

FINAL YEAR PROJECT REPORT
ADVANCED DIPLOMA IN MECHANICAL ENGINEERING
SCHOOL OF ENGINEERING
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SHAH ALAM

CAD/CAM APPLICATION IN MANUFACTURING

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ABSTRACT

The first chapter is more about the basic definition of several terms that will be used in the following chapter. The basic terms that we use are CAD, CAM, CNC where they are related to each other. The explanations will give a brief idea on what it is all about.

The second chapter is about the project itself. It consists of the introduction to the project and the applications of CAD/CAM in manufacturing and for this case cable clamp has been chosen. CAD/CAM Software will be used to create the surface, generate a tool path and generate the NC program for the profile of a die insert of a cable clamp.

The third chapter is more on the drawing of product and the programming. We used Autocad Release12 for product drawing where this is one of the CAD softwares. It gives a brief explanation on the machining and manufacturing process in producing cable clamp. To produce an actual cable clamp, it used a pressure die casting process.

The fourth chapter is briefly about die, the definition and the manufacturing process. Chapter 3 and chapter 4 are important to give a rough idea on this project.

The fifth chapter is the real usage on CAD software that is Autocad and Autosurf. On this chapter we select the system used, the profile drawing of a die insert and also the programs used to generate the drawing.

Chapter sixth is about selecting machining tools to generate tool path and NC program. This chapter is more on CAM where everything in this chapter will be used during machining. We use many tables to show how machining is being done by

using CAM software . The CAM software used is Hypermill where it also simulates the tool path.

Chapter seventh is more on economical side. For this chapter, questionnaire has been distributed to several numbers of company that involve in mould and die making, and through their feed back we analyze the current market, cost and time regarding the usage of CAD/CAM application in manufacturing.

The last chapter is the conclusion of this project.

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