APPLICATION FORM

National Level

One day workshop on

MEASUREMENTS DURING METAL CUTTING

13-09-2008 (Saturday)

Name :

Age :

Designation :

Organization :

Address for Communication :

E-mail id :

Contact No :

Qualification :

D.D no and Bank:

& Date :

Signature

Note:Additional copies of application form can be made.

REGISTRATION:

For Students : Rs.250/-

Teachers from technical institutions: Rs.500/-

Participants from Industries

and R&D institutions : Rs.1000

Registration fee to be remitted in the form of a crossed DD taken in favor of "The Registrar, Karunya University, payable at Coimbatore.

IMPORTANT DATES:

Receipt of application with D.D :01/09/2008

Intimation of Selection (through e-mail) :07/09/2008

ADDRESS FOR CORRESPONDENCE:

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National Level

One Day Workshop on

MEASUREMENTS DURING METAL CUTTING

13-09-2008

Jointly Organized By

CENTRE FOR RESEARCH IN DESIGN AND MANUFACTURING ENGINEERING

School of Mechanical Sciences
Karunya University
Coimbatore-641114

And

TaeguTec

India Pvt Limited, Bangalore

INTRODUCTION:

Research in metal cutting involves measurement of parameters such as cutting force, cutting temperature, surface finish, tool wear, tool chip contact length, chip characteristics and tool vibration. Parameters such as cutting force, cutting temperature, and tool vibration can be used individually or collectively to predict parameters such as tool wear and surface finish. Such predictive models are highly appreciated in metal cutting industry.

An accurate estimate of these parameters is essential to optimize machining processes and to draw conclusions during research work in metal cutting. This one day workshop is being organized to provide an opportunity to teachers and students of technical institutions and professionals from industries and R&D institutions to familiarize themselves with the equipments and facilities needed for such measurements. Apart from theory, practical sessions are also incorporated to provide a better insight into the concept and measurement procedures.

ABOUT THE UNIVERSITY:

Karunya University, formerly Karunya Institute of Technology and Sciences (KITS) was established in 1986 by the founders Dr. D.G.S.Dhinakaran and Dr. Paul Dhinakaran. Making rapid progress ever since, the institute has now grown into an University winning recognitions and awards on its ways; Best Engineering College in Tamilnadu (1996), First ever Autonomous self financing Engineering College(2000), Deemed University (2004), and University (September 2006). The institution has excellent academic, research and extra curricular facilities, effectively utilized by well qualified and dedicated faculty and about 6000 students all living on campus.

UG, PG and Ph.D programmes are offered in the fields of Engineering, Technology and Management. The University has been accredited “A” by the NAAC. The quality facilities on the 700 acre campus include a fully air-conditioned library that stocks 55000 volumes and subscribes to 275 hard copy journals besides on-line subscription of electronic journals. The campus has a fiber optic LAN system serving around 2500 computers with 24 Mbps connectivity.

CENTRE FOR RESEARCH IN DESIGN AND MANUFACTURING ENGINEERING (CRDM):

Center for Research in Design and Manufacturing Engineering (CRDM) was established in 2007 under the School of Mechanical Sciences to facilitate research activities in design and manufacturing engineering. At present the following facilities are available that are almost sufficient to carry out fundamental research in Design and manufacturing Engineering. The facilities include:

- Tool force dynamometer (Kistler make)
- Perthometer (Perthen)
- Metallurgical microscope with image analyzer.
- Profile Projector
- Tool makers microscope
- Minimal fluid application system
- Technology for formulation and testing of metal cutting fluids
- Techniques and instrumentations for measurement of cutting temperature during turning, milling and drilling
- Scanning Electron Microscope (JEOL)
- X-ray Diffractrometer (SHIMADZU)
- Residual Stress Analyser (SHIMADZU)
- Milling and Turning centre
- Softwares: Pro-E, ANSYS, Fluent GAMBIT ,Solid Works, COSMOS, AutoCAD.
- COMSOL Multiphysics
- Intellisuite
- MEMS Pro

The above facilities can be better utilized by creating a forum of researchers by enrolling them as members of CRDM. Efforts are on to establish such a forum.

COURSE CONTENTS:

The following measurement techniques are discussed in the workshop.

1. Cutting force Measurement techniques
2. Measurement of tool wear
3. Measurement of surface finish
4. Latest developments in cutting tools
5. Demo on Scanning Electron Microscope (SEM)
6. Demo on X-ray Diffractrometer (XRD)

Practical sessions are arranged to give the participants hands on experience on the measurement techniques discussed. An exhibition of various cutting tools by M/s TaeguTec is also arranged.

Both theory and practical sessions will be handled by experts who are actively involved in the field of metal cutting. Certificates will be issued to all the delegates who participate in the workshop.

ELIGIBILITY:

Students and teachers from engineering colleges and polytechnics with relevant background can attend the programme. Candidates from industries and R&D organizations can also participate.