Product Code: **IJM07**

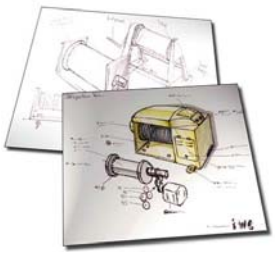
Plastic Moulding Technology Program Series

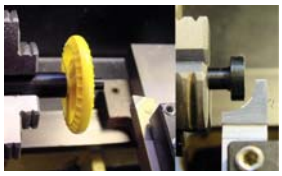
2-day Technical Training Course

PRODUCT DESIGN FOR PART PERFORMANCE AND MOULDABILITY

By: William Lee

PSMB SCHEME - SBL PROGRAM





Course Overview

The use of plastics continues to increase because of key benefits the materials have brought to the society. Product and mould designers, moulders and buyers are always looking for practical design to enhance part performance, ease of mouldability, avoid unnecessary moulding & assembly defects, decreased part assemblies, reduced processing time, weight savings, and corrosion resistance. Practically a large number of product designers, mould designers, mould makers, moulders & most of the buyers are often unaware of the impact of the first step product design on mouldability and the final quality of injection moulded parts. Created to provide assistance for those involved in plastic injection moulding & its final finishing products, this course will examine the concepts of product design for manufacturability and assembly operations for plastic parts. Case histories will highlight plastic parts and systems design. In-class explanation will discuss the practical ways of proper product design.

Benefits

1. Learn good practices in product design for injection moulded parts.
2. Gain design guidelines for part geometry and assembly and disassembly features.
3. Understand the methods of machining plastics into a variety of manufactured products.
4. Find out various plastic finishing processes used in industry and application for finishing parts.

Course Content

1. Design for Mouldability & Part Performance:

- Design guidelines for part geometry: Wall thickness; Flow leader; Flow Restrictor; Ribs, Gussets; Bosses; Blind holes & through holes; Corner design; Draft angle; Coring; Tolerance; External undercut; Internal undercut; Coring.

2. Design for Assembly:

- Design guidance for assembly & disassembly feature: Mechanical fastening; Snap fit joints; Heat staking; Ultrasonic welding & Adhesive bonding.

3. Design for Plastics Machining:

- Plastic/metal machining comparison; Cutting tool materials; Coolants; Sawing; Milling; Drilling; Turning; Water jet cutting; Laser cutting.

4. Design for Plastics Finishing:

- Degating; Deflashing; Cleaning; Decorating (painting, plating, vacuum metallization, hot stamping, silk screening).

Organized by:

Metalloy Consultant Services (for public course)

Metalloy Technology Services (for in-house program)

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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 designed for industrial designers, product designers, project engineers, manufacturing engineers, tooling, processing, and production engineers, mould makers & technical purchasers or anyone involved with plastic injection parts will benefit from this user friendly course.

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.

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