ABSTRACT

The clothing industry is a fast-growing and dynamic sector worldwide. As a basic human need, the clothing business has promising prospects as trends, fashion, and consumer preferences change. In this industry, product quality is a key factor that determines success, and this is where the role of quality control (QC) becomes very important. QC serves to ensure that the products produced meet quality standards through automated or semi-automated quality testing, measurement and evaluation.

Fabric quality has a direct impact on the final product, so the use of QC equipment capable of evaluating aspects such as fiber strength, thickness, warp, tensile strength, and resistance to fabric use is indispensable. QC tools not only ensure good product quality but also improve production efficiency and reduce the risk of defective products. Therefore, QC is becoming an integral part of a successful business strategy in the apparel industry.

For MSMEs, having a QC tools is of utmost importance to ensure the products they produce meet market quality standards. However, high costs and lack of technical know-how often become barriers for MSMEs to use QC tools. Without QC tools, MSMEs are prone to face issues such as defective materials, inconsistent colors, thread popping on the fabric, and low fabric strength, which can ultimately lower customer confidence and reduce competitiveness in the market.

This research uses the Design Thinking method to design a simple quality control tool that meets the needs of MSMEs. With a focus on deep understanding of users and creative solutions, it is expected to create innovative QC tools that support the improvement of product quality, competitiveness, and expansion of MSME market share.

Keywords: *Quality Control, quality control tools, Quality Function Deployment*