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Intermediate Blow Moulding

Aim of the Programme

This programme is aimed at employees who undertake a setter or technician role with the addition of some monitoring and basic fault correction. It will build upon previous knowledge and enable the applicant to set up a new mould to achieve a product specification.

Objectives of the Programme

- Explain the interaction of ancillary equipment and its relationship to the process
- Explain basic quality procedures and work to quality specifications
- Understand the make up and differences in Blow Moulding Polymer compounds
- Undertake a mould change
- Set up associated ancillary equipment
Conduct a logical and systematic set up from zero parameters
- Optimise parison programming
- Understand the different types of trimming devices used in blow moulding
- Set up an Blow moulder to a given standard
- Demonstrate an understanding of primary process terminology
- Start up and shut down an low moulder whilst applying best practice within the industry

Duration - 5 days

Attendees

This programme is ideal for:

- Trainee Setters
- Setters /Technicians
- Development Engineers

Programme Timetable

Guide Course Schedule (May change dependent upon customers needs)

Day 1

Introduction
Polymers & applications used in EBM
Key principles of blow Moulding
Machine configurations
Safety around Processing
Operator/Machine Interaction Polymers and applications used in EBM
Materials - Properties and limitations
Material blending
Typical material problems such as moisture, contamination and melt fracture
Effect of frictional heat. Associated start up issues
Grooved fed/smooth barrel. Output and L/D ratio
Extruder: Start up/shut down procedures

Day 2

Head Design: Continuous v Accumulator
What's inside the Head?
Shot weight, shot volume, parison length
Die gap/screw speed and push out
What to adjust and when
Head Tooling: Die/Pin/Core. Die & pin designs. Ovalised tooling, converge/diverge.
Practical work on above topics
Crystallisation of blow moulding materials
Practical

Day 3

Parison Programming: Function of components, set up, minimum gap
Setting; relationship between positional points, profile range and basic weight.

Radial wall thickness control, applications and limitations

Parison faults: Drag lines, poor distribution and sagging

Practical

Day 4

Blowing ratio and Die Swell

Moulds: Design basics, Choice of Materials, Cooling, pinch off design, venting and cooling temperatures and pressures

Blowing: Pressures for Pre blow and Main blow

Process sequence: What happens & when

Production faults: Holes, contamination, Shrinkage, Distortion, poor distribution, weak weld and surface finish

Practical

Trouble shooting: Typical faults placed on the machine and logical rectification

Day 5

Mould changing

Practical

Course Assessment

At the beginning and end of each day a review of subject matter and a questions and answers session will take place to ensure that all subject matter has been fully embedded.