ABSTRACT

PT. XYZ is a company operating in the tobacco industry. The company focuses on producing hand-rolled cigarettes in the Kudus region, Central Java. PT. XYZ faces challenges in its production process, as it consistently generates defective products every day. The cigarette grinding process is the most significant contributor to these defects. This research aims to improve the process of inserting tobacco into the mouth of the grinder using the DMAI (Define, Measure, Analyze, Improve) approach, while the proposed solution involves a tobacco leveling tool implementing the Quality Function Deployment (QFD) method. The result of this research is a design for a tobacco leveling tool with dimensions of 21 x 8 x 14 cm, extendable up to 22 cm as needed. This tobacco leveling tool can be used with the grinding equipment currently owned by the company. However, it is compatible only with the existing grinder models in the company. The estimated cost to manufacture one tobacco leveling tool is Rp414,000. Based on the calculation of the new sigma value, the use of the tobacco leveling tool is expected to reduce the number of defective products by 46.89% after implementation in PT. XYZ.

Keywords – Six Sigma, Defect, Tobacco, Quality, Cigarette