical Process Control*, FRACAS, Inspeksi

ABSTRACT

PT Putra Agung Setia is a manufacturing company engaged in bus body production, including big bus, medium bus, and micro bus. The company upholds the commitment “Perfection and Safety is Our Commitment” as a guideline in its production activities and implements a Make to Order (MTO) production system. During February to March 2025, PT Putra Agung Setia recorded an increase in production from 10 unit in February to 15 unit in March. In February 2025, defect data for medium bus mining specifications at the finishing stage reached 86 defects, with an average defect rate of 8.6 defects per unit, exceeding the company’s tolerance standard of 5 defects per unit per period. The defects were classified into leakage, electrical, functional, and visual defects. This condition indicates the need for quality analysis and improvement efforts to reduce the defect rate.

This research uses Statistical Process Control (SPC) and Failure Reporting, Analysis, and Corrective Action System (FRACAS) approaches. Statistical Process Control is used to evaluate the statistical stability of the finishing process, while FRACAS is applied to identify the root causes of defects and formulate appropriate corrective actions. The analytical tools employed include check sheets, histograms, pareto diagrams, U control charts, fishbone diagrams, and the 5W+1H method.

The results show that the average number of defects before improvement was 8,6 defects per unit, which decreased to 2,2 defects per unit after improvement. This result serves as one of the parameters indicating the effectiveness of the implemented quality improvements. FRACAS analysis revealed that the main causes of defects originated from method, human, equipment, material, and environmental factors, particularly the absence of standardized inspection SOPs and measurable quality parameters. The proposed improvements include the development of a finishing inspection SOP and inspection check forms. The findings of this study are expected to serve as a reference for reducing defect rates at the finishing stage.

Keyword: *Quality Control, Bus Body Finishing, Statistical Process Control, FRACAS, Inspection*