CHAPTER 4

METHODOLOGY

This chapter explained the methodology used in conducting this project as well as relevant tools and techniques utilized in the analysis, planning, and implementation phases. Methodology used in this thesis is as follows.

4.1 Conceptual Design

The team took following steps in conceptual design phase.

4.1.1 The team used brainstorming technique to design web cutter system draft drawing

4.1.2 The team used QFD and brainstorming techniques to translate the machine modification requirements into design requirements, which were in turned converted to part design requirements.

4.2 Detailed Design

After the part designs had been obtained, the next step was to design in detail the new system. Detailed design was focused on three parts, which were pneumatic system, machine system, and electrical system.

4.3 Installations and Implementation

1. Surveyed possible points of installation for the new web cutter system at coater machine.
2. Selected points of installation based on previously obtained design requirements.

3. Installed web cutter system, which were comprised of pneumatic system, electrical system, and mechanical parts.

4.4 Comparison of the results before and after implementation

After implementation, the newly modified system was assessed against the following criteria.

1. Machine Runnability
2. Reduction of Average sheet break loss time after installation (collected for 5 months prior to installation) compared to average sheet break loss time before installation (collected for 4 months).
3. Cost saving form the implementation.