Dear Sir / Madam,

Introduction to Fundamentals of Sheet Metal Formability

**Venue** : IME CADCAM TRAINING CENTRE SDN BHD(Petaling Jaya, Selangor)
**Date** : 15-16 September 2007
**Time** : 9.00am – 5.00pm
**Duration** : 2 days
**Course fee** : RM 2,000 per pax (HRDF SBL Scheme Claimable)

**Objective:**
To provide a fundamental understanding of sheet metal stamping. It gives an insight into the manufacturing and processing of sheet metal in the industry. The basic principles of stamping tool design, sheet metal behavior during stamping and the different methods of evaluating defects are introduced. Students are also exposed to the state of the art computer based approach to stamping design and analysis.

**Who Should Attend:**
- Product designers
- Process layout and manufacturing engineers
- Die development engineers
- Die designers and tool makers
- CAE analysts
- Management
- University students or lecturers who are involved in this field

**Topics**
- Manufacturing and processing of sheet metal
  - Processing of steel: composition and grades of steel
  - Coating systems
  - Other materials
- Determination of mechanical properties of sheet metal
  - Uniaxial tensile test:
    - definition of stress, strain (engineering, true, principal)
    - elasticity, plasticity
    - anisotropy
    - rate sensitivity
- Basic deformation modes in stamping
  - Deep drawing: nomenclature deformation modes, problems
  - Stretch-flanging
  - Stretch forming
  - Bending
- Defects in stamping
  - Splitting, thinning, wrinkling, springback, etc.
- Tests of formability
  - Failure analysis with Forming Limit Diagrams (FLD)
- Basics of draw die development
  - Controlling material flow
  - Addendum and binder development

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• Stamping press actions
  o Binder and punch tonnages
  o Effect of gravity

• Advanced forming processes
  o Hydroforming, tailor welded blanks, etc.
• Computer analysis of forming processes
  o Role of CAE in manufacturing

Prerequisites
• None

Class Format
• 3 days
• Instructor led
• Presentation, exercises, evaluation and discussion

Please do not hesitate to call Angelyn Lim at 03-7783 6866 for further info or FAX to 03-7783 4384 for registration.

Yes ! I would like to register for the above training

Company : ________________________________
Contact Person : _______________________
Tel : __________________ Fax : ________________
E-mail : ________________________________

Participants Name | Mobile | Email
1) __________________ | __________ | __________________
2) __________________ | __________ | __________________
3) __________________ | __________ | __________________