CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Small Medium Enterprise (SME) play a significant role in the national economy, there is a need to help them improve their competitiveness. Mostly, SMEs operate with poor forecasting and planning systems and long cycle times. These will affect the delivery performance of the SMEs. SME is due their small size, limited managerial capabilities, as well as limited resources do face a challenging task in innovating and as compared to larger firms are weakly structured in innovation, low market power and scarcity of resources in order to appropriate the benefit of their innovation. It is not surprising then, that SMEs in developing countries have been labeled as imitators rather than innovators. The situation is however different in developed countries such as the United States of America. It is important for SMEs to implement materials management systems based on Material Requirements Planning (MRP), Just In Time (JIT) / Kanban concepts together with implementation of Kaizen.

The focus of the study based on the production process improvement of making batik. Implementation of Kaizen helps to increase productivity in a company. Productivity is usually defined as output over input, for example correctly produces products that fulfill their specifications over the value of all resources spent for producing these products during specific time period (Tangen, 2005). An effective regime of productivity measurement is essential for the management of a productivity
improvement programme. A productivity measurement system enables an organization to formulate goals and targets with regard to productivity and to identify problems areas of the organization. The measurement system should specify the desired outputs and output levels, and work to the required inputs and input levels. Key, relevant performance indicators such as delivery times, quality, lead times, and equipment utilization and so on may be part of the overall measurement programme.

In this research, one of the improvement tools from Japanese which known as Kaizen will be discuss. For instant, Kaizen is a system that involves the worker from upper management to lower operators. Everyone is encouraged to come up with a small improvement to gain profit for the company. Kaizen focuses on eliminating waste, improving productivity, and achieving sustained continual improvement in targeted activities and processes of an organization.

Even though there are continuous and great demand from customer, but there are still a problems in the production of Small and Medium Enterprise (SME) that need to overcome. A bottleneck in operations management occurs in sequential manufacturing when a backup happens in one step of the sequence. For example, if there are three machines on an assembly line and the first and last machines can produce 120 units per hour, but the second machine can produce only 80 units per hour, it will cause a bottleneck to occur. This is because the second machine cannot produce enough units to keep pace with the other machines. A bottleneck has a terrible effect on the efficiency of production. The stages following the bottleneck must function below their capacity because they do not receive enough input to operate at full capacity. The stages before the bottleneck need to slow down production because the subsequent stages cannot handle the capacity. As a result, the overall efficiency of the system is significantly reduced.

A bottleneck in the manufacturing process can be difficult to identify in a complex system. The bottleneck can be found by looking at each sequence of the process individually and measuring the production level at each step. If a particular sequence has a low production level then it is the source of the bottleneck. It should be noted that there can be multiple bottlenecks within a complex system. According to Wendel Clark, a bottleneck can be solved by adjusting the production level in the
sequence where the bottleneck is happening. This might be achieved by installing more efficient equipment or, re-layout and combine workload. In some situations, it may not be possible to increase production in that area and it may be more efficient to reduce production capabilities in the other areas in order to create efficiency.

Thus it is important to increase the customer satisfaction by removing bottleneck in the production and implementation of Kaizen. Effectiveness of Kaizen is a powerful tool to reduce cycle time of the production line or assemble line. The purpose to reduce cycle time is to produce products on-time which will fulfill the customer demand and low work-in-progress costs. This will increased satisfaction for customer. As a conclusion, implementation kaizen and doing line balancing is necessary in production line or assembly line to reduce cycle time in production of batik.