Thesis Title : AN APPLICATION OF PERSONAL COMPUTER TO CONTROL LATHE NC. MACHINE

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ABSTRACT

NC.Machine is an automatic mechanical tool that work follow program command. It is composed of instruction series, numerical data and letter. It is suitable to use with highly precission workpiece and mass products. The problem is that it is hard to find an expert programmer. The developed program transfers data from computer aid design to analize the relation of tool path and changes into G-Code program through asynchronous communication cable, RS-232C. This program has two parts. The first part recieve data from data exchange file (DXF) of computer aid design program. It will attibute and group data,and change into G-Code program. The second part is to simulate the movement of tool to check the actual cutting.

The developed program package is able to generate instruction series for linear and circular interpolation movement of tool

The precision of EMCO NC.machine is $\pm$ 0.02 mm. which depends on the movement of stepping motor