

## ABSTRACT

Sempurnaindah Nusantara (SIMNU) is a company producing imitation leather that can be used to coat the car seat, seat motors, leather bags and other products that require a layer of synthetic leather. PT. SIMNU has three product classes, namely high class, medium class and low class. Third classes imitation leather, consisting of some articles of imitation leather. From the third grade faux leather, faux leather high class provides the greatest benefit for the company. However, production of high-class imitation leather it has the largest percentage of disability. In 2011, the average percentage of defective production of high class imitation leather is 6.62%. This value exceeds the maximum percentage of defective products set by the company, amounting to 2.5%. Therefore, it is necessary to search for the production process to undertake appropriate remedial action by using Lean Six Sigma.

Research phase begins with the Define stage of the research conducted to identify objects and mapping production processes that occur. At this stage it is known that there are 14 high-class imitation leather articles, and there are 41 types of defects that occur in the production process. Measure then performed to determine the level of performance of the existing plant. Analyze then performed to find the dominant defect type and contributing factors. Dominant defect type folds laminating defects (13.87%), wrinkled surface (6.63%), striped coating (5.99%), the line of silicon (5.78%) and dirt dust (5.63%). In the next stage done to tackle the causes of Improve both the dominant defect type.

**Keywords:** lean six sigma, Define-Measure-Analyze-Improve, waste, improved production processes, imitation leather.