

Product Code: **MS01**

Manufacturing
Improvement
Training Program

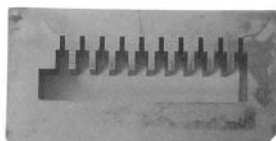
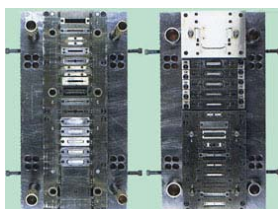
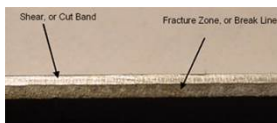
2-day Technical Training Course

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

Session Topic: Sheet Metal Cutting & Process Control

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

The quality of the stamped parts is influenced by the tooling used and the workpiece material. This comprehensive program focuses on the study of blanking & piercing process, workpiece materials behavior, clearance and tooling improvement that impact the success of sheet metal stamping operations. The course also explains various blank edge conditions, how blank edge finish can affect subsequent forming processes & how to improve and prepare good blank finish for subsequent forming operation; calculation of cutting force, stripping force & die block design; advantages of sectional die design; how to plan a good strip layout & improvement on stock strip material and many more.

Benefits

1. Gain a strong foundation for materials, tooling & process understanding in blanking & punching operations.
2. Learn techniques on how to improve sheared edge conditions and stock utilization.
3. Bring design and engineering staff together with a common knowledge of sheet metal stamping process.
4. Apply solutions and troubleshoot tooling problems such as wear & chipping for stamping tools.

Course Contents

1. **Blanking & Punching Process: Overview**

Overview of the process variables on stamping quality & defects.

2. **Blanked Edge Study & Clearance Design**

Sheared edge finish, clearance design, locating clearance, microstructure & process variables.

3. **Materials Characteristics**

Spring back & work hardening effect.

4. **Strip Layout, Utilization & Development**

Scrap strip terminology, layout design, stock utilization, strip development & center line of pressure.

5. **Stamping Tools Design**

Die block size, section & segmented die, punch design, cutting force & stripping force, lateral force, Shear angled tools design, punch stagger, die entry control, clearance design for high speed stamping.

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 the buyers, manufacturing engineer, engineering technician, design engineer, development engineer, senior project engineer, plant engineer, product manager, tool engineer, product designer, structural engineer and technical personnel from the sheet metal working industry only.

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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