ORDER FULFILLMENT PROCESS ANALYSIS BASED ON THE CONCEPT OF LEAN THINKING AND FMEA
(Case Study : PT. Nisso Bahari Surabaya)

Student Name : Marcy Lolita Pattiapon
Student Identity Number : 2506.202.004
Supervisor : Prof. Ir. Suparno, MSIE., Ph.D.
Co-Supervisor : Prof. Ir. I Nyoman Pujawan, M.Eng., Ph.D.

ABSTRACT

Obtain a high profit is the goal of every company. To obtain a higher profit then the company must be a little may make expenditures and efficiency including the waste that exists. PT. Nisso Bahari is one of the job shop manufacturing company engaged in making the floatation tank aquarium with the size of the product vary. Floatation tank aquarium products that are produced export commodities to Japan. In order to stand still in this business and can be trusted by consumers and companies need to improve services for consumers. Factors that come to the attention of the company must be corrected at this time is not exactly the product delivery to consumers, this is because many waste.

This research uses the concept of lean thinking to eliminate all forms of non-value added activity. Making Big Picture Mapping as the first step is done to give a picture of the value stream from the order fulfillment process company. Waste workshops conducted to identify the type of waste that often occurs with the score on each type of waste. Based on the score is then selected some of the tools used to perform analysis of the waste that provides the highest quality. Tools used to analyze the waste are Failure Mode and Effect Analysis (FMEA), Pareto diagrams, and root cause analysis (RCA).

Improvement using the recommended approach to streamlining the Value-Added Assessment (VAA) and the elimination process is non value added. Based on the results of the simulation scenario the improvement of the selected scenario 3 is done with the addition of 1 glass cutting machine and 4 operator, 1 bending machine and 1 operator, 1 corner machine and 1 operator and 1 washing dryer machine and 2 operator so that total 30955.7714 minute wait time to increase the output number of the aquarium as much as 6872 units.