

HIGHER TECHNICAL INSTITUTE
NICOSIA - CYPRUS
MECHANICAL ENGINEERING DEPARTMENT
Diploma Project 1992/93

Project Number: M/647

Title: "Part Programming on a CNC Vertical Milling Machine and Design of a Milling Fixture"

Objectives:

1. Study the programming characteristics of the Bridgeport IMKII (with TNC155 Heidenhein control) CNC vertical milling machine.
2. Write a part program for the manufacture of a component (to be deiced with the student).
3. Make use of Linear Interpolation, circular interpolation and canned cycles.
4. Design a milling fixture to ensure location, support and clamping of the component to be manufactured.
5. Test of the above programmed component on the Heidenhein Control simulation facility.
6. Produce detailed drawing of the manufactured component and fixture.

Terms and Conditions:

1. All recommendations should be according to ISO.
2. Selection of components for the milling fixture should be according to standard component.
3. Professional guidance will be provided.

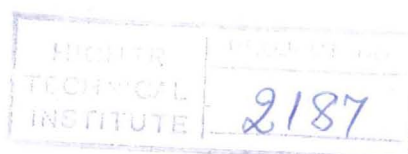
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ABSTRACT

The main objective of the project was the manufacture of a component using the C.N.C. vertical machine and to design a milling fixture to ensure location, support and clamping of the component to be manufactured.

To achieve this the programming characteristics of the Bridgeport IMKII (with TNC 155 Heidenhein control) C.N.C vertical milling machine were studied and a manufacture of another component was produced for practice reasons.

Finally part programs were written by making use of linear interpolation, circular interpolation and canned cycles having as a result the manufacture of the component to required.

Detailed drawings of the manufactured component and fixture were produced.

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