ABSTRACT

ASTIGA is a micro-enterprise engaged in the production of leather jackets, located in Garut. Although it has a strong reputation, data from 2024 shows that out of a total of 3,138 jackets produced, 150 defective units reached customers. This results in a defect escape rate of 4.78%, with a monthly average of 5%. Furthermore, from a total of 286 defective products identified (consisting of 136 detected and 150 undetected), the defect detection rate was only 47.55%, with a monthly average of 46.96%. These figures indicate weaknesses in the final inspection system, posing risks of financial loss and reduced customer trust. This study aims to design improvements to the inspection process to reduce the number of undetected defective products, using the PDCA method and the Business Process Improvement (BPI) approach. Process evaluation refers to the ISO 9001:2015 standard, particularly clauses 4.4.1, 4.4.2, and 8.1, to assess compliance with quality management principles.

The analysis revealed that the main contributing factors to the high number of defects were the lack of operator accuracy, the absence of a written Standard Operating Procedure (SOP), and incomplete inspection information. To address these issues, an inspection SOP, inspection checksheet, and operator training program based on Critical to Quality (CTQ) attributes were developed. These proposed improvements are expected to enhance inspection accuracy, reduce the number of defective products reaching customers, and strengthen the quality control system at UMKM ASTIGA.

Keywords: Inspection process, product *Defect*, Business Process Improvement, SOP, ISO 9001:2015, CTQ