Bradley RK. Education in plastics manuf

Creating an Aluminum Injection Mold

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GUIDE

1. CAD Software:

1.1. Design the part

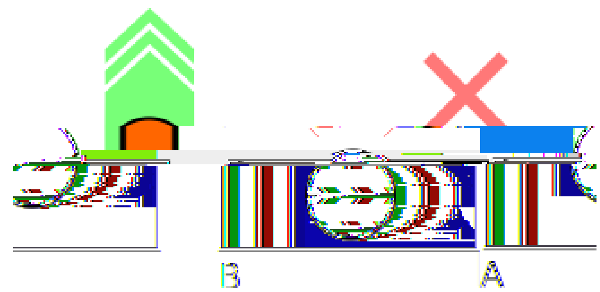

Figure 1.

1.1.1 Avoid Undercuts

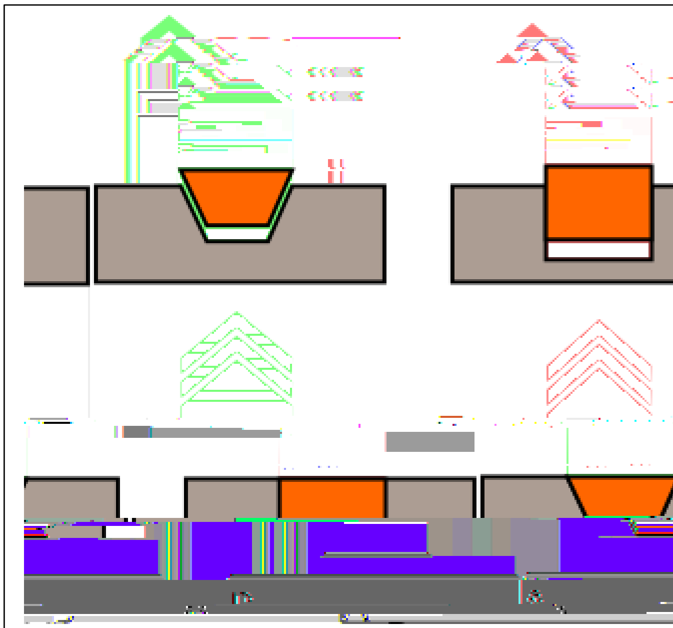

Figure 2.

1.1.2 Use Tapered Sides

1.1.3 Keep the Parting Line on a Single Plane

1.1.4 Design

1.1.6 Consider the End Mill's Cross Section

1.1.7 Parametric Modeling

1.1.8 Designing on Paper

e.g.,

1.1.9 Example: Polyethylene Ball-and-Stick Model

1.1.10 Create a CAD Model of the Plastic Part

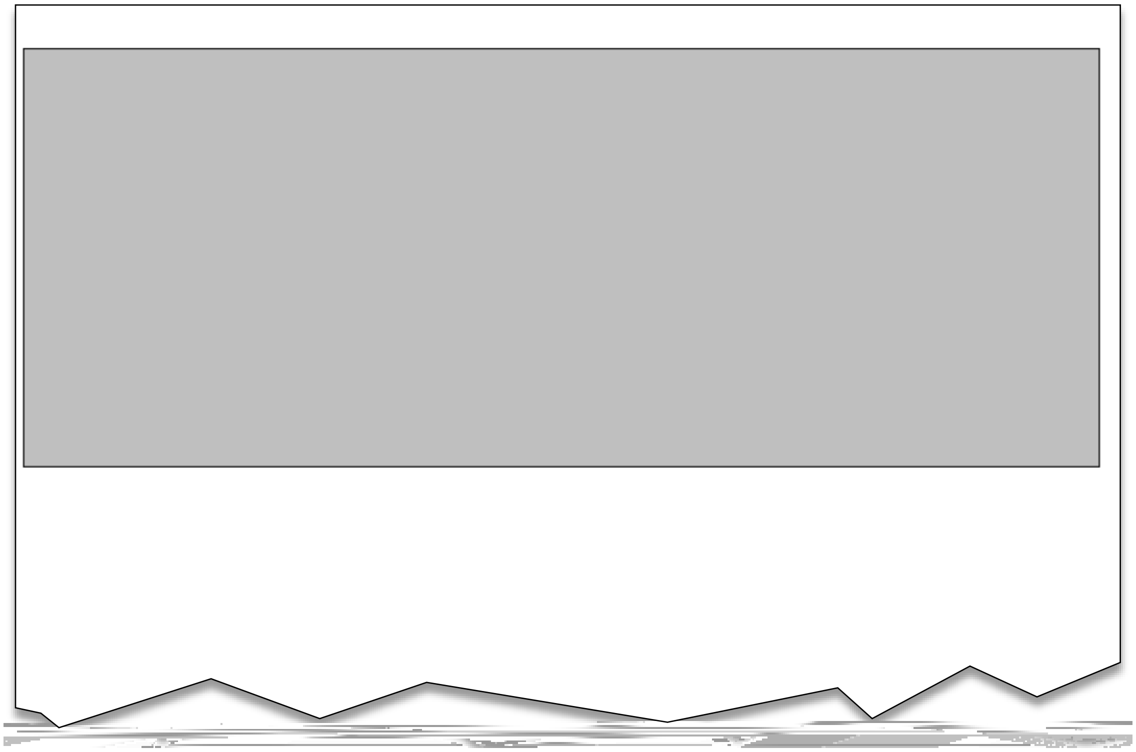

Figure 18.

3. CNC Milling Machine:

3.1. Clamp an appropriate size block of aluminum on the CNC milling machine

3.6. Swap out different end-mills, re-zero, and repeat as needed

4. Finishing the mold:

4.1. Polish the mold if necessary

4.2. Insert alignment pins into one of the two mold halves