

Product Code: **PE03**

Manufacturing  
Improvement  
Training Program

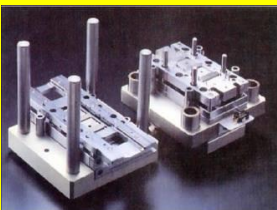
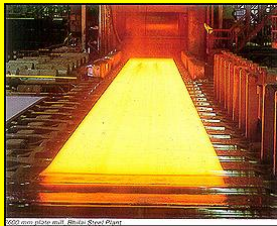
2-day Technical Training Course

**Program: MANUFACTURING INSIGHTS SKILLS (MIS)**

**Session Topic:** Tool Steels Selection & Tooling Improvement

**By: William Lee**

**SBL TRAINING PROGRAM**



### 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

One of the first steps towards a longer tool life is the selection of proper tool steel with the right properties and good quality as tooling material. The drive for improved tooling economy has resulted in the development of many tool steel grades. Many times, a tooling problem is a result of lack of knowledge of the tooling material from the many hundreds that are available. There are several criteria on which the wise decision is normally based. Selection of optimum grade for a given tooling application required understanding of the various characteristics and structure-property relationships, as well as the making techniques of refining the steel. The more familiar a technical person with the material knowledge, the more proficient and confident he or she will be to make judicious materials choices based on these criteria. This course is designed to provide an in-depth study of tool steels, including their standards, classifications, properties, limitations, applications and selection guides. Participants will learn material factors that help to determine tool performance and how to select proper tool steel that is compatible with the design & planned processing procedure.

### Benefits

1. Learn the basic of tool steel properties & its limitation.
2. Explore different types of tool steels.
3. Understand material characteristics to facilitate tool maintenance & its processing works.
4. Examine material factors that determine tool performance.

### Course Content

1. **Tool Steels Classification and Standard**  
- *The Many Classes & Family Of Steels*
2. **Tool Steels Refining Process**  
- *The Impact of Material Quality / Defects on Tooling Performance*
3. **Tool Steels Properties**  
- *The Strength and Limits of Tool Steels*
4. **Applications & Selection Guides of Tool Steels**  
- *The Why Behind Where They Are Chosen*

## Course Instructor



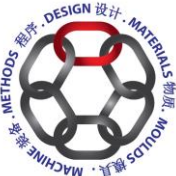
William Lee - Malaysian, Materials Engineer with an honorable Bachelor Degree awarded by The Engineering Council of London (EC, UK). He has over 25 years working & teaching experience in manufacturing industry. William possesses strong fundamentals knowledge in technical science & has special talent 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

Participating companies can be from metal stamping, forming & machining, plastic moulding, electronic, automotive, extrusion, die casting, moulds & dies, tool steels as well as heat treatment industry. Target audience can be those involved in activities related to tooling, parts or products manufacturing such as technical group personnel, production managers, supervisors, tooling engineers, tool makers, engineering specialists, quality controllers and R&D researchers, designers, machinists, technicians and heat treaters.

## 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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