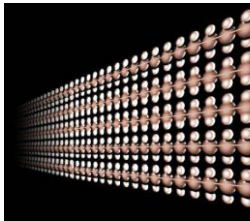




Course Objective

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

Effective moulding & use of plastics require a strong understanding of polymerization, whether plastics are thermoplastic or thermosetting, and some idea of the structure (amorphous or semicrystalline) and unique characteristics of each plastic. It is not necessary to memorize the many plastic grades being used in the market but it is important to have an understanding of the families, chemical composition, and their use & moulding characteristics. Mechanical designers, moulders & most of the buyers are often unfamiliar with both the behavior and processing of plastic materials. This 2-day training is targeted to both technical & non-technical audiences and was created to provide individuals using or producing injection moulded plastic products with an insight of materials understanding & how plastic material factor can influence moulding quality & final product property.



Benefits

1. Gain a strong fundamental knowledge of plastic materials and their family group.
2. Study the many properties of plastic materials, their testing methods to meet design specifications and learn how to avoid degrading plastics strength.
3. Understand response of plastic material to various moulding parameters, flow pattern, moulding characteristics and evaluate their mouldability.



Course Contents

1. Polymer Technology:

- Polymers & Plastics; Polymerization (addition & condensation); Chain topology; Polymer structure; Crystallinity; Polymer isomerism, Product possibilities.

2. Plastics Selection & Applications:

- Factors affecting selection process; Plastics families & their members; Resin Codes; Choosing for Easy flow; Choosing for Improved strength; Choosing for wear resistance; Choosing for electrical resistance; Choosing for fire protection; Choosing for chemical resistance; Choosing for flexibility; Choosing for thermal performance; Choosing for health care applications; Plastics in auto sector.

3. Plastics Properties & Degradation:

- Properties modification; Molecular weight & plastics behaviors; MFI; Hardness; Glass transition temperature T_G ; Melting temperature T_M ; Modifying T_G Point; Measuring T_G Point; Temperature effects; Heat Deflection Temperature; Vicat Softening Point; Mechanical properties; Flammability; Plastics strengthening methods and ways to degrade it; Glass filled or glass reinforced?; Hygroscopic Plastics & Hydrolysis Effect.

4. Moulding Characteristics:

- How plastics flow? Shear thinning; Molecular orientation; Fountain flow; Shear heating; Flow induced stress; Thermal induced stress; Relaxation; Moulding & Post-Mould shrinkage; Moisture conditioning; Plastics & Mould steels choice.



Course Instructor



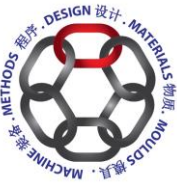
William Lee - Malaysian, Materials Engineer with an honorable Bachelor Degree awarded by The Engineering Council of London (EC, UK). He has over 25 years working & teaching experience in manufacturing industry. William possesses strong fundamentals knowledge in technical science & has special talent 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 recommended for those who want to acquire an in-depth knowledge on various plastic materials used in injection moulding. It 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. 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:

METALLOY CONSULTANT SERVICES PLT

(Registered Training Provider under Ministry of Finance: 357-02128315)

(Registered Training Provider under PSMB: LLP0003449-LGN)

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