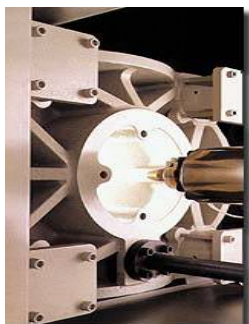
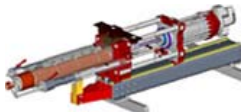
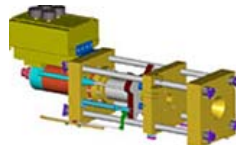
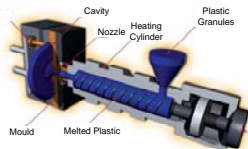
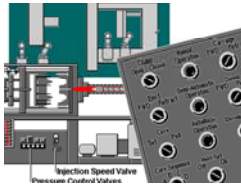


Product Code: **IJM06**

Plastic Moulding  
Technology  
Program Series

2-day Technical Training Course  
**INJECTION MACHINE UNDERSTANDING  
& PROCESS OPTIMIZATION**

**By: William Lee**  
**PSMB SCHEME - SBL PROGRAM**



### Course Overview

Plastic injection moulding process demands precise control of the functionality of various machine & mould features. In addition, processing parameters such as melt temperature, melt viscosity, injection speed, injection follow-up pressure, switch over point from speed to pressure, cycle time etc are vital for successful moulding. This call for critical analysis of the machine & mould specifications and determination of the material's process window to ensure there is a set of conditions that can make good parts.

This course will assist production & quality control personnel from plastic moulding industry for a thorough understanding of injection machine & mould and the use of scientific & systematic techniques to optimize the parameters for injection moulding to produce quality products with a minimum moulded-in stress at lower manufacturing cost.

### Benefits

1. Recognize injection machine specifications and its capabilities.
2. Understand the functions of different systems found in the machine.
3. Establish process window & optimizing the parameter settings.
4. Determine what combination of process variables must be changed to resolve moulding defects.

### Course Contents

#### 1. PIMM –Injection System/Unit:

Hopper capacity; screw diameter; screw L/D ratio; screw rotary speed; injection speed, injection rate; plasticizing capacity (shot weight); metering stroke; initial pressure; hold pressure & back pressure; injection power; injection volume; accumulator, non-return valve.

#### 2. PIMM – Clamping System/Unit::

Hydraulic & toggle clamping systems; Clamp tonnage; tie bars; platen; daylight; mould open stroke; mould height.

#### 3. Process Optimization – Part 1:

Testing & inspection techniques for viscosity; cavity balance and gate seal control.

#### 4. Process Optimization – Part II:

Testing & inspection techniques for plate deflection; tonnage calculation and pressure study.

Organized by:

**Metalloy Consultant Services (for public course)**  
**Metalloy Technology Services (for in-house program)**

Tel: 03-80751529, Fax: 03-80761434, Email: [metalloy@tm.net.my](mailto:metalloy@tm.net.my)

## Course Instructor



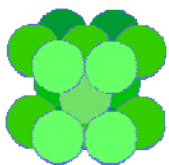
William Lee - Malaysian, Materials Engineer with an honorable Bachelor Degree awarded by The Engineering Council of London (EC, UK). He has over 20 years working & teaching experience in manufacturing industry. William possesses strong fundamentals knowledge in technical science & has special talent 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 Training (MIT) 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 recommended for all those concerned with improving quality & productivity of moulded plastic products. A variety of people will benefit by attending this training including process & manufacturing engineers, moulders & technicians from shop floor, project engineers, materials engineers, injection machine maintenance staff, quality control personnel, machine purchaser & buyers for injection moulded parts.

## Administrative Details

1. This program may be selected in Metalloy Yearly Training Calendar as a public training course. Should public training is not available for this program we will consider opening a public training class if you've minimum guaranteed participants to attend this program.
2. Metalloy 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 Metalloy 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. Metalloy bears no responsibility for the approval of training grants or any form of rebates between participating company and HRDC.



# Promoting Scientific Manufacturing

◆ **Developing K-Workers; Transforming to K-Economy** ◆

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