Design for Manufacture & Assembly

Duration: 2 days

In-Company training:
Smallpeice courses are all available in-company for cost effective group training. This provides the opportunity to customise the content and to include practical activities that are linked to your own processes and products.

Before training onsite we will discuss and scope your and provide a bespoke delivery plan and proposal for your review.

For more information on the options, please contact Smallpeice on +44 (0) 1926 336423 or email train@smallpeice.co.uk

Overview:

One of the most powerful techniques for reducing production costs, DFMA forces designs to be analysed for assembly ease and shows how to re-design to reduce time-to-market, and increase production efficiency. The course is based upon the Boothroyd Dewhurst approach, and provides a step-by-step framework to enable immediate application in the workplace.

Objectives:

- To provide measurable assessment of assembly difficulties
- To challenge part count & simplify designs
- To provide guidance in good product assembly features
- To use actual product examples, to show best-practice
- To assess re-design effectiveness

Outline:

Basic Theory of Manual Assembly Analysis

- The need for better assembly by design
- The core principles of the Boothroyd Dewhurst method
- Reducing part count to generate savings in material and overhead costs

The DFA Steps

- Improving manual assembly methods (handling & insertion etc)
- Total time calculation
- Minimum parts count analysis
- Comparing efficiency of different designs and assembly systems
- Improvement identification
- Categorising re-design ideas, analysis and verification

Product Analysis

- Using a pre-selected product example from your company, the participants will work in small teams to apply the DFA methodology live. This process will enable participants to see the power of the process applied to one of your products

Design for Manufacture

- Linking Design for Assembly to Design for Manufacture
- Identifying potential manufacturing problems early in the cycle
- DFM process steps to a robust, cost effective part design
  - Scope interfaces
  - Functional description
  - Interface performance values
  - Part feature specification
  - Prioritise part features
  - Understand process variability and cost
  - Review process capability and cost
  - Re-design and/or re-specify process

Summary

- Next steps & action planning