

**Course Objective**

The objective of this patented MIS program is to raise technical competency of technical employees from local manufacturing industry for product quality & productivity improvement through understanding of vital manufacturing variables. At the end of the MIS training, participants will realize the importance of technical details study & the introduction of science & engineering procedures to their existing practices for a profitable manufacturing operation.

**Session Overview**

Injection moulding process can be done well with experience and hard working. However, to achieve a new level of quality & productivity from today's demanding customers, more and more engineering procedures and scientific methods have to be applied to replace the traditional methods of processing plastics.

Moulding quality & productivity are influenced by the many process parameters setting such as speed, pressure, temperatures, time, and distance controls within the process. This 2-day class room training is intended to introduce engineering procedures to develop a traceable injection moulding process. It is also aim to train traditional moulder to become modern & knowledgeable moulder to adopt the mind set of processing from the plastic's "point of view" rather than the "machine-focused" approach.

In addition, the trainer will teach processors & buyers the important process outputs that should be properly documented, monitored & inspected to develop proper process setting and to proof process capability in achieving consistent moulding results.

**Benefits**

1. Study the many reasons for melt viscosity variations & how it can affect the moulding quality.
2. Learn how to set up an effective and traceable moulding process.
3. Gain useful practical information that can be applied for good moulding practices.
4. Understand interaction between process parameters and how to correct process variables to troubleshoot moulding defects.
5. Train to be a good problem solver and become valuable resource in the company.

**Course Contents****1. Plastic Flow Behaviors & Moulding Results**

- Plastic viscosity; Resin choice & viscosity; Additives & viscosity; Melt temperature & viscosity; Mould temperature & viscosity; Rheology of Plastic; Shear rate & viscosity; Shear sensitivity; Shear damage & allowable shear rate; Viscosity differential & moulding results; Plastic filling characteristics.

2. Strategic Moulding Techniques

- Traditional & strategic moulding methods; Initial stroke length; Determining best shear rate for moulding; 1st stage filling pressure & speed; Switchover methods; 2nd stage packing pressure & time; Cushion thickness; Melt temperature; Mould temperature & cooling control.

3. Good Moulding Practices (GMP)

- Temperature & Speed Practices; Tooling Optimization; Air vents check; Injection speed profile; The ways plastic melts; Screw selection; Temperature profile setting; Feed zone temperature; Recovery; Decompression; When to use & not to use back pressure; Process documentation.

4. Process Setting & Troubleshooting

- Troubleshooting techniques; Process setting & moulding defects; Dimensional defects & Process setting, Visual Defects & Process Setting; Steps for effective troubleshooting; Rules for process parameters adjustment.



Course Instructor



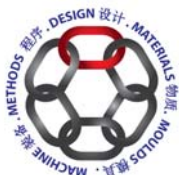
William Lee - Malaysian, Materials Engineer with an honorable Bachelor Degree awarded by The Engineering Council of London (EC, UK). He has over 25 years working & teaching experience in manufacturing industry. William possesses strong fundamentals knowledge in technical science & has special talent to communicate and explain to others the principles involved in various engineering fields. His ability to present and link the various engineering disciplines with real industrial use has made many of his course participants to appreciate the significant of technical details study for manufacturing improvement. Over the years, he has developed a series of patented Manufacturing Insights Skills (MIS) Training programs for various manufacturing industries. He is now a full time contract speaker for a few training organizers as well as professional associations in ASEAN & Australia. William will bring a wealth of teaching experience to this program along with his strong industrial background as a former engineering practitioner in tooling, materials, heat treatment, moulding & metal forming divisions. In addition, William is a versatile trilingual instructor who can instruct technical courses in English, Bahasa Malaysia or Mandarin (or a combination of the languages) to ensure full understanding of his presentation by his trainees from all levels.

Target Participants

This course is designed for processors, mould setters, troubleshooters, quality controllers and buyers who are concerned with the moulded parts quality. Technicians, operators, supervisors and engineers from the plastic injection moulding sector will benefit from this informative 2-day classroom training course.

Administrative Details

1. Should public training not be scheduled for this program we will consider opening an ad hoc public training class if you've minimum guaranteed participants to attend this program.
2. We can bring this program to your premises as in-house training event for your in-house employees only. Interested participating company may contact us for an in-house training proposal.
3. In-house training can be conducted on weekdays or weekends (including public holidays) to meet the scheduling needs of your targeted staff.
4. For in-house training, a list of participants complete with their full name & designation must be presented to training provider one week prior commencement of each program. The total no. of training manual is supplied to the actual no. of turned out attendees only.
5. Substitute is allowed to replace the earlier registered person if he / she is unable to attend the training program (both public and in-house training). Participating company must inform us the details of replacement person.
6. All programs are of SBL (Skim Bantuan Latihan) type. Eligible company (Human Resources Development Fund contributor) must apply through themselves for the rebate of any eligible expenses (including training fees) from Human Resources Development Council. Training provider bears no responsibility for the approval of training grants or any form of rebates between participating company and HRDC.



Organized by:

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◆ Developing K-Workers; Promoting Scientific Manufacturing ◆