

**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:

"Processing" is one of the effective troubleshooting tools for eliminating moulding problems. In the production of a series of moulded parts, deviation in quality features such as dimensional accuracy, weight, absence of distortion, mechanical properties and surface appearance are always inevitable. The degree of deviation will vary from machine to machine and from material to material. The *processing parameters* that affect the quality of injection moulding products include drying temperature and time, shot volume, cushion, decompression, barrel temperature, injection pressure, injection speed, screw speed, flow rate, filling time, back pressure, holding pressure, holding time, mould temperature, cooling time, ejecting pressure, ejector speed, clamping pressure, V-P transfer of moulding process and screw recovery. Inappropriate machine settings have a devastating effect on moulding quality. This 2-day technical short course will explain the function & importance of various processing parameters, the optimal setting of various parameters, their effects & ways to measure and evaluate some of the critical moulding process variables.

Benefits:

1. Understand critical process variables & variations in plastic injection moulding process development.
2. Study the effects of process parameters on moulding quality and productivity.
3. Gain proper guidelines on optimal machine settings & its sequences to achieve consistent moulding quality.
4. Learn proper drying, clamping and machine performance evaluation.

Course Contents:**Chapter 1: Process Development & Validation**

Installation Qualification (IQ); Operational Qualification (OQ); Performance Qualification (PQ); Process validation and revalidation; Machine and Plastic variables; Moulding process capability; Machine setup sheets; Process setup sheets; Process documentation; Documented Categories; Documented Items.

Chapter 2: Materials Drying & Mould Clamping

The purpose of drying; Hygroscopic & Non-hygroscopic plastics; Drying equipment; Humidity & dew point; Dew point measurement; Tips for effective drying; Calculating drying details; Injection pressure for moulding; Clamp pressure for moulding; Cavity pressure; Clamp tonnage calculation; Clamp tonnage setting; What is Clamp over-tonnage?; Clamping force generation; Toggle clamp & Hybrid Direct Clamp.

Chapter 3: Machine Settings

Melt temperature setting; Mould temperature; Switch-over position; Screw rotation speed; Back pressure; Injection pressure; Hold pressure; Holding time; Cooling time; Mould open time; Injection volume & Short Shot; Cushion; Mould opening stroke.

Chapter 4: Machine Evaluation

Check ring reliability test; Load sensitivity test; Platen deflection test.

Course Instructor



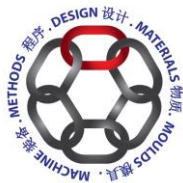
William Lee - Malaysian, Materials Engineer with an honorable Bachelor Degree awarded by The Engineering Council of London (EC, UK). He has over 25 years working & teaching experience in manufacturing industry. William possesses strong fundamentals knowledge in technical science & has special talent 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 want to know how to verify process capability, the development of a robust injection moulding process, how to conduct process validation & revalidation, and how processing parameters & their settings could affect moulded parts quality & productivity. 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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