

Injection Moulding Training

Design and
Procurement of
Injection Moulds
2 day course



POLYBRIDGE Training Ltd

Revised for 2010
Practical Mould design using



Mould Design Software
Courtesy of

**ForeGone
Solutions**

info@polybridgetraining.co.uk
www.polybridgetraining.co.uk
T. +44 (0) 17 46 761 875
F. +44 (0) 17 46 761 875
M. +44 (0) 77 74 732 129
Voip. Skype Polybridge1

	2010
January	26 th & 27 th
March	30 th & 31 st
May	11 th & 12 th
July	20 th & 21 st
Sept.	28 th & 29 th
Nov	30 th Dec 1st

Design & Procurement of Injection Moulds

Who is it for?

Anyone involved in the design, procurement or use, of injection moulds & products

- **Device engineers.**
- **Purchasing & procurement staff**
- **Concept, Designers.**
- **Product designers.**
- **Sourcing & Liaison Engineers**
- **Toolmakers & Tooling Engineers,**
- **Project & Process Engineers**
- **Validation & Feasibility engineers**
- **Quality Assurance**
- **Senior company executives**
- **Sales & Marketing executives**

Course Objectives

- Improve your communication skills
- Guide you through the design & procurement process
- Create designs for efficient production
- Understand how product design affect mould costs
- Evaluate existing designs for flaws & improvements
- Identify problems caused by poor mould design
- Evaluation of product faults
- Choose the right mould type: how & why
- Take part in decision making processes, confidently
- Understand how plastic behaviour dictates mould design
- Choose the right plastic for your product
- Control of the design & procurement process effectively
- Identify cost reduction areas.
- Understand the technicalities clearly and relevantly

Content:

- The moulding process
- Mould Cost structure

Mould Types; Factors in deciding which one to use

- 2 Plate , in its many forms
- 3 Plate & Stack Moulds;
- Hot Runner moulds
- Family Moulds
- Their individual advantages & disadvantages

Mould construction

- Materials used in mould construction
- Methods of manufacture; EDM 5 Axis etc
- Hardening & surface treatments
- Choosing number of Cavities
- Cores & cavities inserts.
- Strength Requirements

- Cooling channels; location & construction
- Mould alignment
- Venting & parting lines
- Surface treatments; plating, surface finishes/ textures
- Draft & line of draw
- Ejection Methods
- Clamp force & minimum Platen area
- Hydraulic & mechanically actuated cores
- Unscrewing moulds: continuous internal threads
- Collapsible cores & expanding cores
- Surface finishes Texturing Grain release angles

Polymers, their influence over mould design

- Gate position; type; size, how many?
- Runner systems; balanced, dimensioning
- Wall thickness & flow ratio
- Shrinkage allowance
- Effects of fillers & reinforcements in polymers
- Effects from cooling systems on final part properties

Moulding & Product Faults: Cause & Cure.

- Common Mould faults
- Faults caused by design errors
- Faults caused by poor mould design
- Faults caused by poor material choice

Flow analysis in mould design

- 3d Polymer Flow analysis
- Fibre orientation & FEA Analysis
- Virtual Mould Trials

Procurement schedules

- Manufacturing process time line
- Mould trials schedules
- Validation protocols & process
- Continuous improvement

Mould design workshop

- Case Study exercises
- Practical design scenarios

PRACTICAL Mould Design by Forgone Solutions

- Designing the mould from a CAD model
- Parametric design
- Design decision making processes
- Concurrent design & Manufacture
- Cutter path creation & Machining strategy
- Parting line identification
- Incorporating side actions
- Selecting Mould Bases using existing catalogues
- Producing the final design

Locations Leamington Spa, Stafford & Telford

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

Registration Form

Injection Mould Design

Fax to +44 (0) 1746 761 875

Email to info@polybridgetraining.co.uk

Select Desired Course Date: 2010

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

Jan 26th & 27th

March 30th & 31st

May 11th & 12th

July 21st & 22nd

Sept 28th & 29th

Nov 30th & Dec 1st

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

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

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 Training Ltd

Registered Business Address Co Reg 4683206 VAT No:559 444 115

Director; D.J. Jeavons. Company Secretary S.Jeavons

42 Linley View Drive, Bridgnorth, Shropshire, WV16 4RT, ENGLAND. UK.

Tel: +44 (0) 1746 761 875

Mob: +44 (0) 7774 732 129

info@polybridgetraining.co.uk www.polybridgetraining.co.uk