

ROOT CAUSE YOUR PLASTIC PART PROBLEMS

17-18 JUNE 2019 (MONDAY-TUESDAY), 9.00 AM – 5.00 PM

@ Hotel Equatorial Penang

1, Jalan Bukit Jambul, 11900 Bayan Lepas, Penang.

Overview:

This course examines the possible root cause/s of the variety of problems encountered during the production, assembly and usage of injection molded plastic parts. With expeditious root-causing a solution can be implemented to resume production, earn customers' trust, and bring in revenue.

Target Group:

This two-day course is offered to anyone involved in the supply chain of plastics parts and products. Any rank from the departments of R&D, NPI, Marketing, Project Management, Process Improvement, Manufacturing, Production Quality, Supplier Quality, Procurement, Customer Quality, will benefit from knowing how to expeditiously root-cause a defect/failure of a plastic part. Knowing the root-cause also acts as a check and balance to wasteful guesswork efforts.

Ideally, the participants should have some knowledge of plastics materials, injection moulding tooling and processes, FEA, and engineering fundamentals, although the basics will be introduced.

Companies with CAD engineers and tool designers in the injection-moulding industries will benefit as it prepares them to spot design shortcomings in the CAD files, before steel is cut.

Companies with back-end assemblers, and users of the plastic parts, will benefit by recognizing where the defect/failure originated in order to quickly resolve the issue for the end-customers.

Senior Management is encouraged to attend so that long-term solutions can be established.

Learning Outcomes

Upon completion of program, participants will be able to:

- Know the root-cause/s of problems encountered throughout the supply chain of the plastic part: at the CAD designer stage, at the toolmaker stage, at the molding machine, during back-end assembly, during usage by the end-customer;
- Understand that problems frequently originate from CAD and tool design, which then makes it very difficult to eliminate by tweaking injection molding parameters. Identify those CAD and tool design shortcomings early, before tooling is started;
- Put in corrective measures, even at CAD stage, to avoid recurrence;
- Gap analysis between your DFM report and your actual problems; and
- Where relevant, scientific explanations are offered as to why those problems happened.

Program Delivery Approach:

Presentations, working discussions, interactive group discussions, case studies, pop quiz, pre & post questions.

Program Outline

- I. Sink marks;
- II. Flashes;
- III. Drag marks;
- IV. Cosmetic and blush marks;
- V. Streaks;
- VI. Burn marks;
- VII. Race-tracking;
- VIII. Ejector marks;
- IX. Short shot;
- X. Jetting

- XI. Warpage;
- XII. Voids and bubbles;
- XIII. Brittleness;
- XIV. Moisture measurement (inconsistent moisture analyzer results);
- XV. Weld lines (breakage and cosmetics);
- XVI. Broken during assembly (broken snap-fits, split screw bosses, ruptured press-fit bosses);
- XVII. Broken after usage;
- XVIII. Deformed after some time;
- XIX. Moldflow simulation errors (ejection temperature, mold temperature)

**HRDF Claimable
Under SBL Scheme**

**Closing date for registration:
10 June 2019**

flexiEdge Training PLT
Shoplot No. 9, Ground Floor,
Hotel Equatorial Penang,
1, Jalan Bukit Jambul,
11900 Bayan Lepas, Penang.
Tel/ Fax: 604-646 8377

Course Leader

Mr. Alex Lau

Mr. Lau holds a B.Sc. in Mechanical Engineering from University of Manchester, and has worked in the R&D of several prominent global MNC's (Novatel Calgary, NORTEL Calgary, Motorola Penang, Agilent Penang, and Seagate Seremban). He has almost 30 years experience, specializing in the design of plastic parts/products that are toolable and manufacturable, and that function flawlessly in their intended structural applications. His FEA (Finite Element Analysis) simulation on plastics has consistently predicted accurate results that correlate very well with the actual application. Hence, one prototype is all that is needed for validation, followed by hard-tooling (no soft-tooling) and production. While many designers still practice outdated and wasteful trial-and-error methods, Alex applies his knowledge in engineering fundamentals, design guidelines, and FEA simulation to achieve 'Do It Right The First Time'. This resulted in no delays to project schedules, on-cost, and on-quality almost every time. No delays, no unpleasant surprises, no fire-fighting late into the nights, no bickering back and forth between production line, molder and toolmaker, no cost-overruns, no tooling modifications. With his approach to interactive CAD design and FEA simulation he has been able to complete many assignments in a flawless manner from design to full production. Guesswork is banished, predictions are accurate, no empty promises made to customers. He possesses an uncanny ability to spot flaws when auditing the FEA simulation work of others, and remedies them on the computer, before committing to hard-tool.

Due to his above skills, on many occasions Senior Management had called upon Alex to solve mechanical and process quality issues that stop-shipped the supply chain and manufacturing lines in Malaysia's SME's and MNC's, when parts/products failed during production or (worse) in the customer's hands. More than once his solutions have successfully overcome production line stoppers, prevented product recalls, rework and scrap, and won additional business. He has trained engineers in many MNC's, SME's, and Skills Development Centres, over the years. Alex is a certified PSBM (HRDF) trainer, as well as a holder in Certified Advanced and Expert Scientific Injection Molding. He also holds US Patent 6853492 Conductive Lens. In his training, Alex uses real case studies and engages the participants in dialogue of their own production predicaments. He receives much positive feedback on his knowledge and experience, and how he connects the training content to the situations of the participants.

Investment / Participation Fees

RM 2,500.00 / participant

REGISTRATION FORM



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No.	Name of Participant(s)	Designation	Self-sponsored? (please tick <input type="checkbox"/>)
1			
2			
3			
4			
5			
6			

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Registration Submitted By:		
Company Name:		
Company Address:		
Contact Person:		Designation:
Tel:	Fax:	Email:
<p>Payment: Enclosed herewith Cheque/ Bank Draft (No. _____) amounting to RM_____ for _____ () participant(s), crossed and made payable to "flexiEdge Training PLT" <u>OR</u> Bank in / transfer to our CIMB Bank A/C No.: 800 794 3431 and email us the bank in/ transaction slip to administrator@flexiedge.com.my .</p> <p><i>*For self-sponsored participant(s), registration will only be guaranteed if full payment is received before program.</i></p>		
<p>Kindly send your completed registration form through email to Ms. Felicia Tham/ Mr. Quah Eng Siang at administrator@flexiedge.com.my or through fax to 04-646 8377. For further enquiry, please contact Ms. Felicia Tham/ Mr. Quah Eng Siang of flexiEdge Training PLT at Tel: 04-646 8377/ 012-479 8377/ 013-588 3355</p>		
Terms and Conditions		
<ol style="list-style-type: none"> 1. Fees are inclusive of program kits, refreshments and lunch and certificate of attendance. 2. Program confirmation will be given through email before the program date. 3. (a) Cancellation / notice of withdrawal must be given in writing (email) to us before program confirmation, no fee shall be charged. (b) No cancellation is allowed once our program confirmation is emailed to you. However, if registered participant is unable to attend, <u>only replacement from the same company is allowed. Participant(s) who registered but does not turn up on training day(s) shall be fully billed. No refund if participant/ replacement does not turn up on the training day(s).</u> 4. flexiEdge Training PLT has the right to change the dates, time, venue, course leader or cancel the scheduled training due to unforeseen circumstances beyond its control. 		

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