

INTRODUCTION

CNC machines are real Mechatronic systems, having electrical and electronic circuits interacting with mechanical actuators / sub systems. Diagnostics and root cause analysis is an important aspect of maintenance, which is most often ignored. Often the roots of a mechanical problem is in the electronics area and that of an electronic problem lies elsewhere. Thorough understanding of the CNC machine circuit diagram, Ladder diagram and CNC parameters is needed to find and fix the root cause to minimize MTTR (Mean Time To Repair) and effective planning of PMBF(Preventive Maintenance Before Failure) towards zero down time. Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organizing a 3 days training on Effective Maintenance towards Zero Down Time (ZDT) - Electrical Aspects of CNC Machines.

FOCUS AREAS

1. Anatomy of CNC machines – Overview of various sub-systems of CNC Turning and Machining Centres.
 2. Systematic approach to diagnostics and problem solving.
 3. Circuit Diagram study – Electrical and electronic circuits
 4. Circuit Diagram study – Hydraulic, Lubrication and Pneumatic sub systems
 5. Maintenance aspects in CNC controllers
 6. Typical problems in Electrical and Electronic sub-systems; Safety aspects; Alarm messages, Alarm History and Operations History
 7. Maintenance aspects of drives and encoder
 8. CNC Parameters setting
 9. Demo and Group exercises in electrical circuit diagram study
 10. Demo of Do’s and Don’ts in CNC controllers
 11. CNC memory data backup

KEY TAKE AWAYS

- After undergoing the programme, the participants will be able to learn -
1. How to carry out preventive and break-down maintenance of CNC machines
 2. Identifying faults in various components of CNC machines
 3. How to report faults correctly to the manufacturer
 4. Sub systems and circuits of CNC machines

PARTICIPATION FEE

Rs. 9000/-
+18% GST
IMTMA Members

Rs. 10000/-
+18% GST
**Micro Companies/ Individuals/ IMTMA
Non Members/ Others**

Rs. 5000/-
+18% GST
Educational Institutions / Students

PARTICIPANT PROFILE

This programme will benefit managers, engineers and middle management personnel involved in the functions of production and maintenance of CNC machines from machine tool, automobile and auto ancillaries, tool rooms, aerospace, defence & railway establishments, general engineering and other manufacturing industries.
Note: Participants are expected to have a basic working knowledge of CNC Machines as the constructional aspects of CNC machines will not be discussed in detail in this programme.

FACULTY

This programme will be conducted by Mr. Ramadas R. Nambi and other Industry experts from renowned manufacturers of CNC Control systems such as FANUC and Siemens.
Mr. Ramadas R Nambi is an industry expert with over 30 years of experience in the area of CNC control systems, CNC machines, Industrial robots & Unmanned operation. Presentations will be accompanied by practical demonstrations and case studies. The workshop will be highly interactive where participants will be able to discuss specific problems in maintenance and solicit feedback from the expert faculty.

For Registration Contact

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