CADspace Training

Course Outline

Certified SolidWorks Plastics Professional 1 Day

Description	This course teaches how to use specialised simulation software tools to predict how melted plastic flows during the injection moulding process. Predicting how the plastic will flow enables you to predict manufacturing defects such as weld lines, air traps, short shots, and sink marks. By predicting these defects, you can change the part or mould geometry, the processing conditions or the plastic material itself to eliminate or minimise them, saving energy, material, time, and money. The SolidWorks Plastics Professional course covers all the features and functions of SolidWorks Plastics Professional (for part designers).
Prerequisites	Certified SolidWorks Essentials – Part & Assembly Modelling and a fundamental knowledge of plastic materials, plastic part design, and/or injection mould design.

Introduction
Use of Colour

Lesson 1: Basic Flow Analysis
Basic Flow Analysis
Stages in the Process
Element Types
Meshing
The Plastics Manager Tree
Input Options
Gates
Running a Flow Analysis
Flow Results

Lesson 2: Detecting Air Traps
Detecting Air Traps
Stages in the Process
Air Traps
Switching Modes for Design Changes
Design Changes
Parts Created Using Mould Design Tools

Lesson 3: Detecting Short Shots
Detecting Short Shots
Stages in the Process
Flow Settings
Flow Front Central Temperature

Lesson 4: The Model Manager
The Model Manager
Stages in the Process
Using the Model Manager
Copying Parts and Results
Batch Manager
Summary and Report

Certified SolidWorks Plastics Premium 1 Day

Description	The SolidWorks Plastics Premium course covers all the features and functions of SolidWorks Plastics Premium (for mould designers).
Prerequisites	Certified SolidWorks Plastics Professional and a fundamental knowledge of plastic materials, plastic part design, and/or injection mould design.

Introduction
About This Course
Use of Colour

Lesson 5: Gate Locations and Sink Marks
Gate Locations and Sink Marks
Stages in the Process
Gate Selection Rules
Sink Marks

Lesson 6: Multiple Cavity Moulds
Multiple Cavity Moulds
Stages in the Process
Mirroring Cavities
Sketching Runners
Runner Design
X-Y Plots

Lesson 7: Runner-Balancing
Runner-Balancing
Stages in the Process
Local Refinement of Mesh
Using Runner-Balancing

Lesson 8: Gate Freeze
Gate Freeze
Stages in the Process
Solid Mesh
Pack Settings
Flow and Pack Analysis
Pack Results

Lesson 9: Optimizing Cooling Time
Optimizing Cooling Time
Stages in the Process
Multiple Gates

Lesson 10: Using Inserts
Using Inserts
Stages in the Process
Cavities and Inserts
Materials for Inserts

Lesson 11: Mesh Repairs
Mesh Repairs
Stages in the Process
Element Issues
Edit Mesh

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