

Thesis Title	The Rapid Prototype Process
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Abstract

The purpose of this thesis is to study how can we apply Rapid Prototype Method in a mass-production or flexible-manufacturing system by studying the Laminated Object Method (LOM). Researcher had built a RPT machine using LOM technique and compared with commercial model. This RPT receives STL file as solid model. The workpiece from this RPT is consisted of paper layers laminated together. Each layer was cut by CO₂ laserbeam moving on the X-Y plane. The accuracy of the cutting process can be measured by using vernier calipper to measure the cut layer and then compared with the drawing. Then, the researcher generated other kinds of models to estimate the time consumption of RPT in closed form formula.

From the results, this LOM - RPT is not feasible for mass-production due to the time consumption. However, it is suitable for flexible manufacturing as lacquer-coated models can be used as casting patterns.

Keywords : Rapid Prototype Techniques ; RPT / LOM