

ABSTRACT

PT Fluxdev Global Industry is an SME engaged in the production of t-shirts, currently experiencing difficulties in meeting its production targets. This issue arises due to mismatches in the sizes of t-shirt components. The problem is caused by several factors, one of which is the failure to separate the cut materials by size, making it difficult for operators to identify the sizes of the materials to be produced. Based on the Lean Six Sigma approach, the failure to meet production targets has resulted in a process capability index (Cp) of only 1.30. This index indicates that while the company's production processes are fairly capable, improvements are still needed to enhance the index and achieve the company's targets.

To minimize product defects related to the issues addressed in this final project, the improvement proposed is to design a tool that addresses the specific problem, which is the stacking of materials after cutting, leading to a failure to separate the materials by size. The design is carried out using the NIDA (Needs, Ideas, Decision, Action) method.

The proposed tool in this final project involves designing a trolley with dividers to separate the components by size, namely S, M, L, and XXXL. The proposed trolley design consists of two different trolleys with dimensions of 100 x 71 cm and 110 x 71 cm. These trolleys are designed to separate the four sizes with dividers shaped according to the pattern of the body and sleeve components, with the dimensions of the dividers varying, making it easier for operators to separate the sizes of each t-shirt component.

Keywords: Lean Six Sigma, product defects, NIDA method (Needs, Ideas, Decision, Action)