

# Injection Moulding Training

Injection Moulding  
Theory & Practice

2 day course



## POLYBRIDGE Training Ltd

### Training Dates 2011

|          |                                     |
|----------|-------------------------------------|
| February | 1 <sup>st</sup> & 2 <sup>nd</sup>   |
| April    | 12 <sup>th</sup> & 13 <sup>th</sup> |
| May      | 10 <sup>th</sup> & 11 <sup>th</sup> |
| June     | 21 <sup>st</sup> & 22 <sup>nd</sup> |
| Sept.    | 20 <sup>th</sup> & 21 <sup>st</sup> |
| December | 6 <sup>th</sup> & 7 <sup>th</sup>   |

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# Injection Moulding Theory & Practice

2 day course

## *Who is it for?*

Anyone involved in the, procurement design or use, of injection moulded products, or needing to improve their knowledge & understanding rapidly.

- Senior company executives
- Sales & Marketing executives
- Purchasing & procurement staff,
- Project, Liaison & Customer Support Engineers,
- Packaging Technologists
- Device engineers.
- Concept, Designers.
- Product designers.
- Sourcing & Liaison Engineers
- Toolmakers & Tooling Engineers,
- Project & Process Engineers
- Quality Assurance Engineers

## *Course Objectives*

- Improve your communication skills
- Allow you to communicate effectively
- Provide "HANDS-ON" practical experience
- Understand how product quality issues arise
- Understand the economics of the overall process
- Recognise moulding faults & how they are caused
- Understand the use of different mould types
- Control the design, production processes effectively

## *Content*

### *Introduction*

- Everyday terminology & what it means
- What is possible using Injection Moulding.
  - Advantages & Disadvantages

### *The injection Moulding Process*

- The moulding Cycle
- The moulding Machine, types & construction

### *Practical setting of a Moulding machine*

- Systematic set-up of the Injection moulding machine
- Production of parts to specification & within cycle
- Selecting the right machine for optimum production

### *Processing, effects on polymer & performance*

- Polymer properties during processing
- Product qualities after moulding
- How polymer impacts the decision making process
- How polymers dictate mould design decisions
- How polymers dictate machine selection
- Processing & product performance / quality
- Processing for thin wall products
- Processing in Packaging components

### *Plastics Materials*

- Factors affecting material selection
- Polymer types
- Polymer choices in design
- Reinforcements & additives; why they are used
- Polymer related problems in finished parts
- Problems associated with plastic flow
- Cooling the polymer: effects on product quality

### *Injection Moulds*

- Mould construction & terminology
- Gate positioning considerations
- Gates & runner systems
- 2 plate moulds; in its many forms
- 3 Plate & Stack Moulds; benefits & drawbacks
- Family Moulds
- Hot Runner moulds; advantages & disadvantages
- Cascade / Valve gating techniques
- Cooling, methods
- Undercuts release mechanisms & core operation
- Overview of CAD & flow analysis CFD
- Prototyping methods

### *Calculations used in moulding*

- Product cost Calculation
- Cooling time calculation

### *Common Injection Moulding Faults*

- Their Causes & cures.

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**Note:** Component Cost Calculation spreadsheet is supplied as part of the course content; **Microsoft Excel** <sup>®</sup>™ format

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**Locations** Telford

**Course Fee:** £550.00 + VAT per person and includes course materials, lunch and refreshments.

### **Tailor Made "In-House" Courses**

This has for many years been our core business, providing cost effective training that meets the company's individual needs, and delivered to suit their schedules, whether on or off-site. Please contact us if this is right for you.

# Registration Form

Injection Moulding Theory & Practice

Fax to +44 (0) 1746 761 875

Email to [info@polybridgetraining.co.uk](mailto:info@polybridgetraining.co.uk)

## Select Desired Course Date: 2011

Please use a separate form for each delegate, photocopies are acceptable

Feb 1<sup>st</sup> & 2<sup>nd</sup>

April 12<sup>th</sup> & 13<sup>th</sup>

May 10<sup>th</sup> & 11<sup>th</sup>

June 21<sup>st</sup> & 22<sup>nd</sup>

September 20<sup>th</sup> & 21<sup>st</sup>

December 6<sup>th</sup> & 7<sup>th</sup>

Surname: \_\_\_\_\_ Title \_\_\_\_\_

Forename: \_\_\_\_\_

Position/ Job Title \_\_\_\_\_

Company: \_\_\_\_\_

## Contact Details;

Company \_\_\_\_\_

Contact name \_\_\_\_\_

(if different from above)

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Postcode: \_\_\_\_\_

Tel: \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_

Invoice Address (if different from Contact Details opposite)

Company \_\_\_\_\_

Contact \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Postcode \_\_\_\_\_

Tel \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_

## Payment Information

### NOTE:

Payment must be received prior to attending the course

Cheque payable to "Polybridge Training Ltd"

Payment enclosed

Please Invoice my company:

Purchase Order No: \_\_\_\_\_

NOTE: Please read this carefully

Cancellation Terms,

By completing & returning this registration form, delegates are agreeing to be bound by the Conditions of Registration which can be found on the following page.

Full terms & conditions can be found on our website:  
[www.polybridgetraining.co.uk/downloads/calculator/terms](http://www.polybridgetraining.co.uk/downloads/calculator/terms)

Please return to:

Training /Seminars,  
Polybridge Training Limited  
42 Linley View Drive,  
Bridgnorth,  
Shropshire.  
WV16 4RT  
United Kingdom.

Fax +44 (0) 1746 761 875

[Info@polybridgetraining.co.uk](mailto:Info@polybridgetraining.co.uk)

## **BOOKING TERMS & CONDITIONS**

### **Payment is accepted in £GB**

Discounts given for multiple registrations: 10% discount for 2 or more delegates from the same company registering at the same time for the same dates

### **Conditions of Registration**

Written confirmation is required: letter, fax, email.

**Payment must be received prior to attending the course.**

**Accommodation** is NOT included in the fee.

**Cancellation** up to 14 days prior to the course start date will be refunded minus a 20% administration charge. Cancellation after this date will be subject to the FULL fee with NO REFUND.

**Transfer** to a later course, prior to the course start date can be accommodated without charge.

Transfer within the 14-day period prior to course start date will incur a 20% administration charge.

All transfer requests must be confirmed in writing by the delegate requesting transfer or their representative. The option to transfer can only be used once after which non-attendance will be treated as a cancellation subject to the terms above

**Delegate substitutions** can be made without incurring penalty

### **Locations**

The final course delivery location will be advised at the time of booking. Location choice is dependent on majority course candidates moulding discipline and travel logistics.

### **Tailor Made "In-House" Courses**

This has for many years been our core business, providing companies with cost effective solutions to meet their own specific needs.

Please contact us if this route will be more effectively meet your company's individual needs.

Polybridge reserve the right to modify this course schedule without notice



# **POLYBRIDGE Training Ltd**

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