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Thesis Title : Microcomputer Control of Milling Letter Machine.

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Academic year : 1991

Abstract

The objectives of this thesis is to study how to use the microcomputer to control the DC servo motor for receiving the required speed and position. This thesis and also presents the characteristic operations of the milling which is controlled by computer.

This milling letter machine is the experimental copied the milling machine which is controlled by computer for the industrial. They have construction similarly. The system of this thesis has three parts, machanical, electronic and program use to control.

The first part of this thesis consists of the table that has been moved for X,Y axis and also Z axis for driving the spindle for moving up and down. The movement in three axis for driving by DC servo motor connects to ballscrew and spindle milling.

The electronic circuit is consisted of interface circuit of computer. Then it has been pass through interpolation that gets data from computer. The comparator circuit receives pulses from a interpolate and compared pulses with pulses from encoder. Then, the difference is pulses error which is sent to a D/A to produce voltage and send to a driver motor.

The second part of this thesis composes. The first is the sending data to the control word which is depended on the mode of operation, the other is the program that uses to make the experimental movement.

The experimental result from this machine can be used to develop in building and improve of the machine which is controlled by computer such as milling machine.