

Precision & Micro Engineering-An Overview

Course Overview

If extreme specifications are to be met for products and components, it is vital to have the right production equipment, including ultra precision machine tools.

Benefits

The Precision & Micro Engineering course will provide you with an overview of the three most important areas of the ultra precision and micro technologies:

- Metal cutting in ultra precision and micro machining operations
- Micro machining with lasers
- Micro plastics processing

Content

Set 1: Metal cutting

- **Micro Technology - Applications and Trends**
Dr. Olaf Rübenach (Ingeneric)
- **Precision and Ultra Precision Machine Tools**
Dipl. Ing. Burkhard Leiffhelm (Fraunhofer IPT)
- **Global Penetration, Trends and Applications of Ultra Precision Machine Tools**
Mr Gildo Wanders (Precitech)
- **Optical Requirements Driving Mechanical and Machine Advances**
Mr Gildo Wanders (Precitech)
- **Fast-Tool Turning**
Mr Jan Hennig (Fraunhofer IPT)
- **Diamond Tools - Pushing to the Edge**
Mr Andrew Cox (Contour):
- **Machining of Brittle Materials**
Dipl. Ing. Dietmar Pähler (Fraunhofer IPT)

Set 2: Micro machining with lasers

- **Micro Joining with Lasers**
Dipl. Ing. Alexander Olowinsky (Fraunhofer ILT):
- **Lasers in Life Sciences: Device Manufacturing and Biomedical Applications**
Dr Martin Wehner (Fraunhofer ILT)
- **Economic Aspects of Laser Micro Machining**
Mr Rawert (Bartels Mikrotechnik)
- **Micro Structuring with Lasers**
Dr Arnold Gillner (Fraunhofer ILT)

Set 3: Micro plastics processing

- **Development and Examples of Microsystems in Industrial Application**
Dr Arno Rogalla (Eppendorf Instrumente GmbH)
- **New Plastification Concepts for Micro Injection Moulding**
Dipl. Ing. Ralf Gärtner (IKV)

- **Hot Embossing of Plastic Microstructures**
Prof. Dominiek Reynaerts (KU Leuven)
- **Injection Moulding of Hybrid Microstructures**
Dipl. Ing. Dirk Opfermann (IKV)
- **Welding of Plastics Micro Parts**
Dipl. Ing. R Lützeler (IKV)
- **Manufacturing of High Precision Optical Plastic Parts**
Dipl. Ing. J Forster (IKV)